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EARNINGS MANAGEMENT AND FUTURE EARNINGS

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Abstract

This research aims to examine the moderating effect of the cost of earnings management on the relationship between earnings management and future earnings. The research samples are manufacturing companies listed on the Indonesia Stock Exchange in 2013-2015, the cost of accruals earnings management is auditor quality, and costs of real earnings management are market share and financial health. Based on the fixed effect regression test, auditor quality strengthens the positive effect of accruals earnings management on future performance, while market share and financial health weaken the negative effect of real earnings management on future earnings. This indicates that in the context of efficient contracting, a high quality auditor provides a better signal for earnings prediction compared to a low quality auditor. In addition, higher market share and higher financial health limit opportunistic real earnings management in reducing future earnings.

Keywords: *earnings management, cost of earnings management, future earnings, opportunist, signaling*

Abstrak

Penelitian ini bertujuan untuk menguji efek pemoderasi biaya manajemen laba terhadap hubungan antara manajemen laba dan laba masa depan. Sampel penelitian yaitu perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia 2013-2015. Biaya manajemen laba akrual yaitu kualitas auditor, sedangkan biaya manajemen laba riil yaitu pangsa pasar dan kesehatan keuangan. Berdasarkan uji regresi *fixed effect*, kualitas auditor memperkuat pengaruh positif manajemen laba akrual terhadap laba masa depan, sementara pangsa pasar dan kesehatan keuangan memperlemah pengaruh negatif manajemen laba riil terhadap laba masa depan. Hal tersebut mengindikasikan bahwa dalam konteks efisien, auditor berkualitas tinggi membuat manajemen laba akrual memberi sinyal yang lebih kuat untuk memprediksi laba masa depan dibandingkan dengan auditor berkualitas rendah. Pangsa pasar dan kesehatan keuangan yang lebih tinggi membatasi praktik manajemen laba riil oportunist yang menurunkan laba masa depan.

Kata kunci: *manajemen laba, biaya manajemen laba, laba masa depan, oportunist, pensinyalan*

INTRODUCTION

Earnings management can be classified into two categories, namely Accruals Earnings Management (hereafter AEM) and Real Earnings Management (hereafter REM). AEM means to manage earnings through the utilization of accounting principles provided by GAAP,

whereas REM is accelerating earnings by changing some business activities (Roychowdhury 2006). AEM is not accomplished by changing the underlying operating activities of the company, but through the choices of accounting methods and accounting estimations used to represent those activities; while REM involves changing the company's underlying

operations in an effort to boost current-period earnings (Gunny 2010).

Earnings management relates to performance evaluation. It is important to examine how management performance will be, especially earnings, after earnings management is carried out in the future. This research focuses on the effect of earnings management on future earnings. Enron was declared bankrupt in 2002 for earnings manipulation and covering up its financial problems and losses (Shirur 2011). The case of Enron demonstrates that the evaluation of future performance is important to avoid the negative impact of earnings management.

Previous research have provided inconsistent results regarding the effect of earnings management on future earnings. Some past studies have shown that both AEM and REM have a negative effect on future earnings (Cohen and Zarowin 2010; Filip et al. 2015; Leggett et al. 2015; Vorst 2016; Tabassum et al. 2014). Earnings management can decrease future earnings because earnings management, especially REM, can create problems in the future (Tabassum et al. 2014; Leggett et al. 2015). These problems include a decrease of future sales volume caused by the current discounted price (a method of sales manipulation) that will be changed back to the normal price in the future (Roychowdhury 2006), a decrease of future receivables collectability caused by lean current credit sales (a method of sales manipulation) (Roychowdhury 2006), or the experience of investment opportunity losses of potential future sales caused by RnD expense cutting (a method of discretionary expenses reduction) (Vorst 2016).

On another note, some previous studies have shown that both AEM and REM can serve as information signaling to explain future earnings (Siregar and Utama 2009; Gunny 2010; Vorst 2016). Gunny (2010) states that earnings management can be a tool to show management ability in order to generate higher earnings in the future. Subramanyam (1996) strengthens this argument by arguing that accrual

management helps earnings information by reflecting economic value as well as predicting future earnings.

Contrasting findings of earnings management on future earnings exist because there are two different motivations when companies engage in earnings management. These two different motivations generate two different effects of earnings management on future earnings. In opportunist motivation, both AEM and REM are used to generate misleading information, so that it increases information cost (the cost needed to generate high quality and accurate information) (Nuryaman 2013), as well as the loss of investment opportunity caused by R&D reduction that leads to lost potential future sales improvement (Vorst 2016), even going as far as decreasing subsequent performance (Filip et al. 2015) due to lower subsequent sales. In efficient contract motivation, earnings management is used to share the private information on the companies' quality in order to differentiate them from low quality companies (Kirmani dan Rao, 2000); such information regarding management ability may generate future performance (Gunny 2010), thus may be able assist in predicting future earnings (Nuryaman 2013).

Inconsistent research results on earnings management is caused by unclear motivations, whether the earnings management was conducted due to opportunist behavior motivation or an efficient contracting one (Suhardianto and Harymawan 2011). Efficient contracting refers to earnings management done to provide signals related to a company's true economic performance by using their private information, while opportunist earnings management refers to information manipulation that reflects more on the manager's personal desire rather than the company's financial performance (Wuryani 2012). This research utilizes the cost of earnings management in order to explain whether earnings management tends to be an opportunist act or serve as information signaling. The cost of earning management

is the limitations and barriers for a manager to engage in earnings management (Beyer et al. 2018; Abernathy et al. 2014). If a manager bears the higher cost of earnings management, then the manager is less likely to engage in it; however, if a manager bears the lower cost of earnings management, then the manager is more likely to engage in it (Beyer et al. 2018). Beyer et al. (2018) explain that it is costly to give a credible signal of private information so companies should have the ability to pay the costs to provide credible signal of information. In this research context, companies should have the ability to maintain the cost of earnings management in order to give the signal of private information.

Badertscher (2011) states that there are costs companies must consider in choosing AEM over REM, or REM over AEM. Zang (2012) specifically points out the cost of both AEM and REM. The cost of AEM is audit quality, while the costs of REM are market share and financial health (Zang 2012). Zang (2012) finds that a high quality auditor is a limitation and barrier for a company to implement AEM, while a company's lower market share and financial health are limitations and barriers for carrying out REM.

Zehri and Shabou (2011) find that a high quality auditor decreases opportunist AEM because they have the ability to detect opportunist AEM compared to a low quality auditor. The main role of an auditor is to ensure that the financial statement stated is based on accounting standards (IAPI 2015), as well as reducing the possibility of weak accounting standards such as the engagement of opportunist AEM. Auditor quality is not a cost for REM because REM does not utilize weaknesses in accounting standards to manage earnings, but rather change a number of business activities. Companies implement REM to avoid the auditor's scrutiny (Cohen et al. 2008; Roychowdhury 2006).

Mascarenhas et al. (2010) argues that an auditor has the motivation to increase

the AEM of information signaling; this corresponds to the findings of Subramanyam (1996), where the AEM of information signaling is positively responded by the investor, therefore the auditor has the interest of the investor's positive response in mind. An investor's positive response indicates that financial information which has been audited by an auditor is considered to be of high quality and that the auditors have succeeded in reducing asymmetric information. When an auditor allows signaling AEM, it shows the effective role they play in improving information quality and reducing asymmetric information. An effective auditor will gain a higher reputation, where higher reputation can serve as motivation for auditors to increase AEM signaling. The reputation of auditors stems from their role in providing high quality audit by evaluating a company's accounting policy and estimation in predicting future earnings. This will also enable financial statement users to see the company's potential performance in the future. Since signaling AEM refers to the accounting policy and estimation choice to manage current earnings that can give a signal of future earnings, auditors will allow companies to engage in signaling AEM so they can achieve a higher reputation. Signaling AEM is able to signal informative current earnings to predict future earnings if it is done under the supervision of a high quality auditor.

Spence (1973) and Ross (1977) explain that if companies want to enjoy the benefit of signaling, the signal must be credible, whereas credible signals have proven to be costly. In the context of REM, the costs of REM are market share and financial health (Zang 2012). Spence (1973) and Ross (1977) explain that signaling is costly, Zang (2012) further elaborates that market share and financial health can be used to explain if companies engage in signaling REM. The higher the market share and financial health, the lower the costs of REM and the more REM is implemented by the company (Zang 2012;

Abernathy et al. 2014). REM is carried out by changing the underlying company's activities, hence the company needs to make sure that they have competitive advantages, such as market share and financial health. Companies with higher market share enjoy more competitive advantages than followers due to their greater cumulative experience, ability to benefit from economies of scale, bargaining power with suppliers and customers, attention from investors, and influence on their competitors; so it will be easier for them to deviate normal business activities beyond their optimal point (Zang 2012). If companies wish to deviate from normal business activities, it will be easier for companies with higher financial health because companies with lower financial health will bear more costs (Zang 2012).

