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경영학석사학위논문
Thesis Paper for M.S., Business Administration

**Corporate Governance, Earnings
Management, and Firm Value:
Focused on Ownership Structure**

기업지배구조, 이익조정 및 기업가치
: 소유구조를 중심으로

February 2020

The Graduate School of Seoul National University
Master in Finance, Business Administration

Hee Jun Shin

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이 논문을 경영학 석사학위논문으로 제출함

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Corporate Governance, Earnings Management, and Firm Value: Focused on Ownership Structure

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ABSTRACT

This thesis explores the operation of the internal control mechanism and the agency problem, centered on the ownership structure of corporate governance through a study of the relationship between earnings management and firm value. This study will first review the effects of corporate earnings management on firm value, and then, demonstrates how corporate governance affects the link between earnings management and corporate values.

The results from the empirical study can be summarized as follows. As the level of earnings management of the prior year increases, the firm value decreases. This suggests that information on earnings management is negatively viewed in the capital market. In other words, earnings management by firms reduces the credibility and utility of accounting information, leading to an increase in capital costs and a decrease in firm value. According to the analysis that took into account corporate governance, ownership structure variable, among various factors that can mitigate

the negative impact of earnings management on firm value, foreign investors (an external corporate governance factor) do not have a statistically significant impact. On the other hand, internal corporate governance factors, such as the largest shareholders, the board of directors, and the CEO, have a positive and statistically significant effect on the relationship between earnings management and firm value. Therefore, it can be inferred that because earnings management practices are discretely done inside firms, ultimately only the internal governance structure has an effect on firm value.

The purpose of this study is to analyze the effect of earnings management practice on investors' evaluation through the impact on firm value as well as the effect of corporate governance on the relationship between earnings management and firm value. This research provides a compelling study as the first domestic research on the subject offering empirical evidence through domestic references. Furthermore, it differentiates itself from existing researches by pointing to the factors of corporate governance that affect the relationship between earnings management and firm value by using various proxy variables. The findings from this thesis imply that investors should consider the factors of corporate governance when utilizing information on reported earnings.

Keywords: Corporate Governance, Earnings Management, Firm Value,
Ownership Structure, Internal Control, Agency problem

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Corporate Governance, Earnings Management, and Firm Value: Focused on Ownership Structure

I. Introduction

A core national political agenda for the Korean government is improving corporate governance and accounting transparency. This is because it can not only promote the integrity of the capital market but also help the rational decision-making process of the investors.

This research explores the operation of the internal control mechanism and the agency problem, centered on the ownership structure of corporate governance through a study of the relationship between earnings management and firm value. This study reviews the effects of corporate earnings management on firm value, and then, demonstrates how corporate governance affects the link between earnings management and corporate values.

Globally there have been numerous researches and theses published on the subject of corporate governance, earnings management, and firm values. Kim (2009) reported that KOSDAQ firms, which have a higher level of earnings management than KSE-listed firms, demonstrate earnings of lower quality and that the link

between their earnings and the value of stocks is low. Furthermore, Francis et al. (2003) stated that investors do not simply evaluate firm value based on reported profit gains or losses, but pay more attention to the earnings quality and respond accordingly. For example, even in the face of continuous profit growth, if the quality of earnings is low, the effect of profit growth on stock prices diminishes. Meanwhile, Sohn (2010) and Drobetz et al. (2004) verified that the level of corporate governance has a positive effect on firm value. However, to the author's knowledge, there has not yet been a research paper that studied the effect of corporate governance on the relationship between earnings management and firm value. Accordingly, it raises the question of whether improving corporate governance influences the level of earnings management, and ultimately has a positive influence on firm value. Thus, this research will examine the relationship between companies' earnings management and firm value. It will also analyze what impact corporate governance has on the relationship between earnings management and firm value.

This research is based on an empirical analysis of 9,412 sample firms selected from the listed companies on the Korea Stock Exchange over the period of 2011 to 2018. The study demonstrates that firm value for the period decreases as earnings management of the previous fiscal year increases. It implies that the information on earnings management is negatively assessed in the capital market. Meanwhile, according to the analysis that considered interaction term, including key variables of governance structure, the negative impact of earnings management practice on firm

value decreases as the firm demonstrates a higher ownership structure level. This suggests the importance of building and managing internal control mechanisms through improving corporate governance to positively affect firm value.

The purpose of this study is to analyze the effect of earnings management practice on investors' evaluation through the impact on firm value as well as the effect of corporate governance on the relationship between earnings management and firm value. This research provides a compelling study as the first domestic research on the subject offering empirical evidence through domestic references. Furthermore, it differentiates itself from existing researches by pointing to the factors of corporate governance that affect the relationship between earnings management and firm value by using various proxy variables. The findings from this thesis imply that investors should consider the factors of corporate governance, ownership structure level when utilizing information on reported earnings.

II. Literature Review and Hypothesis Development

2.1 Earnings Management

As firms' net profit is income minus all expenses, net profit should be the same if income and costs are the same. However, since corporate management is continuous whereas accounting profit is intermittent, firms can adjust their net profit by reporting income and expenses at the point of recognition, i.e., reporting expected

income at present and deferring expenses to the future (Hwang, 2008).

Francis et al. (2004, 2005) measured accruals quality and discretionary accruals quality to assess the strength of managers' opportunism. While accruals refer to the difference between net profit and operating cash flow, managers can wrongfully adjust or manipulate net profit in financial statements according to its discretion in selecting and estimating accounting methods. The authors also argue that because accounting accruals (unexpected or discretionary accruals) that surpass market expectations represent managers' intentional adjustment of reported profit for its private interest, they can increase the risk of adverse selection for external investors by increasing information asymmetry for that firm.

First, this paper will review numerous studies conducted overseas on earnings management relevant to the topic of this thesis. Biddle et al. (2009) stated that high-quality financial reporting reduces information asymmetry and ultimately promotes efficient investment. Kedia and Philippon (2007) argued that earning management involves the distortion of resource allocation in the economy. In order to evade disclosing their deteriorating performance and to pose as a promising company, less profitable firms tend not only to adjust their reported profits but also to overly expand employment and investment. While the overinvestment during the period of earnings management leads to the expansion of the business cycle and the distortion of resource allocation, the growth significantly slows down after the earnings management period. Ramalingegowda et al. (2013) claimed that in the context where

the quality of financial reporting is high, firms are less likely to give up the positive NPV investment to maintain a consistent dividend payout, as a high-quality financial reporting leads to less information asymmetry and broader access to external funding. Chih et al. (2008) presented that CSR would reduce earnings management for profit flexibility and avoiding losses and that it would also lead to an active pursuit of profit. Cho et al. (2013) found that firms that take on CSR generally have fewer earnings and real earnings management practices and that CSR boosts investors' confidence by increasing information transparency. Subramanyam (1996) analyzed how the market assesses discretionary accruals and viewed the role of discretionary accruals from two perspectives: 1) an informational perspective that earnings management provides the market with private information about future profitability, which ultimately improves the usefulness of profits; 2) an opportunistic perspective that managers use them opportunistically, which leads to false information and distortion of profit. Through an analysis of the informational value of discretionary accruals, he showed that discretionary accruals have additional explanatory power for stock returns compared to operating cash flow and nondiscretionary profit. These findings indicate that investors consider discretionary accruals useful and that discretionary accruals have an important role in providing private information on a firm's future profitability.

Rangan (1998) studied the relationship between discretionary accruals and stock returns and found that when discretionary accruals increase by 1 standard deviation,

stock returns decrease by 10%. Subsequently, this confirmed decreasing value relevance due to the effect of earnings management. Marquardt and Weidman (2004) observed a pattern of a significant increase in discretionary accruals during the period of the paid-in capital increase and pointed out that especially when managers participate in the paid-in capital increase, the value relevance of book value increased while that of profit decreased. Francis et al. (2003) stated that in a situation where profits continuously increase, a higher quality of earnings strengthens the impact of earnings on stock prices whereas a lower quality of earnings weakens it. It implies that market responses vary according to the earnings quality, rather than unconditionally reacting to an increase in profits and that market participants pay more attention to the earnings quality than profit gains or losses. Dechow and Skinner (2000) also verified that market participants assess firms based on their reported profits and that the participants' reactions vary, depending on different factors such as a continuous increase in reported profits as well as the financial analysts' ability to meet the performance goals. Thus, foreign researches on discretionary accruals provide a mixed conclusion regarding the impact on stock returns and value relevance, providing both positive and negative results. Meanwhile, Healy (1985) argued that if reported earnings were below the lower limit of earnings, managers would not increase reporting profits, but rather would reduce reported earnings to increase future profits. This implies Big Bath, where managers bear the loss for the term to defer future profits. Similarly, Strong and Meyer (1987) indicated

that managers tend to recognize as much cost as possible for the year to improve future performance for Big Bath. In addition, Pourcian (1993) claimed that a newly appointed manager would try to recognize maximum expenses for the year of his appointment to increase profits for the following year. Hazarika et al. (2012) verified if the level of earnings management immediately prior to the replacement of a CEO was related to forced replacement; The result demonstrated that the chief executive of a company who adjusts earnings using accruals in the year immediately preceding the replacement is more likely to be replaced through forced replacement.

Furthermore, there exist various domestic researches on earnings management relevant to the purpose of this study. Kim and Lee (2010) reported that an earning management practice of the issuing company right before the IPO has a lasting effect on the long-term performance of IPO shares. Han et al. (2019) investigated the topic through a study of KOSPI-listed firms as well as KOSDAQ-listed firms during the period 2011-2017. The findings from this study are as follows: The regression analysis, which studied the effect of earnings management on firm value based on the corporate life cycle, demonstrated that earnings management during the growth and maturity stage has a positive impact on firm value, with the impact being larger at the growth stage. A study, which separately analyzed positive (+) and negative (-) discretionary accruals, exhibited that at the growth stage both positive and negative discretionary accruals are positively related to firm value, whereas at the maturity stage only negative (-) discretionary accruals showed a positive relationship with

firm value. It implies that earnings management at the growth stage is positively assessed in the market, regardless of the sign (+/-) of accruals, due to expectations of future growth. On the other hand, at the maturity stage, a practice of earnings management that conservatively reports accounting profit, rather than the one that increases earnings, is more positively evaluated in the capital market. Kim and Lee (2016) reported that, contrary to the results from the advanced capital market, which showed that institutional investors restrain managers' opportunistic earnings management behavior, there was no evidence from the Korean market that institutional investors reduced managers' opportunistic earnings management. These findings suggest that due to the unique characteristics of the Korean market (such as high monitoring costs resulting from complex governance; high market volatility; and more short-term profit generation opportunities from unreasonable transactions by individual investors), institutional investors to pursue short-term value rather than long-term value. Kho and Kim (2007) examined accruals anomaly and found that there are significant occurrences of accruals anomaly in the domestic stock market as a result of zero-cost hedge portfolio, which buys stocks of companies with low accruals and sells stocks of the ones with high accruals. However, in order to verify if this anomaly reflects a new risk factor, they conducted a time-series analysis using an extended Fama-French three-factor model, four-factor model that includes an accruals-based factor portfolio. The results suggested that accruals-based factor portfolio has its limits to explain expected returns; Consequently, through an

additional cross-section analysis, they argued that accruals anomaly is a phenomenon caused by firms characteristics variable, namely accruals – an explanation that supports behavioral finance perspective rather than a reflection of risk compensation for accruals-based factor beta.

