The Effect of Earnings Management and Corporate Governance in Thai Market.

โดย คุณนพพล ตั้งจิตพรหม

คณะบริหารธุรกิจ สถาบันบัณฑิตพัฒนบริหารศาสตร์

เมษายน 2557

Abstract

Earnings management usually refers to the efforts of firm managers or executives to manipulate the earning figures in financial reporting. In general, these activities can be perceived negatively, as they can stem from managerial opportunism. However, some may argue that managers can use earnings management techniques to communicate or convey certain information and to smooth the earnings to reduce volatility. This study examines whether corporate governance has an impact on the effect of earnings management. Using data about corporate governance star in Thailand, the results support the fact that the effect of earnings management is more positive for firms with a higher level of corporate governance. The evidence from this study shows the role of corporate governance to control managerial opportunism in earnings management. Therefore, improving good governance is as important as improving accounting rules and standards in order to restrain negative earnings management

www.set.or.th/setresearch

Content

Table

Chapter1 Introduction

Earnings management usually refers to the efforts of firm managers or executives to manipulate the earning figures in financial reporting. Even though these activities may not be illegal, they can arise from managerial opportunism in terms of taking advantage of compensation plans (Healy, 1985 ; Baker, Collins, and Reitenga, 2003 ; Bregstresser and Philipon, 2006 ; Kuang, 2008). For example, managers can overstate the reported profit in order to demonstrate the firm's performance and obtain incentive payments, such as bonuses. This managerial opportunism arises with the popularity of pay-for-performance compensation plan. Another way of using earnings management is to understate the reported earnings in order to reduce the current market price of the common stock. Reporting lower earnings will suppress the stock price, which can lead to the lower exercise price of stock options (Baker, Collins, and Reitenga, 2003). For this reason, managers will get more benefits from the employee stock ownership plan (ESOP)

Even though many studies have mentioned the negative side of earnings management, some have argued that managers can use earnings management techniques in a positive way. For example, they can use earnings management as a tool to communicate or convey certain information that is not included in the reported earnings figures (Dutta and Gigler, 2002). Another example of using earnings management positively in relation to firm value is to smooth the reported earnings in order to reduce volatility (Magrath and Weld, 2002).

Therefore, earnings management can be beneficial or harmful for the firm's value based on how managers employ it. In general, earnings management consists of both positive and negative earnings management. Positive earnings management is the use of earnings management in a way that benefits firm value. Meanwhile, negative earnings management is the use of earnings management for private benefit that can be harmful to the firm's value.

There is no simplified way to determine which component of earnings management is harmful or beneficial. However, if there were a mechanism that could help to restrain managerial opportunism, the existence of such a mechanism would be helpful in reducing negative earnings management but not positive earnings management. Examples of such a controlling mechanism is corporate governance.

Corporate governance can act as a mechanism to restrain managerial opportunism. Firms with poor corporate governance are more vulnerable to managerial opportunism. Therefore, earnings management is likely to be for private benefit and could be harmful to the firm's value. However, firms with good corporate governance can reduce their managerial opportunism and mitigate these problems. In this case, earnings management is less harmful or of more benefit regarding firm value.

Based on the above discussion, if corporate governance is effective in controlling managerial opportunism or negative earnings management, the effect of earnings management on firm value will be more positive or less negative. Therefore, the main research question for this study is whether corporate governance can affect the relation between earnings management and firm value.

The impact of corporate governance can be examined based on firm-level analysis. Corporate governance data in Thailand are provided by the Thai Institute of Directors (Thai IOD). The Thai IOD has collected data about the corporate governance of firms listed on the Stock Exchange of Thailand. Instead of reporting numerical CG scores, the Thai IOD reports CG performance in terms of number of stars. Each firm is classified as 5-star, 4-star, or 3-star based on their corporate governance performance.

Research Objective:

1. To examine the role of corporate governance on the level of earnings management in Thai stock market.

2. To examine how corporate governance has an impact on the effect of earnings management in Thailand.

Expected outcomes:

1. Corporate governance can help in reducing the average level of earnings management.

2. The effect of earnings management on firm value is more positive (or less negative) for the firms with higher level of corporate governance.

The rest of the paper is organized is follows. Chapter 2 will summarize related theories and literature about earnings management and corporate governance, as well as, previous studies about the effect of corporate governance and earnings management. Chapter 3 will draw a theoretical model about earnings management and corporate governance and

conclude the research hypotheses that are examined empirically in this paper. Moreover, chapter 4 will explain about data and methodology used in testing research hypotheses. Furthermore, the empirical result and analysis are presented in chapter 5. Finally, chapter 6 provides conclusion and recommendation from this study, as well as suggestion for future studies.

Chapter 2 Literature Review

This chapter summarizes related literatures about earnings management and corporate governance. The first section is literatures about earnings management. It provides an overview concept of earnings management and discusses about how to measure the level of earnings management empirically. The following sections discuss about the background of corporate governance, which can be the good controlling mechanism to restrain managerial opportunism. Finally, the previous studies about the relation between earnings management and corporate governance are discussed.

2.1 Earnings Management Literature

Earnings management usually refers to the situation where managers use their own discretion in financial reporting in order to alter the reported number (Healy and Wahlen, 1999). There are numerous studies about earnings management in accounting and financial research. In those studies, the different measurements of earnings management are used in the analysis. One of the most popular measurements is known as discretionary accruals that are used to measure management discretion in earnings reporting using the accrual accounting technique. The use of accrual-based earnings management in accounting and financial literatures becomes well-known since Healy's (1985) paper. Many researchers have used this accrual-based earnings management measurement in their finance and accounting researches. Thereafter, the original

total accruals has modified until it is known as modified Jones' discretionary accrual model (Jone, 1991; Dechow, Sloan, and Sweeney, 1995).

Besides using managerial discretions, like accruals, to manipulate the reported earnings, firms may engage in earnings management by avoiding reporting losses or earnings decrease. Burstahler and Dichev (1997) find that there is abnormally low number of firms reporting small losses or small decreases in their earnings, whereas there is abnormally high number of firms reporting small positive earnings or small increases in their earnings.

Another recent popular measurement of earnings management is called 'Real earnings management'. Real earnings management is when managers use their discretion to manipulate firm's real activities instead of financial reporting. One of the important examples of this real activities manipulation is about the research and development (R&D) expenses (Baber, Farefield, and Haggard, 1991; Bushee, 1998). Other examples of real earnings management activities are sale manipulation, discretionary expenditure reduction, and overproduction (Roychowdhury, 2006).

For accruals-based earnings management, Healy (1985) has studied about the use of managerial accounting decision to take advantages of higher managerial compensation. Using earnings-based bonuses encourages managers or executives to report higher earnings and get more benefits in their compensation plan. He finds that there is strong association between this earnings-based bonuses scheme and the size of accounting accruals that is the proxy of earnings management. Managers use accruals to increase reported earnings when the bonuses scheme allow them to get higher benefits and managers also use accruals to decrease report earnings when their bonuses have reached the bound. The use of accounting accruals as the proxy to capture

management discretion over earnings becomes popular in later research about earnings management. However, total accruals consist of discretionary and non-discretionary accruals. Using total accruals to measure earnings management implies that non-discretionary accruals are constant overtime. DeAngelo (1986) studies the use of earnings management for the benefit in management buyout. Managers may use their discretions in order to manipulate the reported earnings, which may alter a stock price. This earnings manipulation can help them to purchase common stocks with lower price. He finds that managers have understated firm's earnings and successfully achieve the management buyout at the lower price. In this study, the change in total accruals from previous period is used as the proxy of discretionary accruals. However, this implies that the past accruals are used as the normal level of total accruals. The change of total accruals from previous period will reflect the deviation from the normal level.

Jones (1991) studies about the use of earnings management during the investigation for import relief supporting. During the period of study in United States, the government has granted the import relief subsidy in order to support the local business. Firms applying for this support needs to prove that they are damaged from the imports during that period. Jones finds that firms have used the accruals to reduce their earnings during the investigation. The accrual-based earnings management is measured by discretionary accruals, which is the difference between total accruals and non-discretionary accruals (normal level of accruals). The linear regression technique is applied in order to measure the expected normal level of total accruals instead of using previous accruals. The total accruals are regressed on the factors that affect the level of accruals, which are the change in revenues and the level of property, plant, and equipment. The residual terms from this regression is the part of total accruals that cannot be explained by the above factors and will be used as the proxy for

discretionary accruals. The Jones model becomes the most popular model that is commonly used in the literature about earnings management (McNichols, 2000).