In regard to efficient contracts, Abernathy et al. (2014) states that the purpose of REM is to improve operational activities. REM can be used to change business activities in order to reach optimal level, such as generating more sales as well as earnings in the current and future periods (Gunny 2010). For example, if a company is one of the market leaders with a high market share, REM will be carried out by providing a temporary discounted price without any worries of sales decreasing in the future due to the change from the discounted price back to the normal price. They will maintain higher sales in the future because of a market leader's competitive advantage compared to followers due to their greater cumulative experience, ability to benefit from economies of scale, as well as the bargaining power they have with suppliers and customers. Moreover, they can use discounted price strategies to introduce new products to new customers, in addition to gaining a new market and generating more sales in the future. In order to achieve the optimal level of business activities, companies should have high market share and financial health. REM will prove to be costly in improving operational activities if the company has a low market share and

poor financial health. REM will be able to signal the improvement of operation activities and help to predict future earnings if done by a company with high market share and good financial health.

This research aims to examine: (1) the moderating effect of auditor quality on the effect of AEM on future earnings; and (2) the moderating effect of market share and financial health on the effect of REM on future earnings. This research serves as a contribution to fill previous research gaps that provide contrasting results between the positive effect of earnings management on future earnings (e.g. Gunny and Zhang 2014; Subramanyam 1996; Siregar and Utama 2009; Beyer et al. 2018) and the negative one (e.g. Cohen and Zarowin 2010; Filip et al. 2015; Leggett et al. 2015; Vorst 2016; Tabassum et al. 2015) These contrary results relate to the absence of earnings management perspectives, which are the opportunist behavior or efficient contract perspectives. Previous research (e.g. Gunny and Zhang 2014; Subramanyam 1996; Siregar and Utama 2009; Beyer et al. 2018; Cohen and Zarwin 2010; Filip et al. 2015; Leggett et al. 2015; Vorst 2016; Tabassum et al. 2015) do not include certain factors such as the limitations of managers to engage in earnings management, to explain when earnings management has a positive effect (as signaling earnings management) and when it has a negative one (as opportunist earnings management) on future earnings. By not accounting for these factors, it is unclear whether earnings management is carried out based on opportunist behavior or efficient contract to give the signal of future earnings prediction. This research fills the gap by using the cost of earnings management as moderating variables to determine if the effect of earning management on future earnings is more likely done by opportunist behavior or information signaling. This research predicts that opportunist earnings management is performed when companies have lower costs of earnings management (low quality auditors for AEM, lower market

share and lower financial health for REM), while information signaling is implemented when companies have higher costs of earnings management (high quality auditor for AEM, higher market share and higher financial health for REM).

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Agency Theory

Agency theory explains the relationship between management and shareholders (Jensen and Meckling 1976). The main core of agency theory is about the conflict of interest between management and shareholders. Conflict exists because there is asymmetric information between management and shareholders. In the condition of larger asymmetric information, management engages in opportunist behavior in order to fulfill their interests. Management engages in opportunist earnings management to fulfill interests of bonus, debt, and political cost (Scott 2019).

Signaling Theory

Companies know their own quality, while external parties have less information about it. Signaling theory explains that companies need to give signal of the company's quality in order to differentiate them from low quality companies (Kirmani and Rao 2000). Asymmetric information is the main reason for companies to give signal of private information to external parties. On one hand, agency theory focuses on the impact of higher asymmetric information; while on the other hand, signaling theory focuses on the reduction of asymmetric information. Earnings management can be viewed as a way for companies to give signal of future earnings to external parties.

Earnings Management

Earnings management are the alternatives used to manipulate reported earnings to fulfill certain purposes. There are two ways to understand earnings management. First, earnings management as management opportunist behavior maximizes their utili-

ties in terms of face contract of compensation, debt, and political cost (Scott 2019). Second, earnings management as an efficient contract perspective, where earnings management gives management the flexibility to protect themselves and the company in terms of anticipating unexpected events for the benefit of related parties (Scott 2019). Earnings management is one of the important issues in financial reporting because it is related to the information quality of earnings (Dechow and Schrand 2004). In Indonesia, research on earnings management have proven to be significant, contributing to 18 percent of all accounting and finance research in the National Symposium of Accounting, as well as of 45.7 percent of all published research in the big five accounting journals (*Jurnal Akuntansi dan Auditing Indonesia, Jurnal Akuntansi, Jurnal Riset Akuntansi Indonesia, Akuntabilitas, Jurnal Akuntansi dan Keuangan*) from 2000 until 2009 (Suhardianto and Harymawan 2011).

Earnings Management and Future Earnings

Earnings information is used to predict future earnings. Since earnings information that has been contaminated by earnings management is also used to predict future earnings by information users, earnings management also has an effect on future earnings prediction.

Previous studies have examined the effect of earnings management on future earnings. There are two contrast results about the relationship between earnings management and future earnings. In an efficient contract perspective, AEM (Lipe 1990; Subramanyam 1996; Simamora 2018; Siregar and Utama 2009) and REM (Herbohn et al. 2010; Gunny 2010; Simamora 2018) have a positive effect on future performance. Efficient earnings management gives the signal of private information, so earnings information users can predict future earnings. In opportunist behavior, AEM (Nuryaman 2013) and REM (Vorst 2016; Filip et al. 2015; Leggett et al. 2015) have a negative effect on earnings

management. Opportunist behavior indicates that managers' interests are above the company's performance.

Earnings management, especially income smoothing, can also be used as a tool to transfer future earnings to the current earnings period. Hao and Yao (2010) explain that companies will transfer second-period earnings to first period earnings through income smoothing if first period earnings are low. This can be either efficient or opportunist earnings management. It becomes efficient motivation if the income smoothing is carried out by companies with higher stock liquidation or less asymmetric information; while it becomes opportunistic behavior if income smoothing is done by companies with lower stock liquidation or more asymmetric information (Hao and Yao 2010).

Since the prediction of future earnings is important for information users, earnings forecasts plays an important role on the prediction of future earnings. Investors use earnings forecast information to predict future earnings. Earnings forecast information are usually provided by a company's management or analyst in the stock market. Gunny and Zhang (2014) state that earnings forecasts assist the investor in obtaining a signal of the company's favorable looks. Analyst forecast meetings are also a company's motivation to engage in earnings management, either for opportunistic (Vorst 2016) or efficient motivation (Gunny 2010; Beyer et al. 2018). This research does not use earnings forecast beating as the motivation of earnings management to predict future earnings. This is because earnings forecast data is difficult to access freely from either the companies' management or analysts in the stock market.

Opportunistic Earnings Management

There are some opinions on earnings management as opportunist behavior. Schipper (1989) argues earnings management as opportunist behavior exists because there is the intervention of management to increase personal gain by misleading finan-

cial statement users. Schipper (1989) focuses on the behavior of misleading financial statement users as a crucial matter. Since the personal gain of management can be fulfilled in different ways, Healy and Wahlen (1999) and Leuz et al. (2003) see intention for personal gain of management in a wider scope, which is the opportunist and efficient motivation that depends on how the personal gain of management is fulfilled. This research views that opportunist earnings management is situational, because there is evidence that companies can implement earnings management either from an opportunist or efficient contract perspective (e.g. Al-Attar et al. 2008; Chen et al. 2008; Simamora 2018; Hao and Yao 2010).

In terms of opportunist behavior, earnings management tends to cover the bad condition of the company and creates a bad effect in the future. Opportunist earnings management is also done based on a bonus scheme or debt covenant (Scott 2019). Cohen et al. (2011) find investors recognize the understatement of warranty liabilities in order to manage earnings rather than communicate about performance and liability. Irani and Oesch (2016) state that REM is used to achieve short-term performance for fulfilling analyst forecasts. Another opportunist earnings management is to cover bad performance around seasoned equity offering (SEO) to boost up share price (Kothari et al. 2016). Fisher et al. (2016) also find that AEM is used to avoid filing for bankruptcy in the United States.

Opportunist earnings management, both AEM and REM, have negative effects on future performance. AEM has a negative effect on share price because earnings management practices can reduce the credibility of accounting information (Nuryaman 2013). Fisher et al. (2016) state that earnings management destroys economic value by making the distressed company look like a healthy one. Vorst (2016) finds that REM by discretionary investment cutting leads to an opportunity lost of investment and decreases subsequent performance. Filip et al. (2015) find that AEM that

avoids impairment loss recognition decreases future growth opportunities. REM leads to larger real economic costs (Leggett et al. 2015) and creates problems in the future (Tabassum et al. 2014). Companies that beat analyst forecasts by using both REM and AEM have worse operating performance and stock market performance in the subsequent three years compared to companies that miss analyst forecasts without earnings management (Bhojraj et al. 2009). The impacts of earnings management such as the decrease of economic value, loss of investment opportunity, and bigger economic cost show that earnings management can decrease future earnings.