2.2 Firm Value

Firm value is a matter of ultimate interest for the participants in the capital market, which has led to numerous researches that strived to identify various factors affecting a firm's value. Tobin's Q, as defined in Tobin's (1961, 1978) study, is used extensively as a proxy for not only measuring business performance to evaluate a manager's ability but also measuring firm value to assess investment efficiency. Tobin's Q indicates that if the present value of net free cash flow expected from an investment is greater than 1, the value of the investment is also greater than one, which in turn means that the value of the firm is greater than one. The firm value represents a measure of a firm's future profitability and points to future performance rather than the current one.

Various researches have been conducted overseas on firm value. Conyon and Read (2006) presented a study, which showed that a firm's value can still increase, even when CEOs only use the optimal time needed as a CEO and allocate the rest of the time at an additional post as an independent outside director because the information and skills gained by CEOs from serving as an outside director are greater than the opportunity cost. As a result, they argued that there exists a potential economic value

for a CEO in holding multiple directorships. Miansian (1969) showed that spending on R&D has a significant impact in creating value added for firms, and Branch(1974) explained that R&D investments increase firms' profits with an above-average return on investment while bringing additional profits through increased sales of new products developed from R&D. Chauvin and Hirschey (1993) demonstrated that although the effects of R&D investment on firm value vary according to the size of the firm, there exists a consistent, direct link between R&D investment and firm value. Del Monte and Papgni (2003) also found that firms that invest a high proportion of investment in R&D showed higher growth indicators, shown in factors such as revenue growth and export proportions in particular. Additionally, various researches further argued that there exists a positive relation between R&D investments and firm value (Doukas and Switzer 1992; Eberhart et al. 2004).

According to Morck et al. (1988) and Villalonga and Amit (2006), the firm value measured by Tobin Q proportionally increases with managers' share up to a certain point but rather decreases past this point, showing a reversed U curve. In other words, in the early stage where managers' share increase positive effect from the incentive alignment of managers and other shareholders prevails, but as managers' share reaches a certain point the negative effect becomes greater as business management becomes solidified.

The previous studies on the relationship between firms' pursuit of risk and firm value have provided mixed predictions. Some have found that managers'

overconfidence can ultimately cause a devaluation of firm value in various ways—paying excessive acquisition premium due to valuation errors or deepening the problem of overinvestment when internal funds are available, and the increasing probability of earnings management as well as failed risk management. Others have argued that it can increase firm value in the end by reducing an underinvestment problem by mitigating the agency problem; promoting corporate innovation by considering future growth opportunities; and stimulating risk-averse managers through internal competition in order to induce the optimal level of risk retention (Goel and Thakor 2008; Gervais et al. 2011; Hirshleifer et al. 2012; Adam et al. 2015; Bharati et al. 2016).

Domestic researches on firm value also provide useful insights. Park (2019) presented a new indicator for CEOs' loyalty through a demonstration of the effect of CEOs' multiple directorships on firm value, thereby providing useful insights and the establishment of concrete standards for the users of accounting information. To this end, the author defined the case where a CEO was appointed a registered director by other companies as holding a "multiple directorships" and used Tobin's Q as a proxy for firm value. The results from this study showed that the firms whose CEO holds multiple directorships have lower firm value compared to the ones whose CEO does not. An analysis of the number of CEO's directorship also demonstrated that as the number of multiple directorships increases, the firm value decreases. In addition, through an analysis that controlled endogeneity, it showed a statistically significant

negative relation between multiple directorships and firm value, and the study verified that firms should control loyalty by limiting their CEOs from holding multiple directorships. Park and Lee (2017) examined the effect of multiple directorships on firm value through an analysis of the number and ratio of adjunct directors among registered directors. They found that while there is a negative relation between multiple directorships of inside directors and firm value, there is no strong evidence for the link between outside directors and their multiple directorships. Kang and Kook (2012) investigated the impact of independent outside directors on firm value by differentiating “independent” and “friendly” outside directors. The results demonstrated that firms whose board of directors is more independent due to a higher proportion of “independent” outside directors demonstrate higher firm value, whereas the proportion of “friendly” outside directors does not have a significant effect on firm value. Kwon (2019) examined the effect of related diversifications on firm value and found that both related and unrelated diversification demonstrate diversification discounts, but the firms that use related diversification strategy show a larger diversification discount. They also analyzed the relationship between diversification discount and the largest shareholders’ holdings and reported that the lower the largest shareholders’ holdings are, the larger the diversification discount becomes. They claimed that such findings suggest that diversification discount is correlated to agency cost. Kim and Kwon (2018) demonstrated the effect of managers’ overconfidence on the

relationship between firm value and the firm's pursuit of risk. They combined different factors that could be seen as causes and effects of managers' overconfidence, such as firms' investment in R&D and volatility in stock returns, in order to identify "overconfident firms." The analysis demonstrated that in the case of "overconfident firms," such pursuit of risk decreases the firm value. This implies that managers' overconfidence induces excessive pursuit of risk, which in turn decreases firm value.

2.3 Corporate Governance

Corporate governance can be defined as a way for suppliers of funds to get an appropriate return on investments by controlling corporate managers (Shleifer and Vishny 1997). Theories on corporate governance have become more specified (i.e. ownership theory and agency theory) over time as various discussions and researches to the present state of corporate finance theory.

This section of the paper will review different studies on corporate governance conducted overseas. Berle and Means (1932) analyzed how the separation of ownership and management affects a company's decision-making process. They found that while the level of monitoring managers decreases when shareholders' shares become more dispersed, the authority of control becomes greater when there is a major shareholder or more concentrated stock ownership, which in turn will alleviate the agency problem. La Porta et al. (2002) identified that the solution to the agency problem arising from the separation of ownership and management is to

create a system of checks and balances for stakeholders, and La Porta et al. (2000) reported that firms with systems to protect investors are more likely to achieve better performance as well as better firm value through their analysis of the impact of cultural modalities on the protection of investors at various national levels. Black (2001) suggested that firms with better corporate governance have higher actual market value versus potential market value and lower volatility, and argued that corporate governance is a major investment factor for investors. Cremer and Nair (2005), through their study on the relationship between external and internal corporate governance, observed that there are abnormal returns of 10-15%, when firms with strong ownership of pension funds buy a firm with a high external governance structure and sell a firm with low external governance structure. Giroud and Mueller (2011), assuming that the market is inefficient, claimed that firms with uncompetitive and healthy governance structure enjoy higher firm value. On the contrary, firms with competitive and weak governance structure demonstrate lower stock returns; poor sales performance; and low firm value. They argue that this is a short-term phenomenon as investors take this into account when they trade, which decreases the market inefficiency. Black et al. (2006) conducted an empirical analysis of the effect of governance variables on Tobin's Q- a proxy variable for firm value, using a sample of domestic listed enterprises. The findings suggest that corporate governance variables are positively (+) related to firm value and show a high growth rate in market to book ratio as well. Ashbaugh et al. (2004), in his study

of corporate governance, stock returns, and capital costs, analyzed that firms with low transparency and abnormally high performance demonstrate lower stock returns, whereas firms with greater independence show higher stock returns. Additionally, they found that firms with higher shares of institutional investors and boards of directors have lower capital costs, and those with higher shares of controlling shareholders have greater capital costs. Gompers et al. (2003) approached the topic from shareholders' rights protection (one of the factors constituting corporate governance structure) perspective and demonstrated that the investment strategy where investors buy firms with strong shareholders' rights protection and sell companies with low shareholders' rights protection, generates positive (+) excess earnings.

Domestic research on corporate governance also provide useful insights. Park et al. (2009), following the same methods used by Gompers et al. (2003), found that the investment practice of buying shares of companies with good governance structure and selling those of companies with poor governance structure generates excess earnings. They argued that these results imply the limits of current stock prices in that they do not fully reflect information on corporate governance. They also reported that the dividend policy of the board of directors and shareholders has a more positive effect on the stock price. Sohn (2010) analyzed whether there is a cause-and-effect relationship between corporate governance and firm value. As a governance variable, he used the governance index prepared by the Korea Corporate

Governance Service every year. Through a regression analysis, he reaffirmed that the level of corporate governance structure has a statistically significant effect on firm value— as found by Drobetz et al. (2004). He added that in particular, the analysis using the lower governance index demonstrated that there is a close positive relation between firm value (Tobin's Q) and the governance index of the board of directors, the audit organization, and the disclosure sector. Choi and Yoon (2006) discussed that firms with higher the level of corporate governance are more likely to provide conservative accounting information. They reported that while the mechanical introduction of advanced systems, such as an audit committee and outside directors, is important, the account information becomes more conservative when the level of public disclosure regarding operations is high. Also, after an analysis of the effect of corporate ownership structure on the conservativeness of accounting information, they found that share of foreign investors and the conservativeness are positively correlated. Using the agency theory framework, Kang et al. (2015) investigated the relationship between the independence of the board of directors and the level and efficient allocation of cash assets, in order to analyze how corporate governance affects firm value. They found that the more independent the board of directors, the more likely it is that firms' cash holdings are low, efficiently distributed, and more positively assessed in the market. These findings imply that the value of cash holdings varies according to the level of independency of the board and that it is important to allow the board of directors to

be more independent in order to prevent managers' embezzlement; to reinforce firm value, and to protect investors' rights. Byun and Cho (2010) confirmed that the effect of improving corporate governance, which lowers firms' capital costs, depends on the overall information asymmetry on the firm. They found that capital costs fall only when the information asymmetry is low, as investors fully recognize the good governance structure. They added that only when the information asymmetry is low, good governance structure increases firm value.

2.4 Hypothesis

Corporate governance can be defined as a way for suppliers of funds to get an appropriate return on investments by controlling corporate managers. One of the most important aspects constituting corporate governance is ownership structure, because as Jensen and Meckling (1976) pointed out the agency problem is the primary reason for the founders' share dropping below 100%. Therefore, factors related to ownership, such as whether there is a founder or a majority-shareholder-family as well as their percentage of shares, are important for the corporate governance mechanism and an important topic of discussion regarding ownership structure. Accordingly, this research aims to empirically analyze the impact of corporate governance on the relationship between earnings management and firm value, focusing on ownership structure (the holdings of the largest shareholder, foreign investors, the board of directors, and CEO).

A firm's net profit for the term is a sum of cash flow generated through operating

activities and non-monetary transactions— in other words, accruals. Thus, a firm is able to over or under appropriate relevant items in accounting to increase or decrease net profit. For example, even if a firm does not have any revenue, it can increase accruals and net profit for the period by increasing accounts receivable or decreasing depreciation costs. Although such earnings management is a common discretionary authority accepted by corporate accounting standards, the problem is that stakeholders such as investors do not fully recognize this discretionary authority of firms over net profit report. Therefore, firms have an opportunity to adjust items in accounting in a way that they want, different from their intrinsic value, in order to attract investment (Hwang, 2008). Consequently, firms' earnings may be increased in the short term through earnings management, but in the long run, such management practice will decrease the credibility and utility of accounting information, causing an increase in capital costs, thereby diminishing firm value. Thus, this paper presents the following hypothesis:

[H 1] Firm value decreases as earnings management level of reported earnings increase.