.   DeFond and Jiambalvo (1994) have proposed the use of cross-sectional regression to estimate the discretionary accruals. The cross-sectional regression is estimated for each industry. The deviation of firm's accruals from the normal level of accruals estimated by all firms within the industry is used as discretionary accruals. Dechow, Sloan, and Sweeney (1995) have proposed the modification to the original Jones model. The Jones model uses the change in revenue as one factor to determine the normal level of accruals or non-discretionary accruals. However, the modified Jones model will exclude the change in net accounts receivable from the change in revenues in order to include the effect of change in net account receivable in the discretionary accruals. In the other word, the modified Jones model uses the change in cash revenue instead of the change in total revenues as in the original Jones model. The use of Jone's discretionary accrual model. Discretionary accruals are estimated from the deviation from the normal level of accruals, which is estimated from time-series regression. This estimation implies that the accruals are stationary over time

Bartov, Gul, and Tsui (2001) have evaluated various discretionary accruals model to see their ability to detect earnings management. They use both univariate test and multiple logistics regression in order to justify which model can distinguish between firms with unqualified audit report and firms with qualified audit report (that is the sign of managerial earnings management). They find that most of time-series models, including original Jones model and modified Jones model, cannot significantly distinguish between those firms. However, cross-sectional Jones model and cross-sectional modified Jones model

can successfully distinguish those firms with qualified audit report from those with unqualified audit report.

Dechow and Dechev (2002) study about the quality of accruals and earnings. They discuss that the quality of accruals is associated with the estimation error of accruals. In order to capture this estimation error, the regression model on the accruals is estimated using past, present, and future operating cash flow as explanatory variables. The residuals from this regression reflect the quality of accruals. Kothari, Leone, and Wasley (2005) introduce the performance-matched discretionary accruals. The deviations from the normal level of accruals or non-discretionary accruals based on Jones and modified Jones model may not be totally from the management discretion but from the change in firm performance. Therefore, the discretionary accruals computed from modified Jones model will be subtracted by the discretionary accruals of matching firms in order to control the effect of performance change. The matching firm is another firm in the same industry with the closest return on assets (ROA).

In the recent paper, Dechow et al. (2012) have improved the accrual-based earnings management model by including the information about the reversal of accruals. Previous researches have shown that the accruals from one period will reverse in another period in another period. Accrual-based earnings management measurement usually requires the regression model to estimate the normal level of accruals. Discretionary accruals are the deviation from this normal level, which can be measured by the residual from the regression. Therefore, including these reversals in the regression can significantly improve the power of test.

Another measurement of earnings management level as the variation from accrual-based model is aggregate earnings management measurement proposed by Leuz, Nanda, and Wysocki (2003) in their study about investor protection. They use aggregate earnings management to capture the earning management level of each country and they find that there is a relation between country investor protection level and aggregate earnings management. This aggregate earnings management measurement is the country measurement that combines both earnings smoothing measures and earnings discretion measures. Aggregate earnings management is the combination of four earnings management measurement, which are the ratio of standard deviation between reported earnings and cash flow from operation, the correlation between accruals and operating cash flows, the magnitude of accruals, and the ratio of small reported profits and small reported losses. The country median level of each measurement will represent the country level and they will be ranked among countries in each measurement. The aggregate earnings management is the average of the ranks of these four measurements.

For real earnings management, Baber, Fairfield, and Haggard (1991) study about managerial discretion in R&D expenditure for United States industrial firms. They find that the R&D expenditures are significantly lower when firms would like to report positive earnings or higher earnings from previous year. This evidence implies that manager tries to manipulate the reported earnings by cutting R&D expenses if they want to increase reported earnings to meet some target level of profit. Bushee (1998) has examined the effect of stock trading turnovers and the role of institutional investors on the reduction of R&D to reach higher reported earnings. If investors concerns about long-run performance of firms, it should be less incentives for managers to cut the investment in R&D in order to report higher current earnings. The results show

that the likelihood of cutting R&D is lower when there are higher portion of institutional ownership. However, if those institutional investors engage more in momentum trading strategy, the probability of R&D reduction will be higher. This implies that managers have more incentive to reduce R&D investment if investors have concerned on short-term trading, like higher trading turnover or using momentum trading strategy, rather than long-term performance.

Roychowdhury (2006) has studied about manager's manipulation on real activities in order to avoid reporting negative earnings. He has used three manipulation methods to figure out the level of earnings management. First, sales manipulation can be done by extending credit term or giving high price discounts. If managers would like to manipulate the reported earnings, they can use sale manipulation to generate unsustainable sales and boost up the reported revenues. The second manipulation is the reduction of discretionary expenditures. Discretionary expenditures are expenses that can be influences by managers like R&D expenses or advertising expenses. Managers can manipulate reported earnings by reducing these discretionary expenses. The third one is overproduction. Managers can increase the production level intentionally in order to reduce the fixed overhead costs and lower reported cost of goods sold.

Many studies about earnings management have pointed out that earnings management are from the opportunistic behavior of managers. In the other word, managers use earnings management as a tool in order to transfer wealth to themselves, for example in form of compensation plan. Healy (1985) shows that managers use earnings management to increase reported earnings in order to get more bonuses in their compensation plan. DeAngelo (1986) reports that managers use income-decreasing accruals to understate reported earnings

so that they can implement the management buyout program with cheaper stock price.

Baker, Collins, and Reitenga (2003) examine and report that stock options compensation plan can creates an incentive for managers to use discretionary accruals to decrease reported earnings and stock price in order to get stock options with lower exercise price in their compensation plan. Cheng and Warfield (2005) propose that the equity incentives for managers are also the incentives for them to engage in earnings management. These managers have stock-based compensation and their wealth links to future stock performance. Therefore, they use earnings management to adjust the reported earnings to meet market expectation in order to maintain the stock price level.

Bregstresser and Philipon (2006) have discussed that pay-per-performance compensation plan provides the incentives for mangers to do earnings management. In the firm with CEO compensation is tied to the value of common stock or stock options, there will be more use of discretionary accruals to manipulate reported earnings. Kuang (2008) also finds that performance-vested stock options (PVSOs) in United Kingdom are also the incentive for managers to manipulate reported earnings. Managers whose compensation plan is closely related to PVSOs have engaged more in earnings managements.

However, there are some studies that provide the argument to support earnings management. Sometimes, accounting reports are not effective enough to communicate information to investors (Healy and Palepu, 1995). Therefore, earnings management can be used as a tool to communicate additional information about expected future earnings. Dutta and Gigler (2002) have developed the model in order to justify the benefit of earnings management. In the model, they show that the shareholders wealth could be lower if the potential

of earnings management is restricted by accounting standard and auditing process. Therefore, under the restriction, the benefit of earnings management is reduced as it is more costly for the manager to communicate trustful forecasting.

Watts and Zimmerman (1990) have discussed about how managers use their discretions in earnings reports. Managers can exercise their discretions for their own benefits but as costs for other parties. This situation is known as opportunistic behavior. However, managers can also exercise their discretions on accounting reports for benefits of firms and shareholders. For example, they use income-increasing report in order to avoid debt covenant problems and reduce cost of technical default.

Magrath and Weld (2002) discussed the benefit of earnings management to the firm value. Managers can use earning management to reduce the volatility of earning. This can help to reduce the level of firm perceived risks by investors and increase the value of the firm. Therefore, managers who have engages in earnings management have followed the value maximization principal. Ning (2006) has also argued that earnings management is not fraud because it is done within legitimate constraint. Moreover, the earnings management may create the misrepresentation of earnings reporting but it does not misrepresent the firm economic value in terms of total value of asset, liabilities, and equity. Jiraporn et al. (2008) have studied about earnings management, corporate governance, and firm value in United States. They provide the empirical evidence using the data of United States firms and find that earnings management is not negative to firm value.

In summary, there are two broad measurements of earnings management activities, which are accrual-based earnings management and real earnings management. Moreover, earnings management is perceived negatively

in many previous studies as it is usually from managerial opportunism. Managers can use their discretions to manipulate reported earnings for their own benefits e.g. to secure their position, or to earn more benefits from a compensation plan. However, some papers have argued that some earnings management can be informative and positive to firm value. In this perspective, managers use earnings management for a benefit of firm or to communicate some earnings forecasting to public.

2.2 Corporate Governance Literature

Jensen and Meckling (1976) propose principal-agency relationship within a firm to understand the agency problems. Managers can take their private benefits out of firms' asset by consuming perquisites. They show that the levels of perquisites taken as private benefits by managers are related to their fraction of ownerships. If managers hold less fraction of the firm, they will take more private benefits because they have less incentive to maximize shareholders' wealth. There will be the costs incurring from this conflicts in principal-agency relationship between managers and shareholders, which is known as agency costs. These agency costs have included monitoring costs, bonding costs and residual losses.

Fama and Jensen (1983) discuss this agency problem more in the perspective of the separation between ownership and control. The firm controlling is in the hand of managers whereas ownership belongs to shareholders. When managers make decision for the firms, their decisions may be different from the goal of the firms to maximize shareholder wealth because managers do not share the wealth with shareholders. In this situation, the agency problem is arising and there is a need for the effective controlling of

managerial decisions like corporate governance mechanism. La Porta et al. (2000) also discuss about the problem that the benefits of outside shareholders are expropriated by inside or controlling shareholders. Corporate governance is the mechanism for outside investors to protect themselves from this appropriation. Legal investor protections are also needed in order to make this appropriation become more difficult.