Efficient Earnings Management

Earnings management based on efficient contract or information signaling is aimed at giving private information about the competitive advantages of the company. Management uses earnings management as a tool to give a signal about management skills (Gunny 2010) and the company's ability to generate earnings or cash flow in the future (Subramanyam 1996). The main motive of management in using earnings management as a signaling tool is an efficient contract that provides a signal of private information.

In terms of information signaling, earnings management increases earnings informativeness and predictability (Simamora 2018). Subramanyam (1996) finds that managerial accrual discretion improves the ability of earnings to reflect economic value, as well as help and predict future cash flows, earnings, and dividends. Since accrual accounting base allows recording of expenses in period of benefit rather than period of cash outlay, it helps to predict how much cash will flow in the next period, furthermore it can help to predict how much earning can be generated in the next period (Makar and Alam 2003). Lewellen and Resutek (2019) explain accruals help predict future earnings because they respond to change of production before the change of production affect earnings (e.g. change of the cost of goods sold can be

predicted from the change of inventory cost in the balance sheet), and helps to predict earnings faster than revenue when investment takes times to give any returns.

Subramanyam (1996) finds evidence consistent with this hypothesis, suggests that discretionary accruals do add informational content to earnings. Lipe (1990) shows that earnings management is a technique that reduces earnings variability to reduce uncertainty and increases the predictability of future earnings. Al-Attar et al. (2008) find that abnormal accruals could predict future cash flow and suggests that abnormal accruals are not merely the products of noise in the accruals-estimation process. In this case, managers will use earnings management to communicate some private information to the public in order to obtain results in the form of company value improvement (Tangjitprom 2013). Siregar and Utama (2009), as well as Rezaei and Roshani (2012), find evidence that accrual earnings management is an efficient purpose. Liu (2016) found that there is a positive relationship between earnings management, both accrual and real earnings management, and economic value added in the Association of Southeast Asian Nations (ASEAN). Herbohn et al. (2010) suggest that management signal their expectations about an improvement (deterioration) in the future company's performance via decreases (increases) in unrecognized deferred tax assets (losses). Furthermore, Herbohn et al. (2010) found evidence that management uses their judgment to report useful, value-relevant information about future profitability.

In terms of REM, abnormal activities improve the ability of earnings to reflect economic value as well, especially when a firm has competitive advantage. For example, a market leader firm enjoys more competitive advantage than followers due to greater cumulative experience, ability to benefit from economies of scale, bargaining power with suppliers and customers, attention from investors, and influence on their competitors (Zang 2012). Therefore, managers at market-leader firms may

engage in REM to reflect the competitiveness they have (Zang 2012).

Gunny (2010) found that REM has a positive effect on future earnings. There are two arguments of Gunny (2010). First, engaging in REM may provide benefits for firms to perform better in the future. For example, REM by selling fixed assets helps a firm to avoid debt covenant, or by cutting R&D expense to smooth earnings in order to reduce cost of capital and obtain more funding resources in the future (Gunny 2010). Second, the positive association between REM and future performance is also consistent with signaling managerial competence or future performance. For example, a credible firm issues management forecasting that shows the firm can achieve better performance in the future but fails to beat earnings benchmark in the current period, hence the firm engages in REM to beat earnings benchmark and give signal for better future performance (Gunny 2010). Vorst (2016) found that suspect firms of REM (firms that meet earnings) weaken the negative effect of REM through discretionary investment cutting on future earnings. Contrary to the opportunist concept, REM can serve as a signal of the company's ability to generate better earnings in the future (Gunny 2010).

As information signaling, earnings management practices have to be followed by a number of measurements in order to distinguish earnings management as an opportunist act versus efficient motive, such as auditor quality (Mascarenhas et al. 2010), bankruptcy risk (Al-Attar et al. 2008), and fundamental risk (Chen et al. 2008). Simamora (2018) finds that innate factors and cost of REM can explain earnings management to increase earnings predictability. Moreover, there are five innate factors determined by Francis et al. (2005) that cause accruals management based on a firm's business model: firm size, operating cycle, operation cash flow variability, sales variability, and negative earnings (Simamora 2018). This research uses auditor quality (cost of AEM), market share (cost of REM), and financial health (cost of

REM) to find the likelihood of earnings management as opportunist behavior or information signaling in future earnings prediction.

Hypotheses Development

Accrual Earnings Management, Future Earnings, and Auditor Quality as the Proxy of Cost of AEM

This research uses auditor quality in order to separate AEM as opportunist behavior and information signaling. Mascarenhas et al. (2010) state that the auditor is motivated to increase information signaling AEM because Subramanyam (1996) finds that information signaling AEM is positively responded by the investor and attracts the interest of the auditor. Even though it is the manager's motivation to give the signal of private information, the investor still needs an auditor as an independent party to ensure the quality of the signal (Ojo 2015). A high quality auditor ensures a high quality signal of private information provided by efficient motive earnings management. For example, when management estimates low doubtful allowance, it is not always opportunistically for covering up bad performance to obtain the best compensation, but also giving the signal that the company has good collecting management and good payment profile customers. High quality auditors will suggest where doubtful allowance can reflect real receivable collection.

A quality measurement for an auditor is auditor affiliation. A Big Four affiliated auditor reduces opportunist AEM and boosts signaling AEM up in order to maintain their reputation. Based on the deep pocket theory, the Big Four auditors have the biggest clients and revenue globally, thus they are able to conduct training and competence improvement investment (Lennox 1999). DeAngelo (1981) finds that a Big Four auditor can maintain independence because they reduce dependence on certain clients. A high quality auditor reduces opportunist AEM and increase

signaling in order to reduce monitoring cost (Ching et al. 2015).

H1: Big Four auditors strengthens (weakens) the positive (negative) effect of AEM on future earnings.

Real Earnings Management, Future Earnings, and Market Share as the Proxy of Cost of REM

This research will use market share and financial health in order to differentiate REM as opportunist behavior and information signaling. Zang (2012) shows that market share is the cost of REM. Zang (2012) states that since REM is an improvement strategy of optimal operational decisions, it can be particularly costly for companies with lower market share to face intense competition in the industry. Therefore, management with a lower percentage of industry market share may perceive REM as more costly because it can further erode their status within the industry (Abernathy et al. 2014). Meanwhile higher market share companies have the competitive advantages of greater cumulative experience, the ability to benefit from economies of scale, bargaining power with suppliers and customers, attention from investors, and influence on their competitors (Zang 2012); lower market share companies have a disadvantage in their market position. The disadvantage of market position leads to opportunist REM (Markarian and Santalo´ 2014). Lower market companies engage in REM through carrying out sales through discounted price or more lenient credit sales to cover up their disability to generate more sales than their competitors with a higher market share. As a result, subsequent sales decrease because customers are less likely to buy their product without any discounted price, and receivable collectability decreases because lenient credit sales cannot filter customers with good or bad receivable payment (Roychowdhury 2006); subsequent earnings will also further decrease. Lower market share companies cannot maintain higher sales in the future

because they lack competitive advantages like higher market share companies. This shows that companies engaging in REM without a higher market share will lead to opportunist earnings management and a decrease in future earnings. Higher market share companies that engage in REM, such as over sales, can still maintain higher subsequent sales because they use REM as a tool to give signal that they have greater cumulative experience, the ability to benefit from economies of scale, bargaining power with suppliers and customers, attention from investors, and influence on their competitors. Companies with high market share lead to high future earnings. High market share will reduce bankruptcy risk and increase companies' performance (Opler and Titman 1994) and stock market value (Blundell et al. 1999), included in future earnings. High market share companies will take advantage of their position as market leader to increase future earnings by improving their operational business to optimal level through REM. In this case, REM is beneficial in giving signal of competitive advantage for market leader companies to increase future earnings.

H2: Market share strengthens (weakens) the positive (negative) effect of REM on future earnings.