In analyzing the internal corporate governance structure (separate from external corporate governance structure), it can be inferred that agency cost will be reduced when the holdings of the largest shareholder; the board of directors, and CEO increase, as ownership becomes stronger in terms of principal-agent problem. In

other words, as the holdings of the largest shareholder; the board of directors, and CEO increase, the negative impact of earnings management on firm value will decrease due to stronger internal control mechanism. On the other hand, in the external corporate governance structure, represented by the holdings of foreign investors, external monitoring effect will increase, if the holdings of foreign investors increase. However, the question remains whether such monitoring effect can reduce the negative impact of earnings management on firm value.

To sum up previous studies on corporate governance, as ownership structure is improved, it reduces the agency problem and encourages managers to make appropriate decisions, which ultimately will lead to an increase in firm value. Based on this assumption, this paper will analyze the following hypothesis:

[H 2] the higher the level of corporate governance, the more positive impact it will have on the relationship between earnings management and firm value.

The purpose of the second hypothesis is to verify if the ownership structure (the holdings of the largest shareholder, the board of directors and CEO) ultimately have an impact on lowering cost of capital and increasing firm value, through the following factors: a) a decrease in agency cost, b) an increase in transparency of business operations and financial disclosure through a stronger internal monitoring and control system. In other words, it aims to confirm if investors can recognize a good corporate governance structure and if the firm value increases as a result.

III. Research Design

3.1 Sample Selection and Data

This research analyzed a sample of KOSPI-listed firms during the period 2011-2018, based on the following criteria:

- 1) Firms with fiscal year ending at the end of December
- 2) Excluding firms in the financial industry, such as banks, investment banking firms, and insurance companies
- 3) Firms with relevant financial information available on KIS-value from NICE Information Service and TS-2000 from Korea Listed Companies Association

Setting the fiscal year criterion was to recognize the fact that most firms have a fiscal year ending in December and to control the possible impact on individual firm value due to differences in the economic situation. Financial firms were excluded on the basis that they can jeopardize the homogeneity of samples because they have different regulatory standards, revenue structure and financial statements than non-financial firms.

In addition, firms related to the impairment of capital were excluded. Furthermore, the winsorization for extreme values was conducted, except for the dummy variables, at the level of top/bottom 1%, in order to control the effect of extreme values on the regression analysis. Based on these sample selection criteria, the total number of

sample firms used in this study was 9,412 in “Firm- Year” unit. The definition and measurement of variables used in this research are outlined in <Table 1> below.

<Table 1> Definition of Variables

<i>Firm Value</i>	$TQ_{i,t}$: Tobin's Q
	$MB_{i,t}$: Market to book ratio
<i>Lagged AEM</i>	$MJDA_{i,t-1}$: prior Adjusted-Jones discretionary accruals
	$PMDA_{i,t-1}$: prior Performance-matched discretionary accruals
<i>Lagged Ownership</i>	$LAR_{i,t-1}$: prior largest shareholders' holdings
	$LAR > 50\%_{i,t-1}$: If prior largest shareholders' holdings are more than 50%, 1, if not, 0
	$FOR_{i,t-1}$: prior foreign investors' ownerships
	$FOR > 10\%_{i,t-1}$: If prior foreign investors' ownerships are more than 10%, 1, if not, 0
	$BRD_{i,t-1}$: prior board ownerships
	$BRD > 25\%_{i,t-1}$: If prior board ownerships are more than 25%, 1, if not, 0
	$CEO_{i,t-1}$: prior CEO ownerships
	$CEO > 15\%_{i,t-1}$: If prior CEO ownerships are more than 15%, 1, if not, 0
	$WED_{i,t-1}$: prior control-ownership disparity (= the holdings of subsidiaries, executives, and non-profit corporation)
	$WED > 40\%_{i,t-1}$: If prior control-ownership disparity is more than 40%, 1, if not, 0
<i>Controls</i>	$SIZE_{i,t}$: Size of firm (= Asset at the beginning of a year, natural logarithm value)
	$LEV_{i,t}$: Debt ratio (= Debt at the beginning of a year / Asset at the beginning of a year)
	$GRW_{i,t}$: Revenue growth
	$ROA_{i,t}$: Total return on assets (= Net profit of the term / Asset at the beg. of the year)
	$CFO_{i,t}$: Operating cash flow ratio (= Operating cash flow / Asset at the beg. of a year)
	$CUR_{i,t}$: Current ratio (= Current asset / Current liability)
	$AGE_{i,t}$: Age of firm (= Year founded – year t, natural logarithm value)
	$LOSS_{i,t}$: net loss=1, if not=0

<Table 2> below shows the descriptive statistics of the principal variables. Variables representing firm value, *TQ* and *MB* – average 1.474 and 1.800; standard deviation 1.069 and 1.758 respectively— generally demonstrated higher market value than book value of assets. For the variables signifying earnings management, *MJDA* and *PMDA*, the average was -0.005 and -0.001 respectively, which showed a negative value close to 0.

Furthermore, corporate governance variables are ownership structure using stakes that were, on average, 0.397 for the largest shareholders' holdings (*LAR*); 0.066 for the foreign investors' holdings (*FOR*); 0.169 for the board's holdings (*BRD*); and 0.117 for the CEOs' holdings (*CEO*). The results demonstrate that the holdings of foreign investors and CEOs were not comparably high and imply that improving corporate governance is a task that still needs to be worked on. Also, a variable representing firms with the largest shareholders' holdings exceeding 50% (*LAR*>50%) demonstrated an average value of 0.282; that of foreign investors' holdings exceeding 10% (*FOR*>10%) showed an average value of 0.205; that of the boards' shares exceeding 25% (*BRD*>25%) showed an average value of 0.312; and that of CEOs' holdings exceeding 15% (*CEO*>15%) exhibited an average value of 0.265. The size of firm (*SIZE*) turned out to be an average of 18.938, while the debt ratio (*LEV*) was an average of 0.383, which indicates that the sample firms generally do not have a high debt ratio. Total return on assets were on average 0.011 and the operating cash flow ratio recorded an average of 0.043.

<Table 2> Summary Statistics

<i>Variables</i>		<i>N</i>	<i>Mean</i>	<i>Std</i>	<i>Min</i>	<i>Q1</i>	<i>Median</i>	<i>Q3</i>	<i>Max</i>
<i>Firm</i>	<i>TQ_{it}</i>	9412	1.474	1.069	0.481	0.867	1.125	1.650	6.943
<i>Value</i>	<i>MB_{it}</i>	9412	1.800	1.758	0.275	0.762	1.215	2.112	10.742
<i>Lagged</i>	<i>MJDA_{it-1}</i>	9412	-0.005	0.095	-0.347	-0.046	-0.002	0.038	0.336
<i>AEM</i>	<i>PMDA_{it-1}</i>	9412	-0.001	0.091	-0.328	-0.042	0.001	0.042	0.312
<i>Lagged</i> <i>CG</i>	<i>LAR_{it-1}</i>	9412	0.397	0.167	0.068	0.267	0.392	0.512	0.796
	<i>LAR>50%_{it-1}</i>	9412	0.282	0.450	0.000	0.000	0.000	1.000	1.000
	<i>FOR_{it-1}</i>	9412	0.066	0.101	0.000	0.007	0.023	0.075	0.518
	<i>FOR>10%_{it-1}</i>	9412	0.205	0.404	0.000	0.000	0.000	0.000	1.000
	<i>BRD_{it-1}</i>	9412	0.169	0.164	0.000	0.004	0.142	0.286	0.623
	<i>BRD>25%_{it-1}</i>	9412	0.312	0.463	0.000	0.000	0.000	1.000	1.000
	<i>CEO_{it-1}</i>	9412	0.117	0.140	0.000	0.000	0.051	0.209	0.541
	<i>CEO>15%_{it-1}</i>	9412	0.265	0.441	0.000	0.000	0.000	1.000	1.000
	<i>WED_{it-1}</i>	9412	0.303	0.183	0.000	0.171	0.302	0.428	0.736
	<i>WED>40%_{it-1}</i>	9412	0.301	0.459	0.000	0.000	0.000	1.000	1.000
<i>Controls</i>	<i>SIZE_{it}</i>	9412	18.938	1.346	16.202	18.026	18.681	19.586	23.510
	<i>LEV_{it}</i>	9412	0.383	0.203	0.028	0.217	0.380	0.533	0.902
	<i>GRW_{it}</i>	9412	0.055	0.333	-0.656	-0.089	0.019	0.129	2.068
	<i>ROA_{it}</i>	9412	0.011	0.115	-0.489	-0.013	0.025	0.062	0.373
	<i>CFO_{it}</i>	9412	0.043	0.094	-0.306	-0.002	0.042	0.090	0.377
	<i>CUR_{it}</i>	9412	3.103	4.619	0.223	1.005	1.643	3.121	32.980
	<i>AGE_{it}</i>	9412	3.239	0.609	1.099	2.833	3.258	3.738	4.290
	<i>LOSS_{it}</i>	9412	0.293	0.455	0.000	0.000	0.000	1.000	1.000

See <table 1> for variable definitions.

<Table 3> below exhibits the Pearson and Spearman correlation between variables. Firstly, Tobin's Q, a proxy used for firm value, and the market-to-book ratio showed a positive (+) correlation. Discretionary accruals - *MJDA* and *PMDA* - which were used as earnings management variables for independent variables also showed a positive (+) correlation, whereas earnings management variable and firm value showed a significant negative (-) correlation. This implies that firms that are categorized as practicing earnings management has diminishing firm value. Secondly, continuous variables representing corporate governance structure (*LAR*, *BRD*, *CEO*) demonstrated a negative (-) correlation to firm value and a positive (+) correlation to earnings management. Meanwhile, continuous variable for foreign investors' holdings(*FOR*) showed a positive (+) correlation to firm value. These results from the correlation analysis are against the hypothesis of this study and previous researches on corporate governance and firm value. Since such correlation figures only represent simple correlation between variables, the rest of this study will analyze the relationship in detail through the regression analysis involving the related control variables.