Johnson et al. (2000) use the period during Asian financial crisis to show that the significant decrease in asset prices and exchange rate is partly from the effect of weak corporate governance. During worse expectation about future economies, the countries with low corporate governance mechanism and shareholder rights protection are more vulnerable to the problem of managerial expropriation of private benefits. This results in decreasing of asset prices dramatically in those countries. Therefore, the corporate governance can play the important role to determine the extent of economic problems during the crisis period.

Gomper, Ishii, and Metrick (2003) have developed Governance Index or G-index from each firm provision about shareholder rights. If the firm has more provision to restrict shareholder rights, the governance index will be higher. Therefore, firms with higher G-index are the firms with weaker shareholder rights and are named as Dictatorship firms. Firms with lower G-index have stronger shareholders rights and classified as Democracy firms. They find out that there are strong negative relationship between firm values and G-index. This means the firms with higher G-index (weaker shareholder rights) will have lower firm value measured by Tobin's Q ratio.

Beside shareholders rights, another important aspect about corporate governance is about the structure of board of director. In Beasley's (1996) study

how the board composition helps in controlling accounting fraud, the board composition has included the presence of audit committee in board of director and the proportions of outside directors. Other board structures in the studies about corporate governance are financial expertise of outside director (Park and Shin, 2004) and frequency of board meetings (Xie, Davidson, and DaDalt, 2003).

2.3 Previous Studies about Earnings Management and Corporate Governance

Beasley (1996) study the role of board director composition in controlling accounting fraud. The logit regression is used to distinguish between fraud and non-fraud firms. The result reveals that audit committee does not help to reduce the likelihood of accounting frauds, whereas outside directors can do. Larger proportions of outside board members can reduce the chance of accounting frauds significantly. Moreover, the likelihood of frauds is lower for firms with more tenure of outside directors. Park and Shin (2004) examine the effect of board composition on earnings management in Canada. They find that outside directors cannot help to restrain earnings management but firms whose directors are from financial institutions have the lower level of abnormal accruals. Moreover, firms with representation from institutional shareholders also have lower abnormal accruals. This evidence suggests that, in general, outside directors cannot help to reduce earnings management. However, board members from financial institution or institutional shareholders can effectively help to restrain the earnings management activities.

Peasnell, Pope, and Young (2005) study the role of board monitoring on earnings management for firms in United Kingkom. They find no direct effect of the role of outside director or audit committee to the level of earnings management. However, the interaction between outside director and audit

committee is statistically significant. Therefore, the effectiveness of board monitoring of outside director depends on the role of audit committee.

Xie, Davidson, and DaDalt (2003) study the role of board of directors and audit committee to restrict the level of earnings management. They find that the current discretionary accruals are smaller for firms having board members with financial backgrounds and firms whose board and audit committee have meetings more frequently. This evidence supports the role of board and audit committee to constrain managerial opportunism with earnings management.

Ahmed, Hossain, and Adams (2006) perform the analysis about the effect on corporate governance on annual accounting earnings informativeness using the data from New Zealand. The result reveals that the earning informativeness is inversely related to board size but is not related to outside directors.

Abdul Rahman and Ali (2006) have studied the relation between board size and earnings management for firms listed in Malaysian stock market. They use cross-sectional modified Jones model to estimate discretionary accruals as the measurement of earnings management. They find the positive association between the size of earnings management and the size of the board of directors. This evidence implies the ineffectiveness of larger-size board.

Shen and Chih (2007) study the effect of corporate governance and earnings management in Asian countries. They find that firms with good corporate governance have engaged less in earnings management activities. Moreover, firms with larger size and higher growth have engaged more in earnings management for both earnings smoothing and earnings aggressiveness. However, good corporate governance can help to mitigate these effects in earnings management.

Abed, Al-Attar, and Suwaidan (2012) have studied the effect of corporate governance and earnings management in Amman Stock Exchange (Jordan). They also use modified Jones model to estimate discretionary Accruals. The result is different from other countries because there is no association between earnings management and corporate governance mechanism. They explain this result as the unique characteristics of Jordanian firms where the majority of firms are owned by identifiable group. Therefore, the agency problem is not pronounced and the role of corporate governance mechanism is less necessary in this situation.

Mohamad, Abdul Rashid, and Shawtari (2012) examine the role of corporate governance in reducing earnings management in Malaysian government-linked companies. They find that some corporate governance aspect has the impact to the level of earnings management. The duality role in the company whose CEO and Chairman are the same can lead to the opportunistic behavior and higher earnings management activities. Firms with non-duality have lower level of discretionary accruals. Moreover, more number of board meeting also help to reduce earnings management.

Wang, Sheu, and Chung (2011) study the role of corporate governance to reduce earnings management as the result of Sarbanes-Oxley Act. The results reveal that the implementation of Sarbanes-Oxley Act can help to increase the integrity of reported financial statements. Cornett, McNutt, and Tehranian (2009) have shown the evidence that the corporate governance can significantly affect the level of earnings management for large U.S. banks. Some corporate governance mechanism like board independence can help to reduce the earnings management because managers have lower ability to influence over the board.

However, performance pays can motivate the CEO to manage earnings to get higher compensations.

Hazarika, Karpoff and Nahata (2012) show the role of internal corporate governance to restrict managers' behavior in earnings management. They find the evidence that earnings management is positively related to CEO's forced turnover. They conclude their result as the reaction of the board of director to prevent too-aggressively earnings management before further external consequence arise.

In conclusion, the previous studies have shown the evidence to support the role of corporate governance in reducing managerial opportunism to manipulate reported earnings. Most of these studies use accrual-based earnings management, which is usually based on modified Jones model. Corporate governance have played the important role in reducing the level of earnings management based on previous researches. The general explanation of these evidences is corporate governance can help to restrain managerial opportunism.

However, the previous studies have focused on the role of corporate governance to reduce the level of earnings management. If there are both good earnings management and bad earnings management, corporate governance should help in reducing bad earnings management rather than good earnings management. Therefore, the role of corporate governance is not only to reduce the level of earnings management but also to reduce its negative effect on firm value.

Chapter 3 Theoretical Model and Research Hypotheses

From the literature review discussed earlier, earnings management can be structured into good or informative earnings management and bad or opportunistic earnings management. It is difficult to clarify which earnings management is informative or adverse. However, if there is a mechanism that can help to control the opportunistic behaviors, it should be able to reduce the bad earnings management. The earnings management will be more informative and beneficial to firm value. Therefore, the relation between earnings management and firm value should be more positive or less negative in firms with better corporate governance.

3.1 Theoritical Model

Conceptually, the firm value is the present value of expected future cash flow discounted by appropriate discount rate (William, 1938). Based on this viewpoint, the firm value is the function of future cash flow and discount rate. The discount rate is known as the cost of capital that reflects the risk of the firms, as follows;

$$V = \sum_{t=1}^{\infty} \frac{CF_t}{(1+r)^t} = \int_0^{\infty} CF_t e^{rt} dt$$

$$V = f(CF, r)$$

(1)

From the above equation, *V* represent the current firm value. CF_t is the cash flow at time t in the future and *r* is the cost of capital of the firm. Therefore, overstating or understating the current income through earnings management should have no direct effect on firm value. However, Dechow, Kothari, and Watts (1998) have proposed and provided evidence to support that current earnings are a good forecast of future cash flows based on the cross-correlation and serial correlation structure between earnings and cash flows. This evidence provides the hint that managers can use their discretions in order to improve earnings in formativeness (Watt and Zimmerman, 1986). This will make earnings management become desirable and beneficial to firm value. However, it is also possible that managers use their discretions in reporting earnings so that they can take private benefits. For example, managers may overstate the earnings so that they can get more performance-based compensation like bonuses (Healy, 1985; Baker, Collins, and Reitenga, 2003). In this viewpoint, earnings management will be negative to firm value.

Therefore, earnings management can be characterized by both good and bad perspective. Although earnings management is usually from opportunistic behavior of managers, it is possible that earnings management can be value-added. Earnings management is composed of good earnings management and bad earnings management.

$$EM = EM_G + EM_B \tag{2}$$

From the above equation, *EM* is earnings management. EM_B is bad earnings management that is usually from opportunistic behaviors of managers. Manager have involved in this kind of earnings management for their own benefit. Therefore, firms with high earnings management can be perceived as the riskier firms and risk-averse investors will require more expected return to compensate, which results in higher cost of capital for the firm and finally deteriorate firm value. EM_G is good earnings management or management that creates value for firms, which can be called informative EM or value-added EM. In this case, managers will use earnings management to communicate some private information to the public. Even though there might be a cost of signaling this information, the benefit from signaling is higher and will result in the improvement of firm value.