Real Earnings Management, Future Earnings, and Financial Health as the Proxy of Cost of REM

Zang (2012) argues that financial health is the cost of REM. High bankruptcy risk leads to opportunist earnings management (Al-Attar et al. 2008; Fisher et al. 2016). For poorer financial health companies, the marginal cost of deviating from optimal business strategies is likely to be high (Zang 2012). Fisher et al. (2016) explain that poorer financial health companies engage in earnings management to cover up bad financial condition and to avoid bankruptcy report filling. Different to poorer financial health companies, higher financial health companies engage in earnings management as information

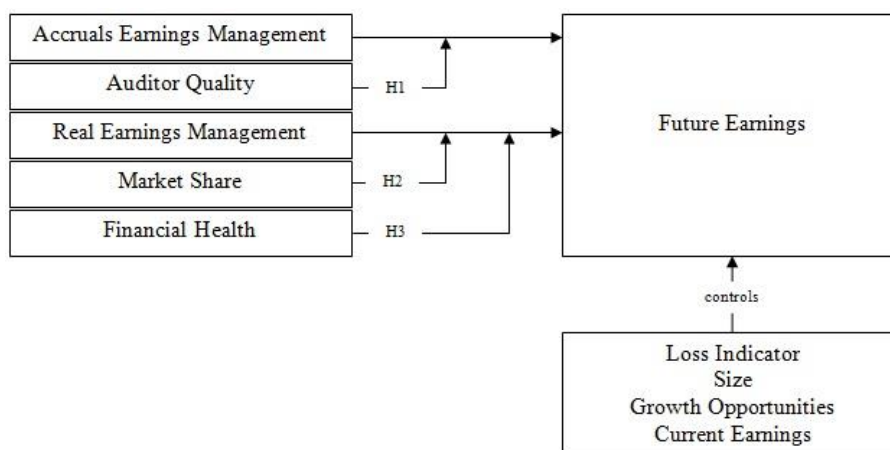


Figure 1

Research Framework

Source: Hypotheses development and previous research

signaling, such as the signal of a healthy financial condition. For example, when companies experience overproduction, they will face higher production costs as well. Companies need to be in healthy financial condition so that higher production costs do not cause any financial problems.

Since poorer financial health companies experience financial problems, it would seem that over production cannot be enough to fulfill higher production costs. In this case, management of poorer financial health companies might perceive REM as relatively costly (Abernathy et al. 2014). When companies of higher financial health face lower financial problems, they can carry out effective business activities which can lead to high financial performance (Opler and Titman 1994; Garlappi and Yan 2011). Healthier companies will take advantage of their position with no financial problems to increase future earnings by improving their operational business to optimal level through REM. In this case, REM is useful in giving the signal of the company being free of financial problems to perform effective business activities and increase future earnings.

H₃: Financial health strengthens (weakens) the positive (negative) effect of REM on future earnings.

Research Framework

Research gaps show that previous research (e.g. Cohen and Zarowin 2010; Filip et al. 2015; Leggett et al. 2015; Vorst 2016; Tabassum et al. 2015; Gunny and Zhang 2014; Subramanyam 1996; Siregar and Utama 2009; Beyer et al. 2018) fail to capture any contribution of cost of earnings management as a determinant of opportunist versus efficient earnings management, nor any figure of it. The research framework based on the literature and hypotheses development built can be seen on Figure 1.

Based on the research framework, the dependent variable is future earnings. The independent variables are AEM and REM, while moderating variables are auditor quality, market share, and financial health.

Control variables are loss indicator, company size and growth opportunity. Loss indicator, company size, and growth opportunities are used to control if abnormal activities came from the business condition or indication of REM (Roychowdhury 2006). It is suspected that companies with no negative earnings (no losses), of bigger size, and higher growth opportunities achieve higher earnings from normal business activities due to their experience in obtaining earnings (have no experience with losses), larger resources (larger in size), and in a growing condition (higher growth opportunities) (Roychowdhury

Tabel 1
Research Sample

Notes	Number of Firms	Number of Firm-Year
Manufacturer companies listed on the Indonesian Stock Exchange 2013-2015.	130	390
Changed the financial reporting period in the research period.	(2)	(6)
Financial statement is not available on www.idx.co.id or on the company's website.	(3)	(9)
Total	125	375

2006). Companies with experience in losses, smaller resources (smaller in size), and lower growth cannot generate higher earnings from normal business activities, as well as being suspected to engage in abnormal business activities through REM. Based on the above explanation, the loss indicator is expected to have a negative effect on future earnings, while size and growth opportunity are expected to have positive effects on future earnings (Gunny 2010; Muzir 2011; Liow 2010; Jennings et al. 2015). Current earnings are added as a control variable to address concern that earnings management is correlated to performance. Higher future earnings can be achieved because companies have experience of higher current earnings achievement. It is expected that current earnings have a positive effect on future earnings (Gunny 2010).

RESEARCH METHOD

Research Sample

The research sample are manufacturing companies listed on the Indonesian Stock Exchange in 2013-2015. This research determines the research period to start from 2013 because free access of complete financial statements on the www.idx.co.id website or company websites mostly began in 2013. This study chooses manufacturing companies because their characteristics are related to production activities, so the measurement of over production activities of REM will not be biased. The number of the samples

used in this research can be seen on Table 1.

Empirical Model

This research aims to examine the moderating effect of the cost of earnings management on the relationship between earnings management and future earnings. In order to fulfill the aims, this research uses a moderating regression model as follows:

Where AEM is Accrual Earnings Management, REM is Real Earnings Management, BIG refers to 1 if it is a Big Four auditor and 0 if otherwise, MS is Market Share, Z is Financial Health, LOSS refers to 1 if the company experienced loss and 0 if otherwise, SIZE is Company Size, MVA is Market Value to Asset, EARNINGS is Current Earnings.

In comparison, AEM is carried out at the ending of the year, while REM is implemented throughout the year (Roychowdhury 2006). Since companies engage in REM from the beginning to the end of the year, companies consider the costs of REM (market share and financial health) at the beginning of the year. Based on this explanation, this research measures market share at the beginning of period t (MSt-1), while financial health is measured at the beginning of period t (Zt-1). Meanwhile, auditor quality (Big Four affiliation) is measured at the period t (BIGt) because AEM is carried out at the end of the year. Control variables that occurred are matched to the research period (period t).

Future Earnings

$$= a + b1AEM_t + b2REM_t + b3BIG_t \times AEM_t + b4MS_{t-1} \times REM_t + b5Z_{t-1} \times REM_t + b6BIG_t + b7MS_{t-1} + b8Z_{t-1} + b9LOSS_t + b10SIZE_t + b11MVA_t + b12EARNINGS_t + e \dots \dots (1)$$

$$\text{Future Earnings} = \frac{\text{Earnings After Tax}_{t+1}}{\text{Total Aset}_{t+1}} \dots \dots (2)$$

$$\frac{\text{Total Accruals}_t}{\text{Assets}_t} = a + b0 \frac{1}{\text{Assets}_t} + b1 \frac{\Delta \text{Sales}_t}{\text{Assets}_t} + b2 \frac{\text{PPE}_1}{\text{Assets}_t} \dots \dots (3)$$

Nondiscretionary accruals_t

$$= \hat{a} + \hat{b}0 \frac{1}{\text{Assets}_t} + \hat{b}1 \frac{\Delta \text{Sales}_t - \Delta \text{Receivable}_t}{\text{Assets}_t} + \hat{b}2 \frac{\text{PPE}_1}{\text{Assets}_t} \dots \dots (4)$$

Variable Measurements**Dependent Variable**

The dependent variable is future earnings. Future earnings occur in one year ahead. Future earnings is measured by the model according to Gunny (Gunny 2010).

Independent Variables

The independent variables are AEM and REM. AEM is measured by discretionary accruals while REM is measured by abnormal activities. This research assumes that companies engage in both income maximization AEM for bonus scheme and debt covenant motivations (Scott 2019) and income minimization AEM for political cost motivation (Jones 1991; Scott 2019). As for REM, this research follows the assumption by Roychowdhury (2006) that explain that companies engage in income maximization REM to avoid losses and beat previous earnings target or analyst forecast. Since AEM is done both for income maximization and minimization, this research uses the absolute value of discretionary accruals. Regarding to REM, since it is done for income maximization, positive or negative signs of abnormal activities value matters to determine if companies increase earnings by the practice of REM.

AEM is measured by absolute discretionary accrual of Jones (1991), modified by Dechow et al. (1995), as follows.

Equation 3 will be run with cross section regression by using 1,602 firm-year

data of all non-banking and non-financial companies listed on the Indonesian Stock Exchange in 2013-2015. Banking and financial companies are excluded because they are in a regulated industry and have different industry characteristics among all the industries. Parameters of a , $b0$, $b1$, $b2$ from Equation 3 are used to calculate non-discretionary accruals, as follows.

REM is measured by abnormal activities. Activities that occur to detect REM are sales manipulation, overproduction, and discretionary expense cutting. In order to estimate sales manipulation activity, overproduction, and discretionary expense cutting, the equation that will be used is as follows (Roychowdhury 2006).