<Table 3> Pearson and Spearman Correlation Matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
(1) <i>TQ_{it}</i>		0.97 (0.00)	-0.02 (0.07)	-0.03 (0.01)	-0.27 (0.00)	0.02 (0.08)	-0.12 (0.00)	-0.06 (0.00)	-0.34 (0.00)	0.01 (0.40)	0.19 (0.00)	0.06 (0.00)	0.03 (0.00)	0.08 (0.00)	-0.28 (0.00)	0.09 (0.00)
(2) <i>MBI_{it}</i>	0.93 (0.00)		-0.03 (0.01)	-0.03 (0.00)	-0.27 (0.00)	0.01 (0.40)	-0.12 (0.00)	-0.06 (0.00)	-0.34 (0.00)	0.03 (0.01)	0.18 (0.00)	0.06 (0.00)	0.02 (0.07)	0.06 (0.00)	-0.28 (0.00)	0.10 (0.00)
(3) <i>MIDA_{it-1}</i>	-0.02 (0.03)	-0.05 (0.00)		0.90 (0.00)	0.07 (0.00)	0.00 (0.95)	0.09 (0.00)	0.08 (0.00)	-0.01 (0.31)	-0.13 (0.00)	0.07 (0.00)	0.13 (0.00)	0.06 (0.00)	0.12 (0.00)	-0.03 (0.01)	-0.10 (0.00)
(4) <i>PMDA_{it-1}</i>	-0.03 (0.01)	-0.05 (0.00)	0.93 (0.00)		0.03 (0.00)	-0.03 (0.00)	0.06 (0.00)	0.05 (0.00)	-0.01 (0.48)	-0.07 (0.00)	0.06 (0.00)	0.06 (0.00)	0.01 (0.40)	0.07 (0.00)	-0.02 (0.04)	-0.05 (0.00)
(5) <i>LAR_{it-1}</i>	-0.22 (0.00)	-0.24 (0.00)	0.09 (0.00)	0.05 (0.00)		-0.05 (0.00)	0.17 (0.00)	0.06 (0.00)	0.24 (0.00)	-0.09 (0.00)	0.00 (0.84)	0.21 (0.00)	0.16 (0.00)	0.02 (0.04)	0.15 (0.00)	-0.25 (0.00)
(6) <i>FORN_{it-1}</i>	0.06 (0.00)	0.04 (0.00)	0.01 (0.29)	-0.01 (0.33)	-0.04 (0.00)		-0.11 (0.00)	-0.09 (0.00)	0.51 (0.00)	-0.16 (0.00)	0.07 (0.00)	0.26 (0.00)	0.21 (0.00)	0.11 (0.00)	0.10 (0.00)	-0.22 (0.00)
(7) <i>BRD_{it-1}</i>	-0.08 (0.00)	-0.11 (0.00)	0.09 (0.00)	0.05 (0.00)	0.24 (0.00)	-0.16 (0.00)		0.81 (0.00)	-0.13 (0.00)	-0.18 (0.00)	0.03 (0.01)	0.14 (0.00)	0.06 (0.00)	0.14 (0.00)	0.02 (0.02)	-0.14 (0.00)
(8) <i>CEO_{it-1}</i>	-0.05 (0.00)	-0.07 (0.00)	0.08 (0.00)	0.04 (0.00)	0.15 (0.00)	-0.14 (0.00)	0.81 (0.00)		-0.15 (0.00)	-0.15 (0.00)	0.03 (0.00)	0.11 (0.00)	0.04 (0.00)	0.15 (0.00)	-0.03 (0.00)	-0.10 (0.00)
(9) <i>SIZE_{it}</i>	-0.24 (0.00)	-0.24 (0.00)	0.02 (0.06)	0.02 (0.09)	0.18 (0.00)	0.47 (0.00)	-0.18 (0.00)	-0.18 (0.00)		0.18 (0.00)	-0.02 (0.02)	0.11 (0.00)	0.13 (0.00)	-0.27 (0.00)	0.33 (0.00)	-0.19 (0.00)
(10) <i>LEV_{it}</i>	-0.08 (0.00)	0.04 (0.00)	-0.14 (0.00)	-0.09 (0.00)	-0.08 (0.00)	-0.13 (0.00)	-0.19 (0.00)	-0.17 (0.00)	0.18 (0.00)		-0.02 (0.08)	-0.23 (0.00)	-0.11 (0.00)	-0.69 (0.00)	0.07 (0.00)	0.17 (0.00)
(11) <i>GRW_{it}</i>	0.16 (0.00)	0.15 (0.00)	0.04 (0.00)	0.04 (0.00)	-0.04 (0.00)	0.02 (0.05)	0.01 (0.38)	0.01 (0.16)	-0.07 (0.00)	-0.02 (0.02)		0.32 (0.00)	0.17 (0.00)	0.03 (0.00)	-0.04 (0.00)	-0.25 (0.00)
(12) <i>ROA_{it}</i>	-0.09 (0.00)	-0.17 (0.00)	0.15 (0.00)	0.09 (0.00)	0.26 (0.00)	0.20 (0.00)	0.16 (0.00)	0.12 (0.00)	0.17 (0.00)	-0.16 (0.00)	0.17 (0.00)		0.56 (0.00)	0.31 (0.00)	-0.04 (0.00)	-0.79 (0.00)
(13) <i>CFO_{it}</i>	-0.04 (0.00)	-0.09 (0.00)	0.08 (0.00)	0.03 (0.00)	0.16 (0.00)	0.20 (0.00)	0.07 (0.00)	0.04 (0.00)	0.14 (0.00)	-0.10 (0.00)	0.09 (0.00)	0.55 (0.00)		0.12 (0.00)	-0.04 (0.00)	-0.44 (0.00)
(14) <i>CUR_{it}</i>	0.15 (0.00)	0.07 (0.00)	0.07 (0.00)	0.05 (0.00)	0.04 (0.00)	0.03 (0.00)	0.16 (0.00)	0.16 (0.00)	-0.15 (0.00)	-0.49 (0.00)	0.01 (0.23)	0.07 (0.00)	-0.02 (0.11)		-0.14 (0.00)	-0.20 (0.00)
(15) <i>AGE_{it}</i>	-0.19 (0.00)	-0.17 (0.00)	-0.03 (0.01)	-0.02 (0.04)	0.12 (0.00)	0.06 (0.00)	0.04 (0.00)	0.00 (0.66)	0.27 (0.00)	0.07 (0.00)	-0.05 (0.00)	0.02 (0.05)	-0.02 (0.03)	-0.09 (0.00)		-0.07 (0.00)
(16) <i>LOSS_{it}</i>	0.10 (0.00)	0.15 (0.00)	-0.12 (0.00)	-0.07 (0.00)	-0.25 (0.00)	-0.18 (0.00)	-0.14 (0.00)	-0.09 (0.00)	-0.16 (0.00)	0.18 (0.00)	-0.15 (0.00)	-0.69 (0.00)	-0.42 (0.00)	-0.06 (0.00)	-0.06 (0.00)	

1) The bottom-left table shows Pearson correlation coefficient and the top-right table shows Spearman correlation coefficient. See <table 1> for variable definitions. 2) Bold texts represent that the finding is significant at the level of 5%

3.2 Earnings Management Variable

Generally, managers have more discretion under accrual-based accounting principles than under cash-based accounting principles. Hence, in previous studies, the difference between net income calculated under accrual accounting principles and operating cash flow calculated under cash-based accounting principles is defined as Accrual (Hazarika et al. 2012; Ramalingegowda et al. 2013; Biddle et al. 2009; Francis et al. 2005; Han et al. 2019; Kim and Lee 2016; Kho and Kim 2007). Such total accruals (*TAC*) are differentiated as discretionary accruals (*DA*) that managers can adjust and non-discretionary accruals (*NDA*) in which earnings management are relatively controlled. To specify, discretionary accruals exhibit attributes that are not easily exposed or observed in the capital market compared to changes in accounting method, which allow managers to use them as a means of earnings management. The above-stated findings can be expressed as the formula shown below:

$$NI - CFO = TAC \quad (1)$$

$$NI - CFO = DA + NDA \quad (2)$$

where

TAC = Total Accruals

NI = Net Income

CFO = Cash Flow from Operating Activities

DA = Discretionary Accruals

NDA = Nondiscretionary Accruals

In order to provide robust statistical results, we use the Adjusted-Jones model presented by Dechow et al. (1995), widely used as a proxy for earnings management in various studies, as well as performance-matched discretionary accruals measures (Kothari et al. 2005) in this study. Adjusted-Jones model (Dechow et al. 1995) provides a revised version of Jones (1991) model, which reduces the measurement error in the previous model where revenue was not viewed as a means of earnings management. Additionally, it includes a variable that deducts changes in account receivables from the change in revenues, when measuring discretionary accruals. Furthermore, Performance-matched discretionary accruals measures (Kothari et al. 2005) is a model that takes into account total return on assets, which is used as a primary measure of earnings management to-this-day.

Formula 3 below describes total accruals calculated by Dechow et al. (1995) through the Jones model, which is standardized as total assets from the previous year to take into account different firm sizes. Also, as shown in Formula 4, it can be inferred that the residual term, which deducts non-discretionary accruals from total accruals, can be considered as discretionary accruals. Thus, discretionary accruals from Adjusted-Jones model (*MJDA*) as well as the ones from Performance-matched discretionary accruals measures (*PMDA*) are laid out in approximate calculations, formula 4 and 5, below:

$$\frac{TAC_{i,t}}{A_{i,t-1}} = \hat{\alpha}_0 \left(\frac{1}{A_{i,t-1}} \right) + \hat{\alpha}_1 \left(\frac{\Delta SALE_{i,t} - \Delta AR_{i,t}}{A_{i,t-1}} \right) + \hat{\alpha}_2 \left(\frac{PPE_{i,t}}{A_{i,t-1}} \right) + \varepsilon_t \quad (3)$$

$$MJDA_{i,t} = \left(\frac{TAC_{i,t}}{A_{i,t-1}} \right) - \left[\hat{\alpha}_0 \left(\frac{1}{A_{i,t-1}} \right) + \hat{\alpha}_1 \left(\frac{\Delta SALE_{i,t} - \Delta AR_{i,t}}{A_{i,t-1}} \right) + \hat{\alpha}_2 \left(\frac{PPE_{i,t}}{A_{i,t-1}} \right) \right] \quad (4)$$

$$PMDA_{i,t} = \left(\frac{TAC_{i,t}}{A_{i,t-1}} \right) - \left[\hat{\alpha}_0 \left(\frac{1}{A_{i,t-1}} \right) + \hat{\alpha}_1 \left(\frac{\Delta SALE_{i,t} - \Delta AR_{i,t}}{A_{i,t-1}} \right) + \hat{\alpha}_2 \left(\frac{PPE_{i,t}}{A_{i,t-1}} \right) \right] + \hat{\alpha}_3 \circ ROA_{i,t} \quad (5)$$

Where

$TAC_{i,t}$ = firm i's total accruals in year t (net income-operating cash flow in year t)

$MJDA_{i,t}$ = firm i's Adjusted-Jones model discretionary accruals in year t

$PMDA_{i,t}$ = firm i's Performance-matched discretionary accruals in year t

$A_{i,t-1}$ = firm i's total assets in year t-1

$\Delta SALE_{i,t}$ = firm i's change in revenue

$\Delta AR_{i,t}$ = firm i's change in account receivable

$PPE_{i,t}$ = firm i's fixed assets in year t (excluding land and assets in construction)

$ROA_{i,t}$ = firm i's total return on assets in year t

ε_t = residual term from regression analysis model

3.3 Research Model

The sample used in this research represents an accumulated panel data over 8 years on 9,412 listed firms. Longitudinal data or panel data presents a combination of cross-sectional data and time-series data, which allows for a comprehensive data collection that cannot be found from individual data set (Wooldridge 2016). In such longitudinal data, it is common to use fixed-effect model, random-effect model, or

pooled ordinary least square as primary analytical tool (Wooldridge 2016; Seok et al. 2019). This research uses fixed-effect model to present calculated approximation and analyze the empirical evidence. Through fixed-effect model, the analysis aims to control the industrial effect and year effect as well as reduce the bias resulting from unseen corporate characteristics

Below is the research model related to Hypothesis 1. Details about the variables are listed in <table 1> above.

$$V_{i,t} = \beta_0 + \beta_1 AEM_{i,t-1} + \beta_2 SIZE_{i,t} + \beta_3 LEV_{i,t} + \beta_4 GRW_{i,t} + \beta_5 ROA_{i,t} + \beta_6 CFO_{i,t} + \beta_7 CUR_{i,t} + \beta_8 AGE_{i,t} + \beta_9 LOSS_{i,t} + Year\ Effects + Industry\ Effects + \varepsilon_{i,t}$$