Then, suppose that there are controlling mechanisms that can help to reduce bad earnings management. In another word, the existence of controlling mechanism will reduce the opportunistic behavior of managers in managing the earnings. Therefore, the level of bad earnings management should be lower under this controlling mechanism as follows;

$$
\begin{aligned}
EM_B &= f(EM_B^*, X) \\
EM_B &= EM_B^* + \beta X
\end{aligned}
\tag{3}
$$

EM_B* is the level of bad earnings management in the absence of controlling mechanism. *X* is the controlling mechanism. β represents the relationship between controlling mechanism and bad earnings management, which β is always negative, meaning that higher controlling level will help to

reduce bad earnings management. In the same way, the good earnings management can be characterized as follows;

$$EM_G = f(EM_G^*, X)$$
$$EM_G = EM_G^* + \gamma X \qquad\qquad (4)$$
$$EM_G = EM_G^*$$

$EM_G{}^*$ is the level of good earnings management in the absence of controlling mechanism. γ represents the relationship between controlling mechanism and good earnings management. Because good earnings management should not be affected by the controlling mechanism, the existence of controlling mechanism will not alter good earnings management; so γ equals to zero. Combining equation 2-4, it can be shown relationship between earnings management and controlling mechanism as follows.

$$EM = EM_G + EM_B$$
$$EM = EM_G^* + EM_B^* + \beta X \qquad\qquad (5)$$
$$EM = EM^* + \beta X$$

EM^* is the level of earnings management in the absence of controlling mechanism. This equation shows the relationship between earnings management and controlling mechanism, which is expected to be negative. La Porta et al. (2000) have discussed about the important of corporate governance to reduce the managerial opportunism to expropriate private benefits from firms. They also mentioned that legal investor protection is like external corporate governance

mechanism. Leuz et al. (2003) have studied and provided the evidence that investor protection can reduce the earnings management aggregate. Therefore, corporate governance should provide the important role in a firm as controlling mechanism to reduce managerial opportunism to do earnings management that deteriorate firm's value.

Based on the definition of good earnings management and bad earnings management, the relationship between firm value and the level of earnings management can be as follows.

$$V = f(EM)$$
$$V = f(EM_G, EM_B) \tag{6}$$
$$V = \alpha_0 + \alpha_1 EM_G + \alpha_2 EM_B$$

V represents firm value. α_0 is the mean level of firm value based on other factors beside earnings management. α_1 is the relationship between good earnings management and firm value, which is positive by definition. α_2 is the relationship between bad earnings management and firm value, which is negative.

In order to show the linkage between the role of controlling mechanism and firm value, the different scenarios about the level of controlling mechanism are established. The first scenario is when there is no controlling mechanism at all. Therefore, the value of firm will depend on the original level of good and bad earnings management as follows.

$$EM_G = EM_G^*$$
$$EM_B = EM_B^*$$
$$V_1 = \alpha_0 + \alpha_1 EM_G^* + \alpha_2 EM_B^* \tag{7}$$

The second scenario is the situation that the controlling mechanism has existed and helped to reduce the level of bad earnings management. The value of firm will be as follows.

$$EM_G = EM_G^*$$
$$EM_B = EM_B^* + \beta X$$
$$V_2 = \alpha_0 + \alpha_1 EM_G^* + \alpha_2 (EM_B^* + \beta X) \tag{8}$$

The third scenario has assumed that the controlling mechanism is very effective so that all bad earnings management is totally eliminated. The value of firm will depend solely on the good earnings management as follows.

$$EM_G = EM_G^*$$
$$EM_B = 0$$
$$V_3 = \alpha_0 + \alpha_1 EM_G^* \tag{9}$$

From above three scenarios, they can be summarized in equation 10. The firm value in the third scenario (V3) is highest as there is no presence of bad earnings management because it is totally eliminated by the existence of the controlling mechanism.

$$V_1 = \alpha_0 + \alpha_1 EM_G^* + \alpha_2 EM_B^*$$
$$V_2 = \alpha_0 + \alpha_1 EM_G^* + \alpha_2 (EM_B^* + \beta X) \qquad\qquad (10)$$
$$V_3 = \alpha_0 + \alpha_1 EM_G^*$$

The firm value in the first scenario (V_1) is lower from the negative effect of bad earnings management ($\alpha_2 < 0$). The firm value in the second scenario (V_2) is between V_1 and V_3 because the interaction effect from corporate governance (βX) helps to reduce the bad earnings management ($\beta < 0$) and increase firm value.

3.2 Research Hypothesis

Some previous researches have shown the evidence that earnings management is from managerial opportunism whereas some studies have argued that it can be beneficial and managers use it to communicate some information about the future earning forecasting. Therefore, earnings management can both positively and negatively affect to the firm value. Nowadays, most firms deploy the performance-based compensation plan for firm executives and this compensation plan motivates firm executives to manipulate earnings for their own benefit (Kolb, 2006). Therefore, in general, earnings management should be negatively affect to firm value because managers tend to use it for their own private benefits rather than to communicate information.

However, if there are good controlling mechanisms, this should help to reduce managerial opportunism. Fama and Jensen (1983) proposed that firms need to have such a good controlling mechanism in order to reduce the agency problem when there is the separation between ownership and control. This

controlling mechanism can be gauged internally in each firm based on the level of their corporate governance or CG. Firms with good governance give the importance to the transparency and shareholder rights. In such firms, managerial opportunism is less likely because managers are restricted by the corporate governance scheme. Therefore, the first hypothesis for this study is as follows.

Hypothesis I: The level of earnings management is lower in firms with higher level of corporate governance.

If there are both good earnings management and bad earnings management, there is no logical explanation why corporate governance should reduce good earnings management. Good earnings management is informative and not from managerial opportunism. Therefore, corporate governance should help in reducing bad earnings management that is from managerial opportunism rather than reducing good or informative earnings management. With this argument, the second research hypothesis is examined as follows.

Hypothesis II: The relation between earnings management and firm value should be more positive (or less negative) for the firm with higher level of corporate governance.

Chapter 4 Research Design

From the theoretical model and research hypotheses discussed in previous chapter, the empirical research design is required to provide the evidence to support that model and examine the research hypotheses. In this chapter, the research design including empirical data and research methodology about how to test the research hypothesis are discussed in details.

4.1 Empirical Data

The data used in this research is mainly collected from Datastream based on WorldScope database. The data is from all firms listed in the Stock Exchange of Thailand during 2008-2011. The accounting data used in this study includes total asset, total equity, total debt, market value of equity or market capitalization, total revenue, property plant and equipment, total current assets, total current liabilities, cash and equivalent, short-term debts, and total depreciations. Firms in financial industries and firms with incomplete data are excluded from the analysis. Finally, there are 1,748 firm-year observations.

The firm value is measured by Tobin's Q (Yermack, 1996; Jiraporn et al., 2008), which is the ratio between the market value of a firm and the book value of a firm. In the other word, Tobin's Q is the market value of a firm scaled down by its book value. More of this ratio implies the firm can create more value added to its book value.

The accrual-based earnings management measurement is used in this research. The discretionary accruals are used as the measurement of earnings management in this study. First, the total accruals are calculated by

$$Accruals_i = \left(\Delta CA_i - \Delta Cash_i\right) - \left(\Delta CL_i - \Delta STD_i - \Delta TP_i\right) - DEP_i \tag{11}$$

Accrual or total accrual is computed from a change in non-cash current assets less a change in non-debt liabilities and deducted by depreciation expenses. However, this accruals cannot be the proxy for earnings management because accruals are normal results of accouting records. In order to measure earnings management, the abnormal level of accruals needs to be determined. These abnormal accruals are known as discretionary accruals, which are computed from cross-sectional modified Jones model. Jones (1991) has introduced the way to measure discretionary accruals as the difference between expected accruals and actual accruals. Thereafter, total accruals are used to estimate the discretionary accrual based on the following regression.

$$\frac{Accrual_i}{Asset_{t-1}} = \beta_0 \frac{1}{Asset_{t-1}} + \beta_1 \frac{\Delta REV_t - \Delta REC_t}{Asset_{t-1}} + \beta_2 \frac{PPE_t}{Asset_{t-1}} + \varepsilon_{it} \tag{12}$$

From the above equation, *Asset* is total assets, *REV* is total revenue, *REC* is the receivables and *PPE* is property, plant, and equipment. *Accrual* is computed based on equation 11. The regression based on equation 12 is estimated year-by-year for each industry to minimize the effect of time-series

and cross-sectional variation in accounting data (DeFond and Jiambalvo, 1994). The residuals from the above regression are used as discretionary accruals.

The controlling factors that may affect the firm market value are capital structure, firm size, and firm growth. Capital structure is a factor that may affect firm value. Although there are a numerous arguments about the effect of capital structure to firm value, many theories support that the financing decisions can affect the value of firms. Those theories include agency theory (Jensen and Meckling, 1976), signaling theory (Ross, 1977), and trade-off theory (Bradley, Jarrell, and Kim, 1984). The capital structure will be measured by the leverage or debt ratio, which is the ratio between total debt and total asset.