Equations 6, 7, and 8 will be run with cross section regression by using 1,602 firm-year data of all non-banking and non-financial companies listed on the Indonesian Stock Exchange in 2013-2015. Banking and financial companies are excluded because they are in a regulated industry and have different industry characteristics among all the industries. In sales manipulation activities, additional sales do not generate an increase of operation cash flow (Roychowdhury 2006). Based on equation 6, when normal operation cash flow that can be generated by sales (linear function of sales and change of sales) is higher than actual operation cash flow, then abnormal (normal

$$Discretionary\ accruals_t = \frac{Total\ Accruals_t}{Assets_t} - Nondiscretionary\ accruals_t \dots \dots \dots (5)$$

$$\frac{CFO_t}{Assets_{t-1}} = a + b0 \frac{1}{Assets_{t-1}} + b1 \frac{Sales_t}{Assets_{t-1}} + b2 \frac{\Delta Sales_t}{Assets_{t-1}} + e_t \dots \dots \dots (6)$$

$$\frac{Production_t}{Assets_{t-1}} = a + b0 \frac{1}{Assets_{t-1}} + b1 \frac{Sales_t}{Assets_{t-1}} + b2 \frac{\Delta Sales_t}{Assets_{t-1}} + b3 \frac{\Delta Sales_{t-1}}{Assets_{t-1}} + e_t \dots \dots (7)$$

$$\frac{Discretionary\ expenses_t}{Assets_{t-1}} = a + b0 \frac{1}{Assets_{t-1}} + b1 \frac{Sales_{t-1}}{Assets_{t-1}} + e_t \dots \dots \dots (8)$$

$$REM = -abnormal\ CFO + abnormal\ PROD - abnormal\ DISEXP \dots \dots \dots (9)$$

$$Z = 1.2\ working\ capital\ to\ total\ assets + 1.4\ retained\ earnings\ to\ total\ assets + 3.3\ EBIT\ to\ total\ assets + 0.6\ market\ value\ of\ equity\ to\ total\ liabilities + 0.999\ sales\ to\ total\ assets \dots \dots \dots (10)$$

minus actual) operation cash flow will be negative; this indicates that the company is engaged in sales manipulation.

In over production activities, companies produce more goods than expected demand (Roychowdhury 2006). Based on equation 7, when expected demand of goods (linear function of sales, change of sales, and previous change of sales) is lower than actual production, then abnormal (expected minus actual) production will be positive and indicates that companies are engaged in over production.

In discretionary expense cutting activities, companies cut discretionary expenses when such expenses do not generate immediate sales (Roychowdhury 2006). Based on equation 8, when the sales that can be generated (linear function of sales) are higher than actual discretionary expenses, then the abnormal discretionary expenses will be negative, indicating that companies have cut discretionary expenses that cannot generate immediate current sales.

Based on the above explanation, the indication of REM is the negative value of abnormal cash flow from operation (abnormal CFO), the positive value of abnormal production (abnormal PROD), and the negative value of abnormal discretionary expenses (abnormal DISEXP) (Cohen et al.

2008). Abnormal CFO is the value of e_t from equation (6). Abnormal PROD is the value of e_t from equation (7). Abnormal DISEXP is the value of e_t from equation (8).

If the management of a company is engaged with one type of REM activity, then they will also be engaged in the other type of REM activity (Cohen et al. 2008; Chi et al. 2011). This research will use the aggregate of three types of REM activities as well as the comprehensive measurement of REM. Real earnings management occurred by the positive value of REM (Chi et al. 2011) is as follows (Tabassum et al. 2014).

Moderating Variables

Moderating variables are auditor quality, market share, and financial health. Auditor quality is measured by a dummy variable, scoring 1 if the auditor is affiliated with the Big Four, and 0 if they are affiliated with a non-Big Four.

The market share shows the position and competition in the industry. Zang (2012) stated that since REM is a departure from optimal operational decisions, it can be particularly costly for companies that face in tense competition in the industry. Therefore, a company with a lower

percentage of industry market share may perceive REM as more costly because it can further erode their status within the industry (Abernathy et al. 2014). Market share is calculated by the total sales of the company divided by the total sales of the industry group (within three digits of industry code) at the beginning of the period (Abernathy et al. 2014; Zang 2012). In this research, the industry group is based on the three digit code of JASICA (Jakarta Stock Industrial Classification) of the manufacturing industry.

For a company in poor financial health, the marginal cost of deviating from optimal business strategies is likely to be high (Zang 2012). In this case, management might perceive real activities manipulation as relatively costly because their primary goal is to improve operations (Abernathy et al. 2014). Financial health is measured by the z score of Altman (1968) at the beginning of the period. Maturungan et al. (2017) state that the z score of Altman (1968) has the prediction power of evaluating the financial distress of Indonesian manufacturing companies 87.8 percent (includes in good category). It shows that this research could use the z score of Altman (1968) to measure financial health. The higher the z score, the healthier the company is. The Z score of Altman (1968) is as follows.

Control Variables

The control variables are loss indicator, size, growth opportunity, and current earnings. Loss indicator, size, and growth opportunities are used to control whether abnormal activities came from business conditions or an indication of real earnings management, while current earnings used to address concern of earnings management is related to performance (Roychowdhury 2006). The loss indicator is measured by a dummy variable, given a score of 1 if earnings have a negative value, and a score of 0 if earnings have a positive value. Size is measured by the logarithm of total assets. Growth opportunity is measured by the market value of equity divided by total

assets. Current earnings are measured by the earnings after tax divided by total assets. The loss indicator has a negative effect on future earnings, while growth opportunity and current earnings have the positive effects on future earnings (Gunny 2010; Muzir 2011; Liow 2010). A larger size shows a larger resource to generate future earnings (Jennings et al. 2015).

Analysis Method

This research uses data from a financial statement published on the Indonesian Stock Exchange. Data was analyzed by regression with panel data (multi samples and years). This research chooses the best model of panel regression among common, fixed, or random effect with the redundant fixed effect test and Hausman test.

RESULTS AND DISCUSSION

Descriptive Statistics

Table 2 shows that based on 375 firm-year data, the highest future earnings is 0.737, while the lowest is -1.279. The highest current earnings is 2.540, while the lowest is -0.603. The negative value of earnings indicates that this research involves loss companies. The consideration of the involvement of loss companies is to control the possibility of opportunist earnings management to delay negative reported earnings in the current period (Roychowdhury 2006; Gunny 2010) that give consequences of the existence of negative earnings in the future period (Gunny 2010). The sample of loss companies are 76 firm-years or 20.3 percent of all 375 firm-years. The average of future earnings for each firm-year is 0.035 with a deviation from the average of 0.126.

The average of AEM is 0.086, which means that on average manufacturing companies manage their level of earnings 0.086 higher or lower from actual earnings relative to lagged total assets by using accounting choices policy and estimation. The average of REM is 0.022, which means

Table 2
Descriptive Statistics of Empirical Model Variables

	Future Earnings	AEM	REM	MS	Z	SIZE	MVA	Current Earnings
Mean	0.035	0.086	0.022	0.143	6.333	12.289	1.603	0.057
Maximum	0.737	2.544	1.142	1.000	832.277	14.390	142.568	2.540
Minimum	-1.279	0.000	-2.336	0.000	-14.184	10.561	0.000	-0.603
Std. Dev.	0.126	0.165	0.472	0.210	43.119	0.693	7.588	0.183
Skewness	5.325	9.782	-1.698	1.985	18.820	0.494	14.443	7.239
Firm-year	375	375	375	375	375	375	375	375
Loss Firm-year								76 (20.3% of total firm-year)
Profit Firm-year								299 (79.7% of total firm-year)

Table 3
Selection Model Tests

Test	Significance	Notes	Conclusion
Redundant fixed effect	0.0003	Fixed effect model is better than the common effect model	Fixed effect model is the best model
Hausman	0.0000	Fixed effect model is better than the random effect model	

that average manufacturing companies manage their level of earnings 0.022 higher from actual earnings relative to lagged total assets by engaging in sales manipulation, over-production, and discretionary expense cutting. Based on the Leuz et al. (2003) report that examined non-banking and financing companies in 31 countries from 1990-1999, Indonesia is included in the cluster of 10 countries with a high average of earnings management. This indicates that Indonesia has high a potential of engaging in both AEM and REM.

The average market share is 0.143, which means that average manufacturing companies have about 14.3 percent control of market share of the industry. The average Z score is 6.333. Altman (1968) determines healthy companies of having a Z score above 2.99 and poor companies having a Z score below 1.83, the average Z score shows that the average manufacture companies are healthy. This research uses the health condition based on Altman (1968) because Maturungan et al. (2017) found that the Altman (1968) Z score has 87.8 percent (includes in good category) explanatory power of bankruptcy prediction for Indonesian manufacturing companies.

Regression Model Selection

This research uses panel data. There are three regression models provided to analyze panel data, namely the common effect, fixed effect, and random effect model. In order to choose the best model, this study used the redundant fixed effect test and Hausman test. The result of the redundant fixed effect test and Hausman test can be viewed on Table 3.