The model used to verify Hypothesis 2 is also shown below. As stated before, details about the variables can be found above in <table 1>.

$$V_{i,t} = \beta_0 + \beta_1 AEM_{i,t-1} + \beta_2 AEM_{i,t-1} \times CG_{i,t-1} + \beta_3 CG_{i,t-1} + \beta_4 SIZE_{i,t} + \beta_5 LEV_{i,t} + \beta_6 GRW_{i,t} + \beta_7 ROA_{i,t} + \beta_8 CFO_{i,t} + \beta_9 CUR_{i,t} + \beta_{10} AGE_{i,t} + \beta_{11} LOSS_{i,t} + Year\ Effects + Industry\ Effects + \varepsilon_{i,t}$$

$V_{i,t}$ is the dependent variable used in this model that represents firm value of firm i in year t . As in various previous researches, Tobin's Q and M/B ratio are used as a proxy variable for firm value. Tobin's Q refers to firm value based on its market value of assets and replacement cost, and is a proxy that measures the current firm

value (Villalonga and Amit 2006; Park 2019). It can be observed that as this value increases, firm value increases, as the market value is higher than replacement costs. In general, as it is impossible to directly measure replacement costs, book value of assets is used as its proxy (Chung and Pruitt 1994; Kim and Kwon 2018). Furthermore, in order to compare the results of firm value with Tobin's Q, we conduct the same regression analysis by using M/B ratio. Tobin's Q ($TQ_{i,t}$) and M/B ratio ($MB_{i,t}$), the dependent variables used, were calculated from the formula 6 and 7 below.

$$TQ_{i,t} = \frac{(\text{Common Shares Market Value}_{i,t} + \text{Preferred Shares Market Value}_{i,t} + \text{Liabilities Book Value}_{i,t-1})}{\text{Total Asset Book Value}_{i,t-1}} \quad (6)$$

$$MB_{i,t} = \frac{(\text{Common Shares} \cdot \text{Preferred Shares Market Value}_{i,t})}{\text{Equity Book Value}_{i,t}} \quad (7)$$

$AEM_{i,t-1}$ is the independent variable that represents earnings management of firm i in year $t-1$, which will be verified using both Adjusted-Jones discretionary accruals as well as performance-matched discretionary accruals. As in Hypothesis 1, if the negative impact on firm value increases as earnings management increases, β_1 will show a significantly less than zero-value.

Another explanatory variable, $CG_{i,t-1}$ represents firm i 's corporate governance

level in year t-1, which is separately used to differentiate internal and external corporate governance structure. First, internal corporate governance can be analyzed by the holdings of the largest shareholders, the CEO, and the board of directors, whereas external corporate governance can be represented by the foreign investors' holdings. $CG_{i,t-1}$ is a dummy variable that takes a value of 1 when the largest shareholders' stakes (LAR) are 50% or more; when the board of directors' stakes (BRD) are 25% or more; when the CEOs' stakes (CEO) are 15% or more; and when the foreign investors' stakes (FOR) are 10% or more. Otherwise, the value is 0 when the stakes of these shareholders are less than their respective % ownership listed above (critical value). Critical value of each variable reflects the reality where each agent's average holdings are different. In the case of the largest shareholders' holdings, the average was 0.397 with a standard deviation of 0.167 and a firm with the largest shareholders' holdings of over 50% was observed in Q3. The board of directors' stakes averaged 0.169 with a standard deviation of 0.164 and a firm with the board of directors' stake of over 25% was identified in Q3. In the case of CEOs' holdings, the average was 0.117 with standard deviation of 0.140 and a firm with over 15% of CEOs' stakes was also identified in Q3. Finally, in the case of foreign investors' stake, the data demonstrated an average of 0.066 with a standard deviation of 0.101; the maximum value of 0.518 and Q3 of 0.075, where critical value was set at 10%. To summarize the data and figures listed above, $CG_{i,t-1}$ representing corporate governance, ownership structure variable, applied a

consistent value of around 75% to each agent category to set the dummy variable.

In order to analyze the effect of corporate governance on the relationship between earnings management and firm value, the interaction term of corporate governance and discretionary accruals ($AEM_{i,t-1} \times CG_{i,t-1}$) was included as a primary interest variable in this model. As in Hypothesis 2, if the level of corporate governance has a positive impact on the relationship between earnings management and firm value, β_2 will take on significantly greater than zero- value.

Moreover, in order to control various factors that can affect firm value, as outlined in previous researches, the study will include the following financial control variables: natural logarithm value of total assets; debt ratio to control a possible effect of corporate capital structure on firm value (such as leverage effect); an average of revenue growth for the past 3 years to control the effect of business growth; ROA and total asset-to-operating cash flow to control the effect of profitability; current ratio as it reflects the solvency and credit capacity that can affect firm value; and natural logarithm value of the firm age to control the effect of growth stage and maturity. Additionally, other dummy variables are included in this model to further control various factors that can affect firm value: 1) Net loss is used as a dummy variable that takes on the value of 1 when there is a net loss, and otherwise the value of 0, to control the effect of net loss. 2) dummy variables of industrial effect and year effect to control the impact of such conditions.

IV. Empirical Results

4.1 The effect of the largest shareholders' stakes on the relationship between earnings management and firm value

<Table 4> below suggests the results from the regression analysis on the effect of the largest shareholders' stakes on the relationship between earnings management and firm value. As each model exhibit relevant *Fvalue* values at 1% it can be assumed that they are highly suitable for this research. In addition, since *Adj_Rsq* values of each model exceeds 20%, the models can be viewed as convincing. With *MJDA* selected as earnings management variable (*AEM*) to verify Hypothesis 1 of this research, the regression analysis of firm value variables, *TQ* and *MB*, provided *AEM* variable coefficients of -0.323 and -0.673 respectively, which showed a negative(-) and statistically significant at least at 1%. In order to further substantiate these findings and provide robust results, *MJDA* was substituted for *PMDA*. The regression coefficient of *AEM* variable returned values of -0.372 and -0.782 respectively, which also suggested a negative (-) and statistically significant at least at 1%. This signifies that as earnings management on reported earnings increase, firm value is negatively impacted.

To confirm Hypothesis 2, the subsequent study involved corporate governance structure and earnings management interaction term ($AEM \times LAR$) with *MJDA* selected as earnings management variable (*AEM*). As predicted, the regression analysis of firm value variables, *TQ* and *MB*, demonstrated coefficients value of

0.667 and 1.230, respectively, which showed a positive (+) relation. Furthermore, when *MJDA* was substituted for *PMDA*, the regression coefficient of interaction term ($AEM \times LAR$) gave a value of 0.545 and 1.041, which reaffirmed the previous result with a positive (+) and statistically significant at least at 1%. This implies that the higher the shareholders' stakes are, the larger its impact in mitigating the negative relation between earnings management and firm value. In sum, these findings suggest that when the largest shareholders' stakes are high, it reduces the agency cost and strengthens monitoring and controlling system. Consequently, this leads to an increase in transparency in accounting and business management, ultimately bringing a positive impact on firm value by reducing the negative effect of earnings management.

<Table 4> The effect of the largest shareholders' stakes on the relationship between earnings management and firm value

<i>Variables</i>	<i>MJDA_{i,t-1}</i>				<i>PMDA_{i,t-1}</i>			
	<i>TQ_{i,t}</i>		<i>MB_{i,t}</i>		<i>TQ_{i,t}</i>		<i>MB_{i,t}</i>	
	<i>Coeff</i>	<i>t-value</i>	<i>Coeff</i>	<i>t-value</i>	<i>Coeff</i>	<i>t-value</i>	<i>Coeff</i>	<i>t-value</i>
<i>Intercept</i>	5.980	32.528 ***	8.895	29.163 ***	5.982	32.547 ***	8.895	29.173 ***
<i>AEM_{i,t-1}</i>	-0.323	-2.896 ***	-0.673	-3.640 ***	-0.372	-3.209 ***	-0.782	-4.064 ***
<i>AEM_{i,t-1} × LAR > 50%_{i,t-1}</i>	0.667	2.633 ***	1.230	2.926 ***	0.545	2.046 **	1.041	2.354 **
<i>LAR > 50%_{i,t-1}</i>	-0.115	-5.167 ***	-0.165	-4.475 ***	-0.115	-5.193 ***	-0.166	-4.510 ***
<i>SIZE_{i,t}</i>	-0.105	-12.884 ***	-0.199	-14.682 ***	-0.105	-12.891 ***	-0.199	-14.683 ***
<i>LEV_{i,t}</i>	0.241	4.189 ***	1.272	13.352 ***	0.242	4.222 ***	1.275	13.425 ***
<i>GRW_{i,t}</i>	0.354	12.133 ***	0.621	12.822 ***	0.356	12.188 ***	0.625	12.891 ***
<i>ROA_{i,t}</i>	-0.427	-3.393 ***	-1.799	-8.622 ***	-0.433	-3.450 ***	-1.813	-8.707 ***
<i>CFO_{i,t}</i>	0.573	4.650 ***	0.865	4.232 ***	0.565	4.590 ***	0.849	4.155 ***
<i>CUR_{i,t}</i>	0.018	7.658 ***	0.018	4.588 ***	0.018	7.672 ***	0.018	4.607 ***
<i>AGE_{i,t}</i>	-0.180	-10.497 ***	-0.253	-8.891 ***	-0.180	-10.515 ***	-0.253	-8.905 ***
<i>LOSS_{i,t}</i>	0.100	3.453 ***	0.091	1.895 *	0.101	3.462 ***	0.092	1.905 *
<i>Fixed Effect</i>	Included		Included		Included		Included	
<i>Fvalue</i>	72.592***		67.960***		72.595***		68.000***	
<i>Adj_Rsq</i>	0.276		0.262		0.276		0.263	
<i>N_obs</i>	9412		9412		9412		9412	

1) *, **, and *** imply two-tail significance at 10, 5, and 1%, respectively. 2) The descriptions on the variables can be found in <table 1>.

4.2 The effect of Foreign Ownership on the relationship between earnings management and firm value

<Table 5> below exhibits the results from the regression analysis on the impact of foreign investors' stakes on the relationship between earnings management and firm value. when *MJDA* was set as earnings management variable (*AEM*), *AEM* variables showed a negative (-) relation between earnings management and firm value. Further research that substituted *MJDA* for *PMDA* generated the same results showing negative (-) relation, reaffirming the findings from the analysis using *MJDA*.

To confirm Hypothesis 2, the subsequent study involved corporate governance structure and earnings management interaction term ($AEM \times FOR$) with *MJDA* selected as earnings management variable (*AEM*). The regression analysis of firm value variables, *TQ* and *MB*, gave the coefficient values of 0.054 and 0.309, respectively, which showed a positive (+) but statistically insignificant. Moreover, the subsequent analysis involving *PMDA* as earnings management variable (*AEM*) exhibited the regression coefficient of interaction term ($AEM \times FOR$) value of -0.353 and -0.409, which rather suggested a negative (-) relation but with insignificance as empirical evidence. This implies that as the foreign investors' stakes rise, external monitoring effect will increase. Nonetheless, such an effect will be limited in affecting internal earnings management and its negative effects on firm value.