Firm size can also affect the firm value. Hirschey and Spencer (1992) have provided the evidence for the important of the size effect to market valuation of fundamental factors. The logarithm of total asset is used as the control variable for the size effect in the regression model.

Firm growth affects the market value of firm as the investors will include the growth rate into the stock value as in the constant-growth dividend discount model (Gordon, 1959). The firm growth rate is computed by the percentage change of firm total asset.

Corporate governance data in Thailand is provided by Thai Institute of Director (Thai IOD). Thai IOD has collected the data about the corporate governance of firms listed in the Stock Exchange of Thailand. Instead of reporting CG score, Thai IOD has reported the CG performance in term of a number of stars. The firms in the best group of corporate governance are classified as 5-star group. The following group is reported as 4-star and 3-star respectively. None of firm is reported as 1-star or 2-star. However, there are some firms where data is reported as "Not Available".

4.2 Hypothesis Testing Methodology

The first research hypothesis is to examine the relation between the level of earnings management and corporate goverannce. Earnings managmeent is based on the absolute value of discretionary accruals as discussed in the previous section. The reason to use absolute value as we concern for only the magnitude or the size of discretionary accruals regardless of they are income-decreasing accruals or income-increasing accruals.

However, the corporate governance data in Thailand is not in form of numerical score but in form of catagorical data. Therefore in order to examine whether the level of discretionary accruals are different across various CG-star groups, the one-way ANOVA technique is used. If the null hypothesis of mean indifference across various groups is rejected, it means there are significantly different in earnings management level among various CG-star groups. Thereafter, the pair-wise comparison can be further examined to see the difference in earnings management level between each pair of CG-star groups.

The second research hypothesis to examine how corporate governance has an impact on the effect of earnings management on firm value. The main statistical technique is this research is the multiple linear regression model where firm value is the dependent variable and earnings managements, as well as, a set or control variables, are the independent variables. In order to test the different in the effect of earnings management on firm value for various level of corporate governance the regression analysis with the dummy interaction term is employed.

The effect of earnings management to firm value is examined based on the following regression model.

$$FV_i = \beta_0 + \beta_1 EM_{it} + \sum_{j=1}^{m} \gamma_j CONTROL_{tt} + \varepsilon_{it}$$

$$FV_i = \beta_0 + \beta_1 EM_{it} + \gamma_1 DR_{it} + \gamma_2 SIZE_{it} + \gamma_3 GROWTH_{it} + \varepsilon_{it} \qquad (13)$$

where *FV* is the value of the firm i at time t, which is measured by Tobin's Q or the ratio between the market value of the firm and its book value. *EM* is the earnings management measurement, which is measured by the absolute total accruals and the absolute discretionary accruals. *CONTROL* is a set of control variables that can affect to the firm value, which are *DR, SIZE* and *GROWTH*. *DR* is the firm's debt ratio representing the leverage or capital structure of the firm. *SIZE* is the firm size measured by the natural logarithm of firm's total assets. *GROWTH* is the firm's growth rate of total assets.

In order to examine the effect of corporate governance in the relationship between earnings management and firm value, corporate governance score is included in the above equation as the interaction effect as follows.

$$FV_i = \beta_0 + \beta_1 EM_{it} + \sum_{j=1}^{m} \delta_i D_{ji} \times EM_{it} + \sum_{j=1}^{m} \gamma_j CONTROL_{tt} + \varepsilon_{it} \qquad (14)$$

Where D_{ji} represents a dummy variable for j-star group of firm i. D_{ji} equals one if firm i is classified in j-star group, or zero otherwise. The coefficient β1 will represent the effect of earnings management for firms without

CG-star. There are only three star groups, which are five-star, four-star, and three-star. Therefore, δ_j will represent the incremental effect of earnings managements between firms without star and firms in j-star group. If corporate governance can act as the effective controlling mechanism to restrict opportunistic earnings management, the coefficient δ_j should be positive and statistically significant at convention level. This means the relationship between earnings management and firm value is more positive (or less negative) for firms in higher CG-star than those firms without CG-star.

Beside the regression analysis for the main analysis discussed earlier, some other supplement analyses are included in order to ensure the robustness of the result. First, the presence of heteroskedasticity can alter the result of hypothesis test of significance discussed earlier. Heteroskedasticity can result in overestimating or underestimating of the standard error of regression. Therefore, the robust standard error is used instead of the normal one to mitigate the impact of the heteroskedasticity presence in the regression analysis.

Another robustness check is to use the Fama-MacBeth regression technique. The data used in this report is collected from many firms in different years, where cross-sectional correlation can arise. Moreover, the year dummy variables can be included in the model in order to reduce the problem of time variation.

The last robustness check is about the measurement of firm value. Looking from investors' perspective, the positive effect or negative effect on firm value can reflect in term of stock returns. Therefore, the stock returns in the first year and the second year after knowing CG performance are used as dependent variable instead of Tobin's Q.

Chapter 5 Analysis and Result

This section includes the empirical results provided based on the research design discusses in the previous chapter. First, the description of data are reported in order to summarize the overview of empirical data. These data are later used in the analysis to examine both research hypotheses. Thereafter, additonal analysis including robustness and using stock returns instead of Tobin's Q in reported in the following section.

5.1 Data Description

The data for firm-level analysis in Thailand is collected from all firms listed in the Stock Exchange of Thailand during 2008-2011. Firms in financial industries and firms with incomplete data are excluded from the analysis. Finally, there are 1,748 firm-year observations. The descriptive data of sample firms in Thailand during 2008-2011 is reported in table 1.

Table 1: Descriptive Statistics of Sample Firms in Thailand

Year	Number of Firms	Debt Ratio	Growth Rate (%)	Total Asset (Million Baht)
2008	432	0.4409	8.276	12,479.58
2009	432	0.4336	4.020	13,458.94

2010	440	0.4352	14.768	14,606.07
2011	444	0.4507	21.411	17,370.70
Overall	1,748	0.4401	12.195	14,499.26

Source: Stock Exchange of Thailand, Datastream

The average debt ratio is around 0.44 for sample firms. The growth rate of asset is lowest at around 4% in 2009 and highest in 2011 at 21.4%. The average growth rate during the analysis period is 12.2%. The firm size measured by average total assets has increased from 12,479 million Baht in 2008 to 17,370 million Baht in 2011.

For corporate governance data, Thai Institute of Director (Thai IOD) has collected the data about the corporate governance of firms listed in the Stock Exchange of Thailand. Instead of reporting CG score, Thai IOD has reported the CG performance in term of a number of stars. The firms in the best group of corporate governance are classified as 5-star group. Therefore, the descriptive data of sample firms in Thailand classified by CG-star group is reported in table 2.

Table 2: Descriptive Statistics of Sample Firms based on CG-star

CG-star Group	Number of Firms	Debt Ratio	Growth Rate (%)	Total Asset (Million Baht)
No Star	796	0.4658	15.832	4,606.01
3 Stars	407	0.3818	7.107	5,915.79
4 Stars	416	0.4332	10.970	19,738.40
5 Stars	129	0.4884	9.756	85,731.94
Overall	1,748	0.4401	12.195	14,499.26

Source: Stock Exchange of Thailand, Thai Institute of Director

Table 2 reports the descriptive data for sample firms in Thailand classified based on CG-star. Thai IOD will report only firms getting 3-star, 4-star, or 5-star. There is no firm reported by Thai IOD as 1-star or 2-star. Therefore, No-star firms are those who got star lower than 3-star.

From the total of 1,748 firm-year observation, 796 firm-year observations are reported as No-star by Thai IOD. This group represents around 45% of total observations. The firms in no-star group are much smaller, in term of total assets, than firms with CG-star. Among CG-star firms, firms in 5-star group are much larger than firms in other groups. 5-star firms have average asset size of 85,731 million Baht. The firms in 4-star group have an average asset size of 19,738 million Baht whereas firms in 3-star group have an average asset size of only 5,915 million Baht. In overall, firms in sample group have an average asset size around 14,499 Million Baht. Only 129 firm-year observations are reported as 5-star, which represents around only 7% of total observations.

5.2 Corporate Governance and Earnings Management Level

Thai Institute of Director (Thai IOD) provides the information about corporate governance of listed firms. This corporate governance performance is reported for each firm in term of CG-star. Firms in top category are given Five CG-stars. Then, other firms are given Four CG-stars and Three CG-stars according to their corporate governance practice respectively. However, no firm is reported to be in Two CG-stars or One CG-star. Those firms are reported as "Not Available" instead.

First the effect of CG performance on the level of earnings management is determined. Earnings Management is based on the absolute discretionary accruals. The level of earnings management for each CG-star group is reported in table 3.

From table 3, the mean level of earnings management varies for each CG-star group. The earnings management is highest for firms with no CG-star and it is lowest for firms with five CG-star. The F-test is based on one-way ANOVA in order to examine the different in mean level among different CG-star groups. The test shows that there is different in mean level of earnings management for each CG-star group at 5% significant level.