Table 3 shows that the significance value of the redundant fixed effect test is 0.0003 (significant in level 0.01). This indicates that the fixed effect model is better than the common effect model. The significance value of the Hausman test is 0.0000 (significant in level 0.01). This indicates that the fixed effect model is superior to the random effect model. This research uses fixed effect regression for hypotheses testing.

Multicollinearity Test

A multicollinearity test is used to evaluate the correlation between independent variables. Hartono (2014) explains that there might be a multicollinearity problem in moderating regression models since the model involves interaction between independent and

Table 4
Result of Multicollinearity Test

Independent Variables	VIF
AEM	3.657711
REM	3.052870
Interaction between auditor quality and AEM	2.220299
Interaction between market share and REM	2.215931
Interaction between financial health and REM	2.99899
Auditor quality	2.261539
Market Share	1.641242
Financial Health	1.79391
Loss indicator	1.561904
Size	1.739295
Market value to total assets	3.116300
Current Earnings	4.496015

moderating variables. The multicollinearity test is done through the VIF test. The result of the multicollinearity test can be seen on Table 4.

Based on Table 4, the VIF of all independent variables is below 10. This shows that this research is free of multicollinearity problems.

Hypotheses Test and Discussion

Based on Table 5 showing the results of regression without moderating variables, AEM has a coefficient value of 0.350525 (statistically significant at 0.01); meaning that AEM has a positive effect on future earnings. This is consistent with Siregar and Utama (2009) who found that discretionary accruals (the proxy of AEM) in the Indonesian Stock Exchange are used to predict future earnings. From an efficient earnings management perspective, AEM is used as a tool to give a signal of private information.

Results of regression without moderating variables show that REM has a coefficient value of -0.000008 (statistically insignificant), which means that REM has no effect on future earnings. Previous research gaps (e.g. Gunny and Zhang 2014; Beyer et al. 2018; Cohen and Zarowin 2010; Filip et al. 2015; Leggett et al. 2015; Vorst 2016) have shown the inconsistent effect of REM on future earnings, REM without the interaction with market share and financial health cannot be determined either as opportunist or efficient REM to

predict future earnings. The effect of REM on future earnings is clearly explained when REM interacts with market share and financial health.

Results of regression with moderating variables show that the variable interaction between auditor quality and AEM (BIGxAEM) has a coefficient value of 0.312008 (statistically significant at the level of 0.05). This indicates that Hypothesis 1 is accepted. Since AEM has a positive effect on future earnings, high quality auditors (auditors from the Big Four) strengthens the positive effect of AEM on future earnings compared to low quality auditors from non-Big Four firms. Big Four auditors need to maintain their reputation in front of the investor by ensuring that the manager uses AEM to provide private information to the investor. Ojo (2015) states that investors rely on auditors as an independent party to ensure high information quality. Therefore, Big Four auditors strengthen the positive effect of AEM on future earnings because AEM that can predict future earnings is positively responded by the investor, resulting in interest from the auditor. This result is consistent with Mascarenhas et al. (2010) and Zehri and Shabou (2011) that state high quality auditors tend to decrease opportunist AEM that reduce future earnings and increase signaling AEM that predict future earnings. Al-Attar et al. (2008) argue that accruals management is not always as noise, but can predict

Table 5
Result of Hypotheses Test

	Prediction Sign	Coefficient		Notes
		Without Moderating Variables	With Moderating Variables	
AEM	+/-	0.350525*	0.245049**	
REM	+/-	-0.000008	0.013039	
BIGxAEM	+		0.312008**	H ₁ is supported by the data
MSxREM	+		0.013850**	H ₂ is supported by the data
ZxREM	+		0.002098**	H ₃ is supported by the data
BIG	+		0.030578	
MS	+		0.027429	
Z	+		0.000605	
LOSS	-	0.012801	0.021203	
SIZE	+	-0.103944	-0.110983	
MVA	+	-0.003562	-0.007191	
EARNINGS	+	0.043691**	0.052842**	
Constant		1.285689	1.347062	
F-Statistic		4.793524*	4.624448*	
Adjusted R-Squared		0.569406	0.568590	

*Significant in level 0.01
**Significant in level 0.05

future performance as well. The role of an auditor is to increase future earnings by reducing monitoring cost spending by companies (Ching et al. 2015). For example, a high quality auditor will suggest doubtful allowance estimation that reflects good collection management and customer payment profile. Good collection management and customer payment profile are competitive advantages to increase revenue and earnings in the future.

The variable interaction between market share and REM (MSxREM) has a coefficient value of 0.013850 (statistically significant at the level of 0.05). This indicates that Hypothesis 2 is accepted. Results of the effect of REM on future earnings shows that REM has a negative coefficient, therefore higher market share weakens the negative effect of REM on future earnings compared to lower market share. Since REM is carried out by performing abnormal operation activities, there is potential lost, such as the potential of sales decreasing in the future when companies return to perform normal operational activities. Companies with a

higher market share can reduce the potential loss because they have a strong position in the market; in the context of the efficient contract, this can also be seen as REM used to give the signal of the position of companies in the market. Market share can reduce future loss through the use of REM; therefore higher market share weakens the negative effect of REM on future earnings. This result is consistent with Gunny (2010) that states REM is a strategy to show competitive advantages and the ability to generate better profitability in the future. In this case, market share is a competitive advantage that can increase performance (Opler and Titman 1994). Markarian and Santalo (2014) state that a company with no strong market position in the industry tends to manage earnings opportunistically; on the other hand, Abernathy et al. (2014) and Zang (2012) state that a company with a strong market position that implements REM will improve business activities. For example, a company that carries out over sales by giving discount prices will not lose future sales when returning to the standard

Table 6
Additional Test

	Coefficient		
	REM = -Abnormal CFO	REM = +Abnormal Production	REM = -Abnormal Discretionary Expenses
AEM	0.258119*	0.242778*	0.252464*
REM	0.088441	0.011277	0.203078
BIGxAEM	0.347422**	0.316863**	0.297154**
MSxREM	0.264723*	-0.427412	0.190226*
ZxREM	0.000965	0.018352**	8.57E-05
BIG	0.022656	0.034757	0.025953
MS	-0.003070	0.194588	0.005018
Z	0.000996***	-3.91E-05	6.96E-05
LOSS	0.021669	0.019091	0.022226
SIZE	-0.091920	-0.112946	-0.107076
MVA	-0.005605	-0.006439	-0.006320
EARNINGS	0.042108**	0.050769**	0.046592**
Constant	1.112855	1.350418	1.305916
VIF	Below 10	Below 10	Below 10
Fixed-Effect	Yes	Yes	Yes
F-Statistic	4.726352*	4.691871*	4.652743*
Adjusted R-Squared	0.575378	0.573105	0.570497

*Significant in level 0.01
**Significant in level 0.05
***Significant in level 0.10

price (before the discounted price) in the future because its high market share maintains high sales for the company.

The variable interaction between financial health and REM (ZxREM) has a coefficient value of 0.002098 (statistically significant at the level of 0.05). This indicates that Hypothesis 3 is accepted. Results of the effect of REM on future earnings show that REM has a negative coefficient, so higher financial health weakens the negative effect of REM on future earnings compared to lower financial health. When companies engage in REM, they perform abnormal activities above their normal level. This will be followed by potential loss because more abnormal levels of resources are needed to perform abnormal activities, such as financial difficulties after overproduction because a company requires a large number of resources to carry out overproduction and has to be financially funded. Furthermore, financial difficulties also make companies struggle to generate earnings. Companies

with higher financial health can reduce the potential of financial difficulties because of good financial conditions; whereas in the context of the efficient contract, it can also be seen as REM that is used to give the signal of financial health condition. A good financial condition can reduce financial difficulties which can make companies struggle to generate earnings; therefore financial health weakens the negative effect of REM on future earnings. This result is consistent with Gunny (2010) that states REM is a strategy to show competitive advantage and the ability to generate better profitability in the future. In this case, financial health is a competitive advantage that can increase performance (Opler and Titman 1994). Fisher et al. (2016) state that a company tends to manage earnings opportunistically to avoid a bankruptcy filing, while Abernathy et al. (2014) and Zang (2012) argue that a healthy company that does REM will improve business activities. For example, a company that undergoes overproduction will not

experience financial difficulties as an impact of big operational investment for overproduction.

Additional Test

This research runs an additional test to analyze each REM activity with information signaling to increase future earnings. In the context of signaling, one activity gives a different information content compared to the other, as well as giving different signals (eg. Connelly 2011). Over sales activity (level of -abnormal CFO), overproduction activity (level of +abnormal production cost), and discretionary expense cutting activity (level of abnormal discretionary expenses) are examined partially to show if different REM activities explain different signals of competitive advantage in order to increase future earnings.