<Table 5> The effect of Foreign Ownership on the relationship between earnings management and firm value

<i>Variables</i>	<i>MJDA_{i,t-1}</i>				<i>PMDA_{i,t-1}</i>			
	<i>TQ_{i,t}</i>		<i>MB_{i,t}</i>		<i>TQ_{i,t}</i>		<i>MB_{i,t}</i>	
	<i>Coeff</i>	<i>t-value</i>	<i>Coeff</i>	<i>t-value</i>	<i>Coeff</i>	<i>t-value</i>	<i>Coeff</i>	<i>t-value</i>
<i>Intercept</i>	6.883	35.302 ***	10.582	32.802 ***	6.874	35.253 ***	10.564	32.740 ***
<i>AEM_{i,t-1}</i>	-0.148	-1.325	-0.388	-2.107 **	-0.121	-1.030	-0.361	-1.862 *
<i>AEM_{i,t-1} × FOR > 10%_{i,t-1}</i>	0.054	0.220	0.309	0.759	-0.353	-1.393	-0.409	-0.976
<i>FOR > 10%_{i,t-1}</i>	0.317	12.968 ***	0.592	14.642 ***	0.316	12.918 ***	0.590	14.574 ***
<i>SIZE_{i,t}</i>	-0.167	-17.892 ***	-0.313	-20.315 ***	-0.166	-17.855 ***	-0.313	-20.268 ***
<i>LEV_{i,t}</i>	0.396	6.853 ***	1.553	16.237 ***	0.397	6.890 ***	1.555	16.307 ***
<i>GRW_{i,t}</i>	0.348	12.009 ***	0.607	12.653 ***	0.350	12.080 ***	0.611	12.745 ***
<i>ROA_{i,t}</i>	-0.517	-4.142 ***	-1.955	-9.465 ***	-0.524	-4.204 ***	-1.969	-9.550 ***
<i>CFO_{i,t}</i>	0.474	3.870 ***	0.686	3.386 ***	0.468	3.825 ***	0.672	3.318 ***
<i>CUR_{i,t}</i>	0.017	7.303 ***	0.016	4.183 ***	0.018	7.363 ***	0.017	4.242 ***
<i>AGE_{i,t}</i>	-0.171	-10.037 ***	-0.237	-8.416 ***	-0.171	-10.014 ***	-0.236	-8.383 ***
<i>LOSS_{i,t}</i>	0.118	4.083 ***	0.122	2.545 **	0.118	4.074 ***	0.121	2.535 **
<i>Fixed Effect</i>	Included		Included		Included		Included	
<i>Fvalue</i>	76.325***		73.027***		76.425***		73.117***	
<i>Adj_Rsq</i>	0.286		0.277		0.286		0.277	
<i>N_obs</i>	9412		9412		9412		9412	

1) *, **, and *** imply two-tail significance at 10, 5, and 1%, respectively. 2) The descriptions on the variables can be found in <table 1>.

4.3 The effect of Board Ownership on the relationship between earnings management and firm value

<Table 6> presents the regression analysis on the effect of the holdings of the board of directors on the relationship between earnings management and firm value. For the purpose of verifying Hypothesis 1, the regression analysis of firm value variable, *TQ* and *MB*, using *MJDA* as earnings management variable (*AEM*), provided results where the coefficients of *AEM* variables exhibited the negative(-) value of -0.335 and -0.657 , respectively, statistically significant at least at 1%. Further analysis using *PMDA* as earnings management variable (*AEM*) exhibited the regression coefficient of *AEM* variable with a value of -0.377 and -0.786 , respectively, which also demonstrated a negative relation at 1%. The results further support Hypothesis 1, which claims that the negative impact on firm value increases, as the level of earnings management increases.

To verify Hypothesis 2, the subsequent analysis investigated corporate governance structure and earnings management interaction term ($AEM \times BRD$) with *MJDA* selected as earnings management variable (*AEM*) through the regression analysis of firm value variables (*TQ* and *MB*). The results were in line with the predictions, as they showed coefficient values of 0.698 and 1.101 , respectively, statistically significant at 1%. Again, in order to further substantiate the research results, additional research using *PMDA* as earnings management variable(*AEM*) was conducted and found the regression coefficient of interaction term ($AEM \times$

BRD) value of 0.529 and 0.958, which demonstrated a positive (+) and significant at 5%. In sum, these findings suggest that when the board ownerships are high, it reduces the agency cost, eventually bringing a positive impact on firm value by reducing the negative effect of earnings management.

<Table 6> The effect of Board Ownership on the relationship between earnings management and firm value

<i>Variables</i>	<i>MJDA_{i,t-1}</i>				<i>PMDA_{i,t-1}</i>			
	<i>TQ_{i,t}</i>		<i>MB_{i,t}</i>		<i>TQ_{i,t}</i>		<i>MB_{i,t}</i>	
	<i>Coeff</i>	<i>t-value</i>	<i>Coeff</i>	<i>t-value</i>	<i>Coeff</i>	<i>t-value</i>	<i>Coeff</i>	<i>t-value</i>
<i>Intercept</i>	6.195	33.440 ***	9.244	30.074 ***	6.196	33.446 ***	9.241	30.071 ***
<i>AEM_{i,t-1}</i>	-0.335	-2.896 ***	-0.657	-3.422 ***	-0.377	-3.113 ***	-0.786	-3.916 ***
<i>AEM_{i,t-1} × BRD > 25%_{i,t-1}</i>	0.698	3.059 ***	1.101	2.908 ***	0.529	2.225 **	0.958	2.428 **
<i>BRD > 25%_{i,t-1}</i>	-0.176	-8.208 ***	-0.282	-7.919 ***	-0.176	-8.213 ***	-0.283	-7.946 ***
<i>SIZE_{i,t}</i>	-0.117	-14.240 ***	-0.218	-15.968 ***	-0.118	-14.245 ***	-0.218	-15.960 ***
<i>LEV_{i,t}</i>	0.220	3.840 ***	1.235	12.989 ***	0.221	3.865 ***	1.238	13.048 ***
<i>GRW_{i,t}</i>	0.352	12.071 ***	0.616	12.755 ***	0.353	12.123 ***	0.620	12.824 ***
<i>ROA_{i,t}</i>	-0.373	-2.966 ***	-1.711	-8.202 ***	-0.377	-3.006 ***	-1.720	-8.261 ***
<i>CFO_{i,t}</i>	0.563	4.582 ***	0.850	4.169 ***	0.553	4.500 ***	0.831	4.075 ***
<i>CUR_{i,t}</i>	0.019	8.071 ***	0.020	4.990 ***	0.019	8.074 ***	0.020	4.996 ***
<i>AGE_{i,t}</i>	-0.172	-10.050 ***	-0.241	-8.475 ***	-0.172	-10.057 ***	-0.241	-8.475 ***
<i>LOSS_{i,t}</i>	0.102	3.508 ***	0.093	1.926 *	0.102	3.511 ***	0.093	1.933 *
<i>Fixed Effect</i>	Included		Included		Included		Included	
<i>Fvalue</i>	73.756***		69.092***		73.712***		69.146***	
<i>Adj_Rsq</i>	0.279		0.266		0.279		0.266	
<i>N_obs</i>	9412		9412		9412		9412	

1) *, **, and *** imply two-tail significance at 10, 5, and 1%, respectively. 2) The descriptions on the variables can be found in <table 1>.

4.4 The effect of CEO Ownership on the relationship between earnings management and firm value

<Table 7> shows the results from the regression analysis on the effect of the CEOs' stakes on the relationship between earnings management and firm value. For the purpose of verifying Hypothesis 1, the regression analysis of firm value (*TQ* and *MB*) using *MJDA* as earnings management variable (*AEM*) demonstrated a negative(-) and statistically significant on firm value at least at 1% with the coefficients of *AEM* variable value of -0.315 and -0.605, respectively. The subsequent analysis using *PMDA* as earnings management variable (*AEM*) also demonstrated a negative (-) relation at 1% with regression coefficient of *AEM* variable value of -0.365 and -0.736, respectively. These findings provide support for Hypothesis 1 by suggesting that as the level of earnings management increases, the negative impact on firm value increases.

To confirm Hypothesis 2, the subsequent study involved corporate governance structure and earnings management interaction term ($AEM \times CEO$) with *MJDA* selected as earnings management variable (*AEM*). As predicted, the regression analysis of firm value variables (*TQ* and *MB*) showed a positive (+) and statistically significant at least at 5% with the coefficients value of 0.512 and 0.733, respectively. Furthermore, when the second research was conducted using *PMDA* as earnings management variable (*AEM*) the regression coefficient of interaction term ($AEM \times CEO$) showed a value of 0.395 and 0.620, which reaffirmed the previous result with

a positive (+) value even though the statistical significance of results dropped from 5% to 10%. Such results from the regression analysis, compared to the results shown in <table 4> and <table 6>, demonstrated a decrease in the regression coefficient value and the statistical significance in general. However, they still statistically demonstrate that an increase in the CEOs' holdings has impact on mitigating the negative relationship between earnings management and firm value. It can be implied that larger stake held by the CEOs can reduce agency cost and increase transparency of accounting and business management, which ultimately has a positive impact on firm value.

<Table 7> The effect of CEO Ownership on the relationship between earnings management and firm value

<i>Variables</i>	<i>MJDA_{i,t-1}</i>				<i>PMDA_{i,t-1}</i>			
	<i>TQ_{i,t}</i>		<i>MB_{i,t}</i>		<i>TQ_{i,t}</i>		<i>MB_{i,t}</i>	
	<i>Coeff</i>	<i>t-value</i>	<i>Coeff</i>	<i>t-value</i>	<i>Coeff</i>	<i>t-value</i>	<i>Coeff</i>	<i>t-value</i>
<i>Intercept</i>	6.178	33.357 ***	9.209	29.965 ***	6.176	33.345 ***	9.202	29.944 ***
<i>AEM_{i,t-1}</i>	-0.315	-2.644 ***	-0.605	-3.061 ***	-0.365	-2.919 ***	-0.736	-3.549 ***
<i>AEM_{i,t-1} × CEO > 15%_{i,t-1}</i>	0.512	2.361 **	0.733	2.038 **	0.395	1.747 *	0.620	1.653 *
<i>CEO > 15%_{i,t-1}</i>	-0.168	-7.541 ***	-0.262	-7.085 ***	-0.168	-7.553 ***	-0.263	-7.111 ***
<i>SIZE_{i,t}</i>	-0.116	-14.107 ***	-0.216	-15.814 ***	-0.116	-14.094 ***	-0.216	-15.789 ***
<i>LEV_{i,t}</i>	0.237	4.143 ***	1.264	13.305 ***	0.239	4.181 ***	1.267	13.376 ***
<i>GRW_{i,t}</i>	0.356	12.234 ***	0.624	12.914 ***	0.358	12.276 ***	0.627	12.973 ***
<i>ROA_{i,t}</i>	-0.392	-3.118 ***	-1.745	-8.361 ***	-0.394	-3.142 ***	-1.751	-8.409 ***
<i>CFO_{i,t}</i>	0.553	4.499 ***	0.835	4.091 ***	0.546	4.440 ***	0.819	4.014 ***
<i>CUR_{i,t}</i>	0.019	7.987 ***	0.020	4.903 ***	0.019	8.003 ***	0.020	4.919 ***
<i>AGE_{i,t}</i>	-0.174	-10.173 ***	-0.245	-8.599 ***	-0.174	-10.180 ***	-0.244	-8.598 ***
<i>LOSS_{i,t}</i>	0.104	3.584 ***	0.096	2.001 **	0.104	3.585 ***	0.097	2.003 **
<i>Fixed Effect</i>	Included		Included		Included		Included	
<i>Fvalue</i>	73.377***		68.652***		73.386***		68.738***	
<i>Adj_Rsq</i>	0.278		0.264		0.278		0.265	
<i>N_obs</i>	9412		9412		9412		9412	

1) *, **, and *** imply two-tail significance at 10, 5, and 1%, respectively. 2) The descriptions on the variables can be found in <table 1>.