Table 3: The Level of Earnings Management on Different CG-star Groups

CG-Star	Mean	Standard Deviation	F-Statistics
No Star	0.0902	0.1408	
Three Stars	0.0889	0.2856	4.82**
Four Stars	0.0657	0.0820	
Five Stars	0.0476	0.0619	

** indicate significant at 5%, * indicat significant at 1%

From table 3, the mean level of earnings management varies for each CG-star group. The earnings management is highest for firms with no CG-star and it is lowest for firms with five CG-star. The F-test is based on one-way ANOVA in order to examine the different in mean level among different CG-star

groups. The test shows that there is different in mean level of earnings management for each CG-star group at 5% significant level.

In pair-wise comparison, the level of earnings management of firms with five CG-star is significantly lower than firms with three CG-star and firms with no CG-star. Moreover, the level of earnings management of firms wth four CG-star is also significantly lower than firms with no CG-star. Therefore, it can be concluded that firms in different CG-star group have different level of earnings managements. Higher CG-star firms tend to have lower level of earnings management.

5.3 Corporate Governance and the Effect of Earnings Management

In order to examine the impact of corporate governance on the effect of earnings management, the multiple regression analysis is used. The result is reported in table 4.

Table 4: The Effect of Earnings Management on Firm Value

	Full Sample	No CG-Star	3 CG-Star	4 CG-Star	5 CG-Star
Constant	0.7434	1.9443	1.3664	-0.3419	0.9126
	(4.25)**	(6.99)**	(3.44)**	(-0.67)	(1.46)
ADA	**0.3155**	**0.0769**	**0.6156**	**1.5434**	**1.5143**
	(1.91)*	**(0.40)**	**(2.12)****	**(2.46)****	**(1.56)**
Debt ratio	0.0939	0.2133	-0.1338	-0.4927	0.0633
	(1.35)	(2.65)**	(-0.91)	(-2.05)**	(0.16)

Growth	0.0543	0.0554	0.5568	-0.0377	-0.0787
	(2.80)**	(2.93)**	(4.39)**	(-0.34)	(-0.22)
Size	0.0252	-0.0631	-0.0224	0.1130	0.0231
	(2.16)**	(-3.26)**	(-0.81)**	(3.32)**	(0.67)

Note: the number in parenthesis is t-statistics.

** indicate significant at 5%, * indicate significant at 10%

Table 4 reports the effect of earnings management and firm value. The first column reports the result for all firms in the sample. The coefficient of absolute discretionary accruals is positive and significant at 10% level. This means that there is a positive effect between earnings management and firm value. Thereafter, firms are classified into a group based on their CG-star. There are only three group of CG-star, which are 3-star, 4-star, and 5-star group. None of firms are reported to be in 1-star or 2-star group. Those firms who did not have been classified in any star groups are put into no-star group. As reported in table 4, the relation between earnings management and firm value firms with no CG-star is neutral as the coefficient of discretionary accruals is not significant at convention level. The effect of earnings management for those firms in 3-star and 4-star group is positive and significant at 5% level. Even though the coefficient of firms in 5-star group is positive and as large as 4-star group, it is not significant at convention level.

The regression analysis to examine the effect of earnings management on firm value is conducted separately between firms with CG-star and firms without CG-star and the result is reported in table 5.

Table 5: The Effect of Earnings Management between CG-star and no-star Firms

	CG-Star	No-Star	Regression with Dummy Interaction
Constant	0.0410 (0.16)	1.9443 (6.99)**	0.8180 (4.58)**
ADA	**0.8465 (2.87)****	**0.0770 (0.40)**	**0.1315 (0.70)**
Debt ratio	-0.1959 (-1.50)	0.2133 (2.65)**	0.1029 (1.48)
Growth	0.1192 (1.48)	0.0554 (2.93)**	0.0568 (2.92)**
Size	0.0772 (4.38)**	-0.0631 (-3.26)**	0.0195 (1.63)
ADA x DStar			**0.5855 (2.05)****

Note: the number in parenthesis is t-statistics.

** indicate significant at 5%, * indicate significant at 10%

The result reported in table 5 shows the difference in the effect of earnings management on firm value. The coefficient of earnings management for firm with CG-star (including 3-Star, 4-Star, and 5-Star) is 0.8465 whereas the coefficient of earnings management for firms without CG-star (possible to be 2-Star and 1-Star firms) is much lower at 0.0770. This result can partially support the role of corporate governance on the effect of earnings management. The effect of earnings management on firm value is higher (more positive) for firms with better corporate governance performance than firms with poorer corporate governance performance.

However, in order to examine whether this difference in the effect of earnings management is statistically significant, the regression analysis with

dummy interaction term is used. The dummy variable for CG-star is created whereas this dummy variable equals to one for firms with CG-star (3-Star, 4-Star, or 5-Star) or zero otherwise. The interaction term is the multiplication between CG-star dummy variable and earnings management measurement. This interaction term is added in the regression model and it is also reported in the last column of table 5. The coefficient of earnings management (EM) represents the effect of earnings management on firm value for firms without CG-star. The result is as expected. Although the effect of earnings management is still positive, it is not statistically significant at any convention level. Compared to the result in table 4, the effect of earnings management for full sample is significantly positive. This implies that the significantly positive effect of earnings management is from only firms with CG-star.

Furthermore, the coefficient of interaction term represents the difference in the effect of earnings management between firms with CG-star and firms without CG-star. This coefficient is positive and statistically significant at 5% level. This means the effect of earnings management is significantly higher (or more positive) for firms with CG-star compared to firms without CG-star.

The results reported earlier have revealed that the effect of earnings management on firm value is more positive for firms with CG-star than firms without CG-star. However, there is still no comparison of the effect of earnings management among firms with different CG-star. In order to examine this difference, the regression analysis to examine the effect of earnings management on firm value is conducted separately for firms in each CG-star group. The result of three regression models is reported in table 6.

Table 6: The Effect of Earnings Management among CG-star Firms

	3-Star	4-Star	5-Star	Dummy Interaction
Constant	1.3664 (3.44)**	-0.3419 (-0.67)	0.9126 (1.46)	0.2141 (0.81)
ADA	**0.6156 (2.12)****	**1.5434 (2.46)****	**1.5143 (1.56)**	**0.1896 (0.56)**
Debt ratio	-0.1338 (-0.91)	-0.4927 (-2.05)**	0.0633 (0.16)	-0.2191 (-1.69)*
Growth	0.5568 (4.39)**	-0.0377 (-0.34)	-0.0787 (-0.22)	0.1065 (1.33)
Size	-0.0224 (-0.81)**	0.1130 (3.32)**	0.0231 (0.67)	0.0653 (3.67)**
ADA x D4				**1.6515 (3.30)****
ADA x D5				**2.3956 (2.80)****

Note: the number in parenthesis is t-statistics.

** indicate significant at 5%, * indicate significant at 10%

From table 6, the coefficient of earnings management on firm value for firms with three CG-stars is 0.6156. This coefficient is lower compared to the coefficient of earnings management for all firms with CG-star reported earlier with the value of 0.8465 (that represents the average effect of earnings management for all firms with CG-star). The coefficients of earnings management for firms with four CG-stars and five CG-stars are 1.5434 and 1.5144 respectively. These coefficients are higher than the coefficient for firms with three CG-stars or the coefficient for all firms with CG-star. This means that the effect of earnings management is more positive for firm with five CG-star and four CG-stars compared to firms with three CG-stars or no-star.

In order to examine these differences, the regression analysis with dummy interaction term is used and the result is reported in the last column of table 6. D4 equals one if firms are in 4-star group, or zero otherwise. D5 equals one if firms are in 5-star group, or zero otherwise. The coefficient of earnings management (ADA) in the last column represents the effect of earnings management for firms with 3-star. The result shows that this coefficient is, even positive, not statistically significant at any convention level. However, The coefficients of interaction term for both 4-star and 5-star are 1.6515 and 2.3956, which are positive and significant at 5% as expected. This result also supports the research hypothesis about the impact of corporate governance on the effect of earnings management.

5.4 Additional Analysis

Robustness Check

The results reported in previous section is based on multiple regression analysis using ordinary least square (OLS) method. Because data is collected from many list firms cross-sectionally and many years, Those results may suffer from some time-series variations and cross-section variatins that break the classical assumption of regression based on econometric issues. Therefor, this section will report the results of re-estimation of the regression model in various ways and those result are reported in table 7.

Table 7: Robustness Check

	Robust Standard Error	Year Dummy	Fama-MacBeth Regression
Constant	0.8180 (4.05)**	0.9697 (5.43)**	0.8593 (14.09)**
ADA	0.1315 (0.73)	0.1559 (0.85)	0.2287 (2.99)
Debt ratio	0.1029 (1.40)	0.1043 (1.53)	0.0714 (1.53)
Growth	0.0568 (1.81)*	0.0172 (1.46)	0.0313 (2.74)**
Size	0.0195 (1.46)	0.0484 (2.53)**	0.0175 (2.96)**
ADA x DStar	**0.5855 (1.70)***	**0.4697 (1.68)***	**0.5396 (2.72)***

Note: the number in parenthesis is t-statistics.