Table 6 shows that interaction between market share and over sales activities had a positive effect on future earnings, while the interaction between financial health and over sales had no effect on it. Zang (2012) explains that higher market share companies have competitive advantages such as greater cumulative experience, the ability to benefit from economies of scale, bargaining power with suppliers and customers, attention from investors, and influence on their competitors. Over sales activities which were done by higher market share companies are more likely to communicate information about competitive advantages in their market position to increase future earnings, while over sales activities done by higher financial health companies do not communicate information about their healthy financial condition. For example, higher market share companies provide lenient credit sales (over sales activities) to give signal that they have advantages of greater experience and bargaining power with customers.

The interaction between market share and overproduction activities had no effect on future earnings, while the interaction between financial health and over-

production had a positive effect on future earnings. Higher financial health shows that companies have lower financial problems and are in a healthy financial condition. Overproduction activities done by higher financial health companies are more likely to communicate information about healthy financial conditions and lower financial problems so they can increase future earnings, while overproduction activities done by higher market share companies do not communicate information about competitive advantages of market position. For example, higher financial health companies carry out overproduction to give signal that they have no financial problems to cover up the increase of production costs.

The interaction between market share and discretionary expense cutting activities has a positive effect on future earnings, while the interaction between financial health and discretionary expense cutting has no effect on future earnings. Zang (2012) explains that higher market share companies have competitive advantages such as greater cumulative experience, the ability to benefit from economies of scale, bargaining power with suppliers and customers, attention from investors, and influence on their competitors. Discretionary expense cutting activities done by higher market share companies are more likely to communicate information about it while discretionary expenses cutting activities done by higher financial health companies do not communicate information on healthy financial conditions. For example, higher market share companies cut advertisement expenses to give signal that they have advantages of greater experience, economies of scale, and bargaining power with customers to make customers buy their products without any advertisement, as well as being able to increase future earnings. Connelly (2011) argues that different activities give different signals, companies engaged in different REM activities will give different signals of the company's competitive advantages to increase future earnings.

CONCLUSION

Based on data analysis, results show that auditor quality strengthens the positive effect of AEM on future earnings. This indicates that a high quality auditor is more likely to increase efficient AEM to give the signal of private information than opportunist AEM to predict future earnings. Market share weakens the negative effect of REM on future earnings. This indicates that a company with a higher market share is more likely to engage in efficient REM than opportunist REM to increase future performance. Financial health weakens the negative effect of REM on future earnings, indicating that a healthier company is more likely to engage in efficient REM than opportunist REM to increase future performance. The cost of earnings management is explained if earnings management is done opportunistically or with efficient contract motivation.

There are some limitations to this research. First, this research does not consider analyst forecast of future earnings due to limited access to analyst forecast data, because earnings management can be used to beat analyst forecasts, either for opportunistic (eg. Vorst 2016) or efficient motivation (eg. Gunny 2010; Beyer et al. 2018). Second, this research has limitations on the variable measurements, such as earnings management was only measured by discretionary accruals and abnormal activities and is estimated by the company data of this research sample only, while there are other measurements of earnings management such as income smoothing (eg. Eckel 1981) or classification shifting (McVay 2006). Market share was measured based on companies listed on the Indonesian Stock Exchange only, which does not reflect true market share compared to other unlisted companies. Third, this study only utilized manufacturing companies as the research sample, thus the results cannot be generalized to use on non-manufacturing companies. Fourth, this research uses future earnings for only one year ahead and does not consider long run

future earnings of two or three years ahead. Fifth, this research does not consider downward REM for income minimization, where Francis et al. (2016) finds the existence of downward REM when there is managerial incentive for share repurchase, management buyouts, and CEO option awards. Future research suggestions include: considering the analyst forecast of future earnings to ensure companies are engaged in earnings management for analyst forecast beating purposes, using other measurements of earnings management, considering unlisted companies' sales to measure true market share, using non-manufacturing companies as research samples, using earnings two or three years ahead to measure long run future earnings, and examining the downward REM for income minimization, especially in cases of share repurchase, management buyouts, and CEO option awards.

These research findings have a number of implications. For academicians, this research fills the previous research gap by providing auditor quality, market share, and financial health factors to determine if earnings management is done based as an opportunist act or efficient contract purpose. Companies can also consider high quality auditors, market share, and financial health to give signal of better future earnings by using earnings management. Where investors are concerned, they can evaluate auditor quality, market share, and financial health to use earnings information for investment decision making.

REFERENCES

- Abernathy, J.L., B. Beyer, and E.T. Rapley. 2014. Earnings Management Constraints and Classification Shifting. *Journal of Business Finance & Accounting*, 41 (5-6), 600–626.
- Al-Attar, A., S. Hussain, and L.Y. Zuo. 2008. Earnings Quality, Bankruptcy Risk and Future Cash Flows. *Accounting and Business Research*, 38 (1), 5–20.

- Altman, E. I. 1968. Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy. *The Journal of Finance*, 23 (4), 589–609.
- Badertscher, B. A. 2011. Overvaluation and the Choice of Alternative Earnings Management Mechanism. *The Accounting Review*, 86 (5), 1491–1518.
- Beyer, B., S. M. Nabar, and E.T. Rapley. 2018. Real Earnings Management by Benchmark-Beating Firms: Implication for Future Profitability. *Accounting Horizons*, 32 (4), 59–84.
- Bhojraj, S., P. Hribar, M. Picconi, and J. McInnis. 2009. Making Sense of Cents: An Examination of Firms That Marginally Miss or Beat Analyst Forecasts. *The Journal of Finance*, 64 (5), 2361–2388.
- Blundell, R., R. Griffiths, and J. Van Reenen. 1999. Market Share, Market Value and Innovation in a Panel of British Manufacturing Firms. *Review of Economic Studies*, 66 (3), 529–554.
- Chen, L.H., D.S. Dhaliwal, and M.A. Trombley. 2008. The Effect of Fundamental Risk on the Market Pricing of Accruals Quality. *Journal of Accounting, Auditing & Finance*, 23 (4), 471–792.
- Chi, W., L.L. Lisic, and M. Pevzner. 2011. Is Enhanced Audit Quality Associated with Greater Real Earnings Management? *Accounting Horizons*, 25 (2), 315–335.
- Ching, C.P., B.H. Teh, O.T. San, and H.Y. Hoe. 2015. The Relationship among Audit Quality, Earnings Management, and Financial Performance of Malaysian Public Listed Companies. *International Journal of Economics and Management*, 9 (1), 211–229.
- Cohen, D.A., M.N. Darrough, R. Huang, and T. Zach. 2011. Warranty Reserve: Contingent Liability, Information Signal, or Earnings Management Tool? *The Accounting Review*, 86 (2), 569–604.
- Cohen, D.A., A. Dey, and T.Z. Lys. 2008. Real and Accrual Based Earnings Management in the Pre and Post Sarbanes Oxley Periods. *The Accounting Review*, 83 (3), 757–787.
- Cohen, D.A., and P. Zarowin. 2010. Accrual-Based and Real Earnings Management Activities around Seasoned Equity Offerings. *Journal of Accounting and Economics*, 50 (1), 2–19.
- Connelly, B.L., S.T. Certo, R.D. Ireland, and C.R. Reutzel. 2011. Signaling Theory: A Review and Assessment. *Journal of Management*, 32 (1), 39–67.
- DeAngelo, L.E. 1981. Auditor Size and Audit Quality. *Journal of Accounting and Economics*, 3 (3), 183–199.
- Dechow, P., and C. Schrand. 2004. *Earnings Quality*. USA: Research Foundation of CFA Institute Monograph.
- Dechow, P.M., R.G. Sloan, and A.P. Sweeney. 1995. Detecting Earnings Management. *The Accounting Review*, 70 (2), 193–225.
- Eckel, N. 1981. The Income Smoothing Hypothesis Revisited. *ABACUS*, 17 (1), 28–40.
- Filip, A., T. Jeanjean, and L. Paugam. 2015. Using Real Activities to Avoid Goodwill Impairment Losses: Evidence and Effect on Future Performance. *Journal of Business Finance & Accounting*, 42 (3-4), 515–554.
- Fisher, T.C.G., I. Gavious, and J. Martel. 2016. *Earnings Management and Firm Value in Chapter 11*. Working Paper. University of Sydney, Sydney.
- Francis, B., I. Hasan, and Li. 2016. Evidence for the Existence of