V. CONCLUSION

This research explored the operation of the internal control mechanism and the agency problem, centered on the ownership structure of corporate governance through a study of the relationship between earnings management and firm value. This study reviewed the effects of corporate earnings management on firm value, and then, demonstrated how corporate governance affects the link between earnings management and corporate values.

In conclusion, the results from the empirical study conducted using a sample of 9,412 KSE-listed firms during the period 2011-2018 can be summarized as follows. As the level of earnings management of the prior year increases, the firm value decreases. This suggests that information on earnings management is negatively viewed in the capital market. In other words, earnings management by firms reduces the credibility and utility of accounting information, leading to an increase in capital costs and a decrease in firm value. According to the analysis that took into account corporate governance, ownership structure variable, among various factors that can mitigate the negative impact of earnings management on firm value, foreign investors- an external corporate governance factor- do not have a statistically significant impact. On the contrary, internal corporate governance factors, such as the largest shareholders, the board of directors, and the CEO, have a positive and statistically significant effect on the relationship between earnings management and firm value. It can be inferred that because earnings management practices are

discretely done inside firms, only the internal governance structure has shown affect firm value ultimately.

Finally, it may be useful to point out some limitations of this research. When measuring discretionary accruals, there may be some bias resulting from the error of estimation. One needs to be cautious in interpreting the empirical evidence involving the largest shareholders' holdings as they include affiliates' holdings. Nevertheless, recognizing the need for an in-depth analysis that takes into account ownership-control disparity, this paper additionally addresses ownership-control disparity (the holdings of subsidiaries, executives, and non-profit corporation) and its effect on the relationship between earnings management and firm value in the appendix section. It may be interesting to scrutinize the characteristic of the largest shareholders henceforth- specifically identifying whether they are individuals, institutional investors, or foreign investors.

Appendix

It is well understood that in the case of the Korean companies, there exists a discrepancy between cash flow right of controlling shareholders, which represent actual ownership interest, and voting right that affects decision making. La Porta et al. (1999, 2000) reported that in countries, including Korea, where capital markets are weak, controlling shareholders exercise considerable control over the company through indirect ownership, such as mutual equity and pyramid equity structure involving relatives or subsidiary companies. This represents separation of ownership and control.

If the ownership-control disparity is large, controlling shareholders are more likely to pursue opportunistic interests to maximize their wealth and to make decisions that conflict with corporate value. This implies that there may be a difference in decision-making process depending on the ownership-control disparity characterized by the difference between the cash flow right and the voting right of controlling shareholders. In other words, if the ownership-control disparity is large, it will strengthen entrenchment effect that increases the likelihood of controlling shareholders to pursue private interests and make decisions that may have a negative impact on corporate value (Lee et al., 2012).

The discussion in this appendix section aims to take the regression analysis results involving the largest shareholders' stake variable a step further and provide insights on how of the ownership-control disparity affects firm value. Using methodology

below used in Lee et al. (2012), the analysis involved calculating the ownership-control disparity by deducting cash flow right from voting right. The data used for this calculation, such as cash flow rights and voting rights, included data downloaded from TS-2000 as well as hand-collected data.

$$\text{Cash Flow Rights} = \frac{(\text{controlling shareholder's direct share ownership} + \text{family ownership})}{(\text{Number of common stocks} - \text{Treasury stock})}$$

$$\text{Voting Rights} = \frac{\left(\begin{array}{l} \text{controlling shareholder's direct share ownership} + \text{family ownership} \\ \text{affiliates' direct share ownership} + \text{directors' share ownership} \\ \text{non - for - profit organizations' share ownership} \end{array} \right)}{(\text{Number of common stocks} - \text{Treasury stock})}$$

$$\text{Ownership - Control Disparity (WED)} = \text{Voting Rights} - \text{Cash Flow Rights}$$

<Table 8> below shows the results from the regression analysis on the effect of ownership-control disparity (affiliates' stake + executives' stake + non-profit corporations' stake) on the relationship between earnings management and firm value. Looking at the interaction term ($AEM \times WED$) of ownership-control disparity and earnings management, all of the regression coefficient values were positive (+), suggesting a positive (+) relation to firm value, but the results lacked statistical significance for the study. This may suggest that the greater the ownership-control disparity, the worse the agency problem becomes; it lacks impact on firm value to mitigate the negative effect of earnings management on firm value. However, these results from the Appendix are not against a major point of this study, that only

the internal governance structure have shown to have a positive effect on the negative relationship between earnings management and firm value, since agents those generating ownership-control disparity can also be viewed as internal corporate governance.

<Table 8> The effect of ownership-control disparity on the relationship between earnings management and firm value

Variables	<i>MJDA_{i,t-1}</i>				<i>PMDA_{i,t-1}</i>			
	<i>TQ_{it}</i>		<i>MB_{it}</i>		<i>TQ_{it}</i>		<i>MB_{it}</i>	
	<i>Coeff</i>	<i>t-value</i>	<i>Coeff</i>	<i>t-value</i>	<i>Coeff</i>	<i>t-value</i>	<i>Coeff</i>	<i>t-value</i>
<i>Intercept</i>	5.967	32.468 ***	8.886	5.967 ***	5.965	32.469 ***	8.877	29.112 ***
<i>AEM_{i,t-1}</i>	-0.279	-2.442 **	-0.542	-0.279 ***	-0.327	-2.745 ***	-0.665	-3.367 ***
<i>AEM_{i,t-1} × WED > 40%_{i,t-1}</i>	0.382	1.617	0.469	0.382	0.255	1.032	0.352	0.858
<i>WED > 40%_{i,t-1}</i>	-0.127	-5.960 ***	-0.164	-0.127 ***	-0.128	-6.002 ***	-0.166	-4.684 ***
<i>SIZE_{it}</i>	-0.104	-12.768 ***	-0.198	-0.104 ***	-0.104	-12.755 ***	-0.198	-14.595 ***
<i>LEV_{it}</i>	0.244	4.262 ***	1.279	0.244 ***	0.245	4.287 ***	1.281	13.510 ***
<i>GRW_{it}</i>	0.355	12.158 ***	0.623	0.355 ***	0.356	12.213 ***	0.627	12.936 ***
<i>ROA_{it}</i>	-0.442	-3.518 ***	-1.827	-0.442 ***	-0.447	-3.568 ***	-1.838	-8.830 ***
<i>CFO_{it}</i>	0.562	4.563 ***	0.847	0.562 ***	0.552	4.484 ***	0.829	4.056 ***
<i>CUR_{it}</i>	0.019	7.748 ***	0.018	0.019 ***	0.019	7.754 ***	0.019	4.650 ***
<i>AGE_{it}</i>	-0.183	-10.648 ***	-0.257	-9.005 ***	-0.183	-10.664 ***	-0.257	-9.007 ***
<i>LOSS_{it}</i>	0.100	3.426 ***	0.091	1.894 *	0.100	3.423 ***	0.091	1.893 *
<i>Fixed Effect</i>	Included		Included		Included		Included	
<i>Fvalue</i>	72.731***		67.818***		72.770***		67.924***	
<i>Adj_Rsq</i>	0.276		0.262		0.276		0.262	
<i>N_obs</i>	9412		9412		9412		9412	

1) *, **, and *** imply two-tail significance at 10, 5, and 1%, respectively. 2) The descriptions on the variables can be found in <table 1>.

References

- Adam, T. R., Fernando, C. S., & Golubeva, E. (2015). Managerial overconfidence and corporate risk management. *Journal of Banking & Finance*, 60, 195-208.
- Ashbaugh, H., Collins, D. W., & LaFond, R. (2004). Corporate governance and the cost of equity capital. Emory, University of Iowa. Retrieved on January, 26, 2006.
- Bae, J., & Kim, J. (2012). Information Asymmetry and Earnings Management. *Journal of Taxation and Accounting*, 13(2), 141-172.
- Bergstresser, D., & Philippon, T. (2006). CEO incentives and earnings management. *Journal of financial economics*, 80(3), 511-529.
- Berle, A., & Means, G. (1932). *The Modern Corporation and Private Property*. New York: New Brunswick.
- Bharati, R., Doellman, T., & Fu, X. (2016). CEO confidence and stock returns. *Journal of Contemporary Accounting & Economics*, 12(1), 89-110.
- Biddle, G. C., Hilary, G., & Verdi, R. S. (2009). How does financial reporting quality relate to investment efficiency?. *Journal of accounting and economics*, 48(2-3), 112-131.
- Black, B. (2001). The corporate governance behavior and market value of Russian firms. *Emerging markets review*, 2(2), 89-108.
- Black, B. S., Jang, H., & Kim, W. (2006). Does corporate governance predict firms' market values? Evidence from Korea. *The Journal of Law, Economics, and Organization*, 22(2), 366-413.
- Black, B. S., Kim, W., Jang, H., & Park, K. S. (2010). How corporate governance affects firm value: Evidence on channels from Korea.
- Branch, B. (1974). Research and development activity and profitability: a distributed lag analysis. *Journal of Political Economy*, 82(5), 999-1011.
- Byun, H., & Cho, Y. (2010). When Does the Information on Corporate Governance Affect Firm Values? : The Relationship Between Information Asymmetry and Cost of Capital. *Asian Review of Financial Research*, 23(3), 213-248.
- Chaney, P. K., & Lewis, C. M. (1995). Earnings management and firm valuation under asymmetric information. *Journal of Corporate Finance*, 1(3-4), 319-345.
- Chauvin, K. W., & Hirschey, M. (1993). Advertising, R&D expenditures and the market value of the firm. *Financial management*, 128-140.
- Chih, H. L., Shen, C. H., & Kang, F. C. (2008). Corporate social responsibility, investor protection, and earnings management: Some international evidence. *Journal of business ethics*, 79(1-2), 179-198.