** indicate significant at 5%, * indicate significant at 10%

The first issue is heteroskedasticity that is the violation of the regression assumption about equal variance. The presence of heteroskedasticity can make the estimation of standard error of regression incorrect and the result of hypothesis test of significance becomes invalid. To mitigate this problem, the robust standard error is used in the regression analysis instead of normal OLS standard error. The result based on robust standard error is reported in the first column of table 7. The coefficient of interaction term is still positive and significant at 10% level.

The second robustness check is to reduce the time-series variation in the testing model. The testing period covers 2008-2011 and the market value of firms are affected by the sub-prime crisis during that period. In order to reduce

this problem, the year dummy variables are included in the regression and the result is reported in the second column of table 7. The result is qualitatively similar to the result reported earlier. Although the coefficient of the interaction term is lower compared to the main result, it is still significant at convention level.

The last robustness check is to mitigate the possible effect of cross-sectional correlation problem because the data is collected from both cross-sectional and time-series. The Fama-MacBeth regression technique is employed and the result of Fama-MacBeth regression is reported in the last column of table 7. The coefficient in Fama-MacBeth is the average of year-by-year cross-sectional regressions and the standard error and test statistics are computed based on Fama and MacBeth (1973). The coefficient of the interaction term is still positive and statistically significant at 10% level. Therefore, this result does support the impact of corporate governance to the effect of earnings management on firm value.

Using Stock Return to Measure the Effect on Firm Value

In the main analysis part, Tobin's Q or the ratio between market value and book value of the firm is used to examine the effect of earnings management on firm value, However, based on investor perspective, the effect on firm value can be reflected from the return from stock investing. In order to cover this perspective, the stock returns in the following year after corporate governance star is announced are used as the dependent variable in the testing model (equation 13 and 14). The result is reported in table 8.

Table 8: Using Stock Return as A Proxy to Firm Value

	Tobin's Q	1st Year Return	2nd Year Return
Constant	0.8180 (4.58)**	0.5197 (2.55)**	1.0688 (4.20)**
ADA	0.1315 (0.70)	-0.1876 (-0.72)	-0.2141 (-0.67)
Debt ratio	0.1029 (1.48)	0.1471 (1.62)**	0.3771 (3.36)**
Growth	0.0568 (2.92)**	-0.0153 (-0.76)	-0.0257 (-0.55)
Size	0.0195 (1.63)	-0.0142 (-1.01)	-0.0545 (-3.09)**
ADA x DStar	**0.5855** **(2.05)****	**0.0611** **(0.16)**	**0.1388** **(0.30)**

Note: the number in parenthesis is t-statistics.

** indicate significant at 5%, * indicate significant at 10%

The first column of table 8 shows the result of regression with dummy interaction, similar to table 5. The second column of table 8 reports the result of regression using the stock returns in the first year after knowing CG-star as the dependent variable. The coefficient of ADA is -0.1876, which shows the negative effect of earnings management on stock returns for firms without CG-star. The coefficient of interaction term is 0.0611 representing the incremental or marginal effect of earnings management. This means that the effect of earnings managemement on stock returns is less negative for firms with CG-star compared to firms without CG-star, even though this result is not statistically significant. The result using stock returns in the second year, as reported in the third column of table 8, yields a qualitatively similar result.

Chapter 6 Conclusion and Recommendation

This study aims to examine the impact of corporate governance regarding the relation between earnings management and firm value. This is because earnings management can be both positive and negative. Therefore, the effect of earnings management on firm value is unpredictable because it depends on which type of earnings management dominates the other. Negative earnings management, as stated, stems from managerial opportunism—managers can use earnings management for their own private benefit. Meanwhile, positive earnings management stems from the use of earnings management in a beneficial way, such as communicating certain information to investors.

6.1 Conclusion

The theoretical framework of this study shows that if there is an effective mechanism for controlling managerial opportunism, the negative earnings management should be eliminated. In that case, the effect of earnings management on firm value should be more positive or less negative.

The result from the first research hypothesis shows that there is difference in the level of earnings management among firms in different CG-star groupps and this difference is statistically significant. Firms with 5-star have lowest level of earnings management. Firms with 4-star and 3-star have relatively higher level of earnings management whereas firms with no-star have

highest level of earnings management. Compared among firms getting CG-star. Firms with 5-star have significantly lower level of earnings management than firms with 3-star. This result supports the role of corporate governance in reducing managerial opportunisms in earnings managements.

However, there are both good earnings management and bad earnings management. If corporate governance can effectively reduce managerial opportunism, it should reduce bad earnings management instead of the good one. Therefore, the effect of earnings management should be less negative or more positive in firms with better corporate goverannce. This propostion is examined in the second research hypothesis. The effect of earnings management on firm value is generally positive in Thailand. The effect of earnings management on firm value can be generally positive if the positive earnings management dominates the negative earnings management.

The result of the second research hypothesis shows the role of corporate governance on the effect of earnings management. The effect of earnings management for firms with no-star are positive but not statistically significant whereas the effect of firms with CG-star is significant positive. Moreover, the difference in the effect of earnigns management is also statistically significant. Comparing only among firms with CG-star, the result is similar as the effect of earnings management for firms with 5-star and 4-star are more positive than firms with 3-star and this difference is also statistically significant.

6.2 Implication and Recommendation

Earnings Management or managerial discretions to manage reported earnings is generally perceived in a negative way. This is because earnings management is usually linked with managerial opportunism. Managers are perceived to use this for their own private benefits like their compensation plans. Many accounting scandals around the world make this issue more interesting for investors. However, some researches have proposed that earnings management can be positive if managers use it in a beneficial way. Managers can use earnings management as a way to communicate or convey certain information not available in reported earnings. Another way to use earnings management positively is to smooth the reported earnings to reduce their volatility. Therefore, earnings management can be beneficial or harmful for the firm's value based on how managers employ it.

The results in this paper have revealed the positive effect on earnings management in Thailand. One possible explanation is there is no outstanding accounting frauds, especially about earnings management, has been revealed in Thailand. Therefore, earnings management is not perceived negatively in Thailand.

However, it is no matter how earnings management is perceived positively or negatively, corporate governance provides an important role that helps to improve the effect of earning management. In Thailand, the effect of earnings management for firms with better corporate governance is more positive than firms with poorer corporate governance. This evidence clearly shows the importance of corporate governance to improve the positive effect of earnings management.

The accounting professions have discussed and improved accounting standards to provide more meaningful accounting figures and to reduce

managerial discretion in the report of earnings. The evidence from this study shows that managerial discretion, such as earnings management, is not actually unfavorable. Some earnings management is perceived positively and results in a positive effect on firm value. In the firms with good governance, shareholders rights should be well-protected and they will be less vulnerable to opportunistic behaviors in earnings management. In this case, earnings management can be used in a favorable way, for example, to reduce earnings volatility or to convey information about future earnings by managers. Therefore, encouraging good corporate governance is as important as improving accounting rules and standards in order to restrain the negative earnings management.

Each firm can improve its corporate governance by adjusting its practices and provisions to protect the rights of minority shareholders, as well as improving their board effectiveness, for example, by having more independent directors with a financial background (including financial accounting) or meeting more frequently. For regulator, they should promote corporate governance practices among listed firms in order to ensure that managerial opportunism is minimized and shareholders' rights are well protect. Each firm can promote shareholders rights by improving the transparency in their decision and information disclosure. Shareholders should have the rights to be informed with a fair knowledge about the firm's status. Any activities having the impact to shareholders rights should be disclosed transparently. Moreover, shareholders should have the rights to be heard. They should be able to participate in shareholders meeting freely. Any mechanism that can create the obstacle for this participation should be eliminated.

6.3 Future Researches

In order to extend the empirical evidence on this topic, other measurements of earnings management can be used to see whether the results are similar to this study. There are other types of accrual-based earnings management, such as performance-matching discretionary accruals or discretionary accruals with reversal. Moreover, if earnings management stems from managerial opportunism, managers will use not only accruals but also other manipulations of firm operating activities, which is known as real earnings management. The examples of these real earnings management are, for example, to manipulate discretionary expenses such as research and development or advertising expenses, to manipulate the timing of asset disposition, or to overproduce and sell.

Another possible extension of this research is to find a way to create a distinction between good and bad earnings management. Bad earnings management comes from managerial opportunism and should be negative for the firm's value. Good earnings management is expected to use other beneficial methods and should be positive for firm value. It can be started from examining the different types of earnings management, e.g. income smoothing, income-increasing accruals, income-decreasing accruals, loss avoidance, manipulating of discretionary expenses such as R&D expenses, timing the period to sell assets, and oversell or overproduction, in order to see whether they are positive or negative in relation to the firm's value.