- Downward Real-Activity Earnings Management. *Journal of Accounting, Auditing & Finance*, 31 (2), 212-248.
- Francis, J., R. LaFond, P. Olsson, and K. Schipper. 2005. The Market Pricing of Accruals Quality. *Journal of Accounting and Economics*, 39 (2), 295-327.
- Garlappi, L., and H. Yan. 2011. Financial Distress and the Cross-section of Equity Returns. *The Journal of Finance*, 66 (3), 789-822.
- Gunny, K.A. 2010. The Relation between Earnings Management Using Real Activities Manipulation and Future Performance: Evidence from Meeting Earnings Benchmarks. *Contemporary Accounting Research*, 27 (3), 855-888.
- Gunny, K.A., and T.C. Zhang. 2014. Do Managers Use Meeting Analyst Forecasts to Signal Private Information? Evidence from Patent Citations. *Journal of Business Finance & Accounting*, 41 (7-8), 950-973.
- Hao, Q., and L.J. Yao. 2010. An Explanation for Earnings Management: Opportunistic or Signaling? *Journal of Theoretical Accounting Research*, 5 (2), 82-95.
- Hartono, J. 2014. *Metodologi Penelitian Bisnis: Salah Kaprah dan Pengalaman-Pengalaman 6th ed.* Yogyakarta: BPF.
- Healy, P., and J. Wahlen. 1999. A Review of Earnings Management Literature and its Implication for Standard Setting. *Accounting Horizons*, 13 (4), 365-383.
- Herbohn, K., I. Tutticci, and P.S. Khor. 2010. Changes in Unrecognised Deferred Tax Accruals from Carry-Forward Losses: Earnings Management or Signalling? *Journal of Business Finance & Accounting*, 37 (7-8), 763-791.
- Ikatan Akuntan Publik Indonesia. 2015. *Standar Audit 200: Tujuan Keseluruhan Auditor Independen dan Pelaksanaan Audit Berdasarkan Standar Audit.* Jakarta: Divisi Penerbit IAPI.
- Irani, R.M., and D. Oesch. 2016. Analyst Coverage and Real Earnings Management: Quasi-Experimental Evidence. *Journal of Financial and Quantitative Analysis*, 51 (02), 589-627.
- Jennings, J., H. Seo, and L. Tanlu. 2015. *The Effect of Organizational Complexity on Earnings Forecasting Behavior.* Working Paper. Washington University in St. Louis, Missouri.
- Jensen, M.C., and W.H. Meckling. 1976. Theory of the Firm: Managerial Behaviour, Agency Cost and Ownership Structure. *Journal of Financial Economics*, 3 (4), 305-360.
- Jones, J.J. 1991. Earnings Management during Import Relief Investigations. *Journal of Accounting Research*, 29 (2), 193-228.
- Kirmani, A., and A.R. Rao. 2000. No pain, No Gain: A Critical Review of the Literature on Signaling Unobservable Product Quality. *Journal of Marketing*, 64 (2), 66-79.
- Kothari, S.P., N. Mizik, and S. Roychowdhury. 2016. Managing for the Moment: The Role of Earnings Management via Real Activities versus Accruals in SEO Valuation. *The Accounting Review*, 91 (2), 559-586.
- Leggett, D.M., L.M. Parsons, and A.L. Reitenga. 2015. Real Earnings Management and Subsequent Operating Performance. *IUP Journal of Operations Management*, 15 (4), 7-32.
- Lennox, C.S. 1999. Audit Quality and Auditor Size: An Evaluation of

- Reputation and Deep Pockets Hypotheses. *Journal of Business Finance & Accounting*, 26 (7), 779–805.
- Leuz, C., D. Nanda, and P.D. Wysocki. 2003. Earnings Management and Investor Protection: An International Comparison. *Journal of Financial Economics*, 69 (3), 505–527.
- Lewellen, J., and R.J. Resutek. 2019. Why do Accruals Predict Earnings? *Journal of Accounting and Economics*, 67 (2-3), 336-356.
- Liow, K.H. 2010. Firm Value, Growth, Profitability and Capital Structure of Listed Real Estate Companies: An International Perspective. *Journal of Property Research*, 27 (2), 119–146.
- Lipe, R. 1990. The Relation between Stock Returns and Accounting Earnings Given Alternative Information. *The Accounting Review*, 65 (1), 49–71.
- Liu, Z.J. 2016. Effect of Earnings Management on Economic Value Added: A Cross-Country Study. *South African Journal of Business Management*, 471 (1), 29–36.
- Makar, S., and P. Alam. 2003. The Valuation of Discretionary Accruals and Antitrust Merger Investigation. *The Journal of Applied Business Research*, 19 (1), 57-74.
- Markarian, G., and J. Santalo'. 2014. Product Market Competition, Information and Earnings Management. *Journal of Business Finance & Accounting*, 41 (5-6), 572–599.
- Mascarenhas, D., S.F. Cahan, and V. Naiker. 2010. The Effect of Audit Specialist on the Informativeness of Discretionary Accruals. *Journal of Accounting, Auditing & Finance*, 25 (1), 53–84.
- Matturungan, N.H., B. Purwanto, and A.K. Irwanto. 2017. Manufacturing Company Bankruptcy Prediction in Indonesia with Altman Z-Score Model. *Journal of Applied Management*, 15 (1), 18–24.
- McVay, S.E. 2006. Earnings Management using Classification Shifting: An Examination of Core Earnings and Special Items. *The Accounting Review*, 81 (3), 501–531.
- Muzir, E. 2011. Triangle Relationship among Firm Size, Capital Structure Choice and Financial Performance. *Journal of Management Research*, 11 (2), 87–98.
- Nuryaman. 2013. The Influence of Earnings Management on Stock Return and the Role of Audit Quality as a Moderating Variable. *International Journal of Trade, Economics and Finance*, 4 (2), 73–78.
- Ojo, M. 2015. Audits, Audit Quality and Signalling Mechanisms: Concentrated Ownership Structures. *American Research Journal of Humanities and Social Sciences*, 1 (2), 9–13.
- Opler, T.C., and S. Titman. 1994. Financial Distress and Corporate Performance. *The Journal of Finance*, 49 (3), 1015–1040.
- Rezaei, F., and M. Roshani. 2012. Efficient or Opportunistic Earnings Management with Regards to the Role of Firm Size and Corporate Governance Practices. *Interdisciplinary Journal of Contemporary Research in Business*, 3 (9), 1312–1322.
- Ross, S. 1977. The Determination of Financial Structure: The Incentive Signalling Approach. *Bell Journal of Economics*, 8 (1), 23–40.
- Roychowdhury, S. 2006. Earnings Management through Real Activities Manipulation. *Journal of Accounting and Economics*, 42 (3), 335–370.
- Schipper, K. 1989. Commentary on Earnings Management. *Accounting Horizons*, 3 (4), 91–102.

- Scott, W.R. 2019. *Financial Accounting Theory 8th ed.* Canada: Pearson Education.
- Shirur, S. 2011. Tunneling vs Agency Effect: A Case Study of Enron and Satyam. *Vikalpa: The Journal for Decision Makers*, 36 (3), 9–26.
- Simamora, A.J. 2018. Effect of Earning Management on Earnings Predictability in Information Signaling Perspective. *Jurnal Akuntansi*, XXII (2), 173–191.
- Siregar, S. V, and S. Utama. 2009. Type of Earnings Management and the Effect of Ownership Structure, Firm Size, and Corporate Governance Practices: Evidence from Indonesia. *International Journal of Accounting*, 43 (1), 1–27.
- Spence, M. 1973. Job Market Signaling. *The Quarterly Journal of Economics*, 87 (3), 355–374.
- Subramanyam, K.R. 1996. The Pricing of Discretionary Accruals. *Journal of Accounting and Economics*, 22 (1-3), 249–281.
- Suhardianto, N., and I. Harymawan. 2011. A Decade of Earnings Management Researches in Indonesia. *Asia Pacific Journal of Accounting and Finance*, 2 (1), 90–119.
- Tabassum, N., A. Kaleem, and M.S. Nazir. 2015. Real Earnings Management and Future Performance. *Global Business Review*, 16 (1), 21–34.
- Tangjitprom, N. 2013. The Role of Corporate Governance in Reducing Negative Effect of Earnings Management. *International Journal of Economics and Finance*, 5 (3), 213–220.
- Vorst, P. 2016. Real Earnings Management and Long-Term Operating Performance: The Role of Reversals in Discretionary Investment Cuts. *The Accounting Review*, 91 (4), 1219–1256.
- Wuryani, E. 2012. Company Size in Response to Earnings Mangement and Company Performance. *Journal of Economics, Business, and Accountancy Ventura*, 15 (3), 491–506.
- Zang, A.Y. 2012. Evidence on the Trade-Off between Real Activities Manipulation and Accrual-Based Earnings Management. *The Accounting Review*, 87 (2), 675–703.
- Zehri, F., and R. Shabou. 2011. Audit Quality, Corporate Governance and Earnings Management in the Context of Tunisian Firms. *Journal of Administration & Economics Science*, 1 (1).