- Cho, S. Y., Lee, C., & Pfeiffer Jr, R. J. (2013). Corporate social responsibility performance and information asymmetry. *Journal of Accounting and Public Policy*, 32(1), 71-83.
- Choi, H., & Yoon, J. (2006). The Effects of Corporate Governance on Conservativeness of Accounting Information. *Korean Accounting Review*, 31(4), 145-174.
- Chung, K. H., & Pruitt, S. W. (1994). A simple approximation of Tobin's q. *Financial management*, 70-74.
- Canyon, M. J., & Read, L. E. (2006). A model of the supply of executives for outside directorships. *Journal of Corporate Finance*, 12(3), 645-659.
- Cremers, K. M., & Nair, V. B. (2005). Governance mechanisms and equity prices. *The Journal of Finance*, 60(6), 2859-2894.
- Cremers, K. M., Nair, V. B., & Wei, C. (2007). Governance mechanisms and bond prices. *The Review of Financial Studies*, 20(5), 1359-1388.
- Dechow, P. M., & Skinner, D. J. (2000). Earnings management: Reconciling the views of accounting academics, practitioners, and regulators. *Accounting horizons*, 14(2), 235-250.
- Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. *Accounting review*, 193-225.
- Dechow, P. M., S. P. Kothari, and R. L. Watts. 1998. The Relation between Earnings and Cash Flows. *Journal of Accounting and Economics*. Vol.25 : 133-168.
- Del Monte, A., & Papagni, E. (2003). R&D and the growth of firms: empirical analysis of a panel of Italian firms. *Research policy*, 32(6), 1003-1014.
- Doukas, J., & Switzer, L. (1992). The stock market's valuation of R&D spending and market concentration. *Journal of Economics and Business*, 44(2), 95-114.
- Drobetz, W., Schillhofer, A., & Zimmermann, H. (2004). Corporate governance and expected stock returns: Evidence from Germany. *European financial management*, 10(2), 267-293.
- Eberhart, A. C., Maxwell, W. F., & Siddique, A. R. (2004). An examination of long - term abnormal stock returns and operating performance following R&D increases. *The Journal of Finance*, 59(2), 623-650.
- Francis, J., LaFond, R., Olsson, P. M., & Schipper, K. (2004). Costs of equity and earnings attributes. *The accounting review*, 79(4), 967-1010.
- Francis, J., LaFond, R., Olsson, P., & Schipper, K. (2003). Earnings quality and the pricing effects of earnings patterns. Available at SSRN 414142.
- Francis, J., LaFond, R., Olsson, P., & Schipper, K. (2005). The market pricing of accruals quality. *Journal of accounting and economics*, 39(2), 295-327.

- Gervais, S., Heaton, J. B., & Odean, T. (2011). Overconfidence, compensation contracts, and capital budgeting. *The Journal of Finance*, 66(5), 1735-1777.
- Giroud, X., & Mueller, H. M. (2011). Corporate governance, product market competition, and equity prices. *The Journal of Finance*, 66(2), 563-600.
- Goel, A. M., & Thakor, A. V. (2008). Overconfidence, CEO selection, and corporate governance. *The Journal of Finance*, 63(6), 2737-2784.
- Gompers, P., Ishii, J., & Metrick, A. (2003). Corporate governance and equity prices. *The quarterly journal of economics*, 118(1), 107-156.
- Han, J., Sin, S., & Bae, S. (2019). Impact of Earnings management on Firm Value in the Corporate Life Cycle. *Accounting Information Review*, 37(2), 1-27.
- Hazarika, S., Karpoff, J. M., & Nahata, R. (2012). Internal corporate governance, CEO turnover, and earnings management. *Journal of Financial Economics*, 104(1), 44-69.
- Healy, P. M. (1985). The effect of bonus schemes on accounting decisions. *Journal of accounting and economics*, 7(1-3), 85-107.
- Hirshleifer, D., Low, A., & Teoh, S. H. (2012). Are overconfident CEOs better innovators?. *The journal of finance*, 67(4), 1457-1498.
- Hwang, L. (2013). CFO Lecture Notes(11th ed.). Seoul, Korea: Seoul Economy and Management Publisher.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics*, 3(4), 305-360.
- Kang, Y., & Kook, C. (2012). The Effect of Independent Outside Directors on Firm Value. *Asian Review of Financial Research*, 25(3), 451-498.
- Kang, Y., Kook, C., & Yoon, J. (2015). How Does Good Corporate Governance Contribute to Firm Value?: Board Independence and Firm's Cash Holdings. *Asian Review of Financial Research*, 28(2), 309-350.
- Kedia, S., & Philippon, T. (2007). The economics of fraudulent accounting. *The Review of Financial Studies*, 22(6), 2169-2199.
- Kho, B., & Kim, J. (2007). Does the Accrual Anomaly Reflect a Risk Factor? The Case of the Korean Stock Market. *Korean Journal of Financial Studies*, 36(3), 425-461.
- Kim, D., & Eum, S. (2008). The Relationship Between Corporate Governance and Foreign Ownership for Korean Firms. *International Business Review*, 12(4), 155-172.
- Kim, H., & Kwon, T. (2018). Risk-Taking and the effect of CEO Overconfidence in Firm Value. *The Korean Finance Association*, 1678-1724.
- Kim, J., & Lee, J. (2010). Earning Management and the Long-run Performance of Initial Public Offering Firms. *The Korean Finance Association*, 24-61.

- Kim, K., & Lee, J. (2016). The impact of institutional investors' trading on the opportunistic earnings management in Korea. *The Korean Finance Association*, 67-101.
- Kim, Y. (2009). Earnings Management and Value Relevance of Accounting Information of KSE and KOSDAQ Firms. *Accounting Information Review*, 27(2), 255-272.
- Kothari, S. P., Leone, A. J., & Wasley, C. E. (2005). Performance matched discretionary accrual measures. *Journal of accounting and economics*, 39(1), 163-197
- Kwon, T. (2019). Corporate Related-Diversification and Firm Value. *The Korean Finance Association*, 1118-1142.
- La Porta, R., Lopez - de - Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *The Journal of Finance*, 54(2), 471-517.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (2000). Investor protection and corporate governance. *Journal of financial economics*, 58(1-2), 3-27.
- La Porta, R., Lopez - de - Silanes, F., Shleifer, A., & Vishny, R. (2002). Investor protection and corporate valuation. *The journal of finance*, 57(3), 1147-1170.
- Lee, A., Chun, S., & Kim, S. (2012). Controlling Shareholders' Ownership Structure and Real Earnings Management. *Korean Accounting Review*, 37(1), 157-189.
- Lee, H. (2015). The Effect of Corporate Governance Improvement on the Financial Performance and Firm Value. *Review of Accounting and Policy Studies*, 20(4), 111-134.
- Lee, S., & Lee, Y. (2017). Effects of Corporate Governance Structure on Firm's Efficiency and Value. *Journal of Knowledge Studies*, 15(3), 33-73.
- Marquardt, C. A., & Wiedman, C. I. (2004). The effect of earnings management on the value relevance of accounting information. *Journal of Business Finance & Accounting*, 31(3 - 4), 297-332.
- Minasian, J. R. (1969). Research and development, production functions, and rates of return. *The American Economic Review*, 59(2), 80-85.
- Morck, R., Shleifer, A., & Vishny, R. W. (1988). Management ownership and market valuation: An empirical analysis. *Journal of financial economics*, 20, 293-315.
- Park, J. (2019). The Relationship between Representative Director with Multiple Directorships and Firm Value. *Tax Accounting Research*, 60, 47-66.
- Park, J., & Ji, S. (2019). The Effect of Outside Director with Multiple Directorships on the Firm Value. *Korean Computers and Accounting Review*, 17(1), 205-229.
- Park, J., & Lee, K. (2017). Multiple Directorships of Registered Directors and Firm Value. *Accounting Information Review*, 35(3), 1 - 27.
- Park, K. (2017). Review of Corporate Governance Research and its Implications for Korea.

- Korean Management Review, 46(3), 625-662.
- Park, K., Byun, H., & Lee, E. (2009). Do Ex Post Corporate Governance Premia Exist in the Korean Stock Market?. *Korean Journal of Financial Studies*, 38(4), 423-454.
- Pourciau, S. (1993). Earnings management and nonroutine executive changes. *Journal of accounting and economics*, 16(1-3), 317-336.
- Ramalingegowda, S., Wang, C. S., & Yu, Y. (2013). The role of financial reporting quality in mitigating the constraining effect of dividend policy on investment decisions. *The accounting review*, 88(3), 1007-1039.
- Rangan, S. (1998). Earnings management and the performance of seasoned equity offerings. *Journal of Financial economics*, 50(1), 101-122.
- Seok, J., Kim, B., & Go, S. (2019). Impact of R&D Investment on Firm Value: The Role of Customer Awareness. *Journal of Consumer Studies*, 30(1), 43-67.
- Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *The journal of finance*, 52(2), 737-783.
- Sohn, P. (2010). A Study of Relationship between Corporate Governance and Firm Value: Using Corporate Governance Index. *Journal of Industrial Economics and Business*, 23(3), 1443-1465.
- Strong, J. S., & Meyer, J. R. (1987). Asset writedowns: Managerial incentives and security returns. *The Journal of Finance*, 42(3), 643-661.
- Subramanyam, K. R. (1996). The pricing of discretionary accruals. *Journal of accounting and economics*, 22(1-3), 249-281.
- Villalonga, B., & Amit, R. (2006). How do family ownership, control and management affect firm value?. *Journal of financial Economics*, 80(2), 385-417.
- Wooldridge, J. M. (2016). *Introductory econometrics: A modern approach*. Nelson Education.
- Xie, B., Davidson III, W. N., & DaDalt, P. J. (2003). Earnings management and corporate governance: the role of the board and the audit committee. *Journal of corporate finance*, 9(3), 295-316.

기업지배구조, 이익조정 및 기업가치 : 소유구조를 중심으로

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본 연구는 기업지배구조 중 소유구조를 중심으로 내부통제(Internal Control) 메커니즘의 작동 및 대리인문제의 완화 여부를 이익조정 수준과 기업가치 간의 관계를 통해 검증하는 것을 목적으로 한다. 단계적으로 먼저 1) 기업의 이익조정이 기업 가치에 영향을 미치는지 검토하고, 2) 기업의 지배구조가 기업의 이익조정 수준과 기업가치 간의 관계에 어떠한 영향을 미치는 지에 대해서 분석한다.

실증분석결과를 요약하면 다음과 같다. 첫째, 전기의 이익조정 수준이 증가할수록 당기의 기업가치는 감소하는 것으로 확인되었다. 이는 이익조정에 대한 정보를 자본시장에서 부정적으로 평가한다는 것으로 해석된다. 즉, 기업의 이익조정 행위가 회계정보의 신뢰성 및 유용성을 감소시켜 궁극적으로 자본비용이 증가하고 기업가치는 감소할 것으로 확인되었다. 둘째, 상호작용변수인 기업지배구조변수를 고려하여 분석한 결과에 의하면, 이익조정이 기업가치에 미치는 부정적인 영향을 완화시키기 위한 지배구조 요인 중 기업외부 지배구조 요인인 외국인투자자는 별다른 영향을 미치지 못하지만, 기업내부 지배구조 요인인 최대주주, 이사회, 그리고 최고경영자는 유의한 영향을 미치는 것으로 나타났다. 이러한 결과는 이익조정이라는 행위가 기업내부에서 은밀히 진행되는 사항이기 때문에 기업 내부의 지배구조 요인만 영향을 미치는 결과가 도출된 것으로 해석된다.

본 연구는 기업의 이익조정과 기업가치 간의 관계에 기업의 지배구조가 미치는 영향을 분석한 국내 최초의 연구로서 국내 자료를 바탕으로 실증적인 근거를 제시하였다는 점에서 그 의의가 있다. 또한 지배구조의 다양한 대응변수를 사용하여 구체적으로 어떠한 지배구조 요인이 이익조정과 기업가치 간의 변화에 어떠한 영향을 미치는지 확인하였다는 데에 기존 연구와 차별성을 갖는다. 본 논문의 결과는 자본시장에서 투자자들이 이익조정에 대한 정보를 이용할 때 기업의 지배구조 요인을 고려할 필요가 있음을 시사한다.

주요어: 기업지배구조, 이익조정, 기업가치, 소유구조, 내부통제, 대리인문제

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