Reference

Abdul Rahman, R., and Ali, F. 2006. Board, Audit Committee, Culture and Earnings Management: Malaysian Evidence. **Managerial Auditing Journal.** 21 (7): 783-804.

Abed, S., Al-Attar, A., and Suwaidan, M. 2012. Corporate Governance and Earnings Management: Jordanian Evidence. **International Business Research.** 5 (1): 216-225.

Ahmed, K., Hossain, M., and Adams, M. 2006. The Effects of Board Composition and Board Size on the Informativeness of Annual Accounting Earnings. **Corporate Governance: An International Review.** 14 (5): 418-431.

Baber, W., Farefield, P., and Haggard J. 1991. The Effect of concern about Reported Income on Discretionary Spending Decisions: The Case of Research and Development. **Accounting Review.** 66 (4): 818-829.

Baker, T., Collins, D., and Reitenga, A. 2003. Stock Option Compensation and Earnings Management Incentives. **Journal of Accounting, Auditing and Finance.** 18 (4): 557-592 .

Bartov, E., Gul, F., and Tsui, J. 2001. Discretionary-Accruals Models and Audit Qualifications . **Journal of Accounting and Economics.** 30 (3): 421-452.

Beasley, M. 1996. An Empirical Analysis of the Relation between the Board of Director Composition and Financial Statement Fraud. **Accounting Review.** 71 (4): 443-465.

Bergstresser, D., and Philippon, T. 2006. CEO Incentives and Earnings Management. **Journal of Financial Economics.** 80 (3): 511-529.

Bradley, M., Jarrell, G., and Kim, E. H. 1984. On the Existence of an Optimal Capital Structure: Theory and Evidence. **The Journal of Finance.** 39 (3): 857-878.

Burstahler, D., and Dichev, I. 1997. Earnings Management to Avoid Earnings Decreases and Losses. **Journal of Accounting and Economics.** 24 (1): 99-126.

Bushee, B. 1998. The Influence of Institutional Investors on Myopic R&D Investment Behavior. **Accounting Review.** 73 (3): 305-333.

Cheng, Q., and Warfield, T. 2005. Equity Incentives and Earnings Management. **Accounting Review.** 80 (2): 441-476.

Cornett, M., McNutt, J., and Tehranian, H. 2009. Corporate Governance and Earnings Management at Large U.S. Bank Holding Companies. **Journal of Corporate Finance.** 15 (4): 412-430.

DeAngelo, L. 1986. Accounting Numbers as Market Valuation Substitutes: A Study of Management Buyouts of Public Stockholders. **Accounting Review.** 61 (3): 400-420.

Dechow, P., and Dichev, I. 2002. The Quality of Accruals and Earnings: The Role of Accrual Estimation Errors. **Accounting Review.** 77 (Supplement): 35-59.

Dechow, P., Hutton, A., Kim, J. H., and Sloan, R. 2012. Detecting Earnings Management: A New Approach. **Journal of Accounting Research.** 50 (2): 275-334.

Dechow, P., Kothari, S., and Watts, R. 1998. The Relation Between Earnings and Cash Flows. **Journal of Accounting and Economics.** 25 (2): 133-168.

Dechow, P., Sloan, R., and Sweeney, A. 1995. Detecting Earnings Management. **Accounting Review.** 70 (2): 193-225.

DeFond, M., and Jiambalvo, J. 1994. Debt Covenant Violation and Manipulation of Accruals. **Journal of Accounting and Economics.** 17 (1-2): 145-176.

Dutta, S., and Gigler, F. 2002. The Effect of Earnings Forecasts on Earnings Management. **Journal of Accounting Research.** 40 (2): 631-656.

Fama, E., and Jensen M. 1983. The Separation of Ownership and Control. **Journal of Law and Economics.** 26 (2): 301-325.

Fama, E., and MacBeth, J. 1973. Risk, Return, and Equilibrium: Empirical Tests. **Journal of Political Economy.** 81 (3): 607-636.

Gomper, P., Ishii, J., and Metrick, A. 2003. Corporate Governance and Equity Prices. **Quarterly Journal of Economics.** 118 (1): 107-156.

Gordon, M. 1959. Dividends, Earnings and Stock Prices. **Review of Economics and Statistics.** 41 (2): 99-105.

Hazarika, S., Karpoff, J., and Nahata, R. 2012. Internal Corporate Governance, CEO Turnover, and Earnings Management. **Journal of Financial Economics.** 104 (1): 44-69.

Healy, P. 1985. The Effect of Bonus Schemes on Accounting Decisions. **Journal of Accounting and Economics.** 7 (1-3): 85-107.

Healy, P., and Palepu, K. 1995. The Challenges of Investor Communication: The Case of CUC International, Inc. **Journal of Financial Economics.** 38 (2): 111-140.

Healy, P., and Wahlen, J. 1999. A Review of the Earnings Management Literature and Its Implications for Standard Setting. **Accounting Horizons.** 13 (4): 365-383.

Hirschey, M., and Spencer, R. 1992. Size Effects in the Market Valuation of Fundamental Factors. **Financial Analysts Journal.** 48 (2): 91-95.

Jensen, M., and Meckling, W. 1976. Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure**. Journal of Financial Economics.** 3 (4): 305-360.

Jiraporn, P., Miller, G., Yoon, S., and Kim, Y. 2008. Is Earnings Management Opportunistic or Beneficial? An Agency Perspective. **International Review of Financial Analysis.** 17 (3): 622-634.

Johnson, S., Boone, P., Breach, A., and Friedman E. 2000. Corporate Governance in the Asian Financial Crisis. **Journal of Financial Economics.** 58 (1-2): 141-186.

Jones, J. 1991. Earnings Management During Import Relief Investigations. **Journal of Accounting Research.** 29 (2): 193-228.

Kolb, R. 2006. **The Ethics of Executive Compensation.** Blackwell Publishing. Malden: MA.

Kothari, S., Leone, A., and Wasley, C. 2005. Performance Matched Discretionary Accrual Measures. **Journal of Accounting and Economics.** 39 (1): 163-197.

Kuang, Y. 2008. Performance-vested Stock Options and Earnings Management. **Journal of Business Finance and Accounting.** 35 (9-10): 1049-1078.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., and Vishny, R. 2000. Investor Protection and Corporate Governance. **Journal of Financial Economics.** 58 (1-2): 3-27.

Leuz, C., Nanda, D., and Wysocki, P. 2003. Earnings Management and Investor Protection: An International Comparison. **Journal of Financial Economics.** 69 (3): 505-527.

Magrath, L., and Weld, L. 2002. Abusive Earnings Management and Early Warning Signs. **The CPA Journal.** 72 (8): 50-53.

McNichols, M. 2000. Research Design Issues in Earnings Management Studies. **Journal of Accounting and Public Policy.** 19 (4-5): 313-345.

Mohamad, M., Abdul Rashid, H., and Shawtari, F. 2012. Corporate Governance and Earnings Management in Malaysian Government Linked Companies: The Impact of GLCs' Transformation Policy. **Asian Review of Accounting.** 20 (3): 241-258.

Ning, Y. 2006. A Different Perspective of Earnings Management. **Canadian Social Science.** 2 (2): 11-17.

Park, Y., and Shin, H. 2004. Board Composition and Earnings Management in Canada. **Journal of Corporate Finance.** 10 (3): 431-457.

Peasnell, K., Pope, P., and Young, S. 2005. Do Outside Directors Limit Earnings Management? **Corporate Finance Review.** 10 (5): 5-10.

Ross, S. 1977. The Determination of Financial Structure: The Incentive-Signalling Approach. **Bell Journal of Economics.** 8 (1): 23-40.

Roychowdhury, S. 2006. Earnings Management Through Real Activities Manipulation. **Journal of Accounting and Economics.** 42 (3): 335-370.

Shen, C., and Chih, H. 2007. Earnings Management and Corporate Governance in Asia's Emerging Markets. **Corporate Governance: An International Review.** 15 (5): 999-1021.

Wang J., Sheu, H., and Chung, H. 2011. Corporate Governance Reform and Earnings Management. **Investment Management and Financial Innovations.** 8 (4): 109-118.

Watts, R., and Zimmerman, J. 1986. **Positive Accounting Theory.** Prentice-Hall. Englewood Cliffs: NJ.

Watts, R., and Zimmerman, J. 1990. Positive Accounting Theory: A Ten Year Perspective. **Accounting Review.** 65 (1): 131-156.

William, J. 1938. **The Theory of Investment Value.** Harvard University Press. Cambridge: MA.

Xie, B., Davidson, W., and DaDalt, P. 2003. Earnings Management and Corporate Governance: the Role of the Board and the Audit Committee. **Journal of Corporate Finance.** 9 (3): 295-316.

Yermack, D. 1996. Higher Market Valuation of Companies with a Small Board of Directors. **Journal of Financial Economics.** 40 (2): 185-211.