EARNINGS MANAGEMENT AND FUTURE EARNINGS

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Abstract

This research is aimed to examine the moderating effect of the cost of earnings management on the relationship between earnings management and future earnings. Research samples are manufacture companies listed in Indonesia Stock Exchange 2013-2015. The cost of accruals earnings management is auditor quality, while the costs of real earnings management are the 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. It indicates that in the context of efficient contracting, high quality auditor provide better signal for earnings prediction compared to the low quality auditor. In addition, higher market share and higher financial health limit opportunistic real earnings management to reduce future earnings.

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

INTRODUCTION

Earnings management can be classified into two categories, which are 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 means to accelerate 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 under-
lying 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, in the future after earnings management is done. This research focuses on the effect of earnings management on future earnings. Enron has been bankrupt in 2002 for earnings manipulation and covering financial problems and losses (Shirur 2011). The case of Enron demonstrates that evaluation of future performance is important to avoid the bad impact of earnings management.

Previous researches provide the inconsistent result of effect earnings management on future earnings. Some previous researches show that both AEM and REM has 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). The problems include decreasing of future sales volume that caused by discounted current price (method of sales manipulation) will be changed to normal price in the future (Roychowdhury 2006), decreasing of future receivables collectability that caused by lean current credit sales (method of sales manipulation) (Roychowdhury 2006), or experience of investment opportunity losses of potential future sales that caused by RnD expenses cutting (method of discretionary expenses reduction) (Vorst 2016).

On the other hand, there are some previous researches shows that both AEM and REM can be 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 to generate higher earnings in the future. Subramanyam (1996) states that accrual management helps earnings information reflects economic value as well as predicts future earnings.

Contrast findings of earnings management on future earnings are exist because there are two different motivations when companies are engaged in earnings management. These two different motivations generate two different effects of earnings management on future earnings. In opportunist motivation, both AEM and REM is used to make misleading information, so that it increases information cost (cost which is needed to generate high quality and accurate information) (Nuryaman 2013) as well as opportunity lost of investment that caused by R&D reduction that leads to lost of potential future sales improvement (Vorst 2016), further it decreases subsequent performance (Filip et al. 2015) because of lower subsequent sales. In efficient contract motivation, earnings management is used to share private information of companies' quality in order to differentiate them from low quality companies (Kirmani dan Rao, 2000) such as information of management ability to generate future performance (gunny 2010), so it can help predict future earnings (Nuryaman 2013).

Inconsistent result earnings management research caused by unclear motivations if earnings management is done by opportunist behavior motivation or efficient contracting one (Suhardianto and Harymawan 2011). Efficient contracting refers to earnings management done to provide signals related to companies true economic performance using their private information, while opportunist earnings management refers to information manipulation which reflects more on manager personal desire than the company's financial performance (Wuryani 2012). This research uses the cost of earnings management in order to explain if earnings management tends to opportunist act or information signaling. The cost of earnings 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 earnings management, on the other hands, if a manager bears the lower cost of earnings management then the manager is more likely to engage in earnings management (Beyer et al. 2018). Beyer et al. (2018) explain that it is costly to give a credible signal of private information and companies should have the ability to pay the costs to provide a 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 that companies have to be considered to choose AEM than REM, or choose REM than AEM. Zang (2012) specifically point out both the cost of AEM and REM. The cost of AEM is audit quality, while costs of REM are the market share and financial health (Zang 2012). Zang (2012) finds that high quality auditor is a limitation and barrier for the company for doing AEM, while lower market share and financial health are limitations and barriers for the company for doing REM.

Zehri and Shabou (2011) find that high quality auditor decreases opportunist AEM because high quality auditor can detect opportunist AEM than a low quality auditor. Main role of auditor is to ensure that financial statement is stated based on accounting standard (IAPI 2015), further, it reduces possibility of accounting standard’s weaknesses to engaged in opportunist AEM. Auditor quality is not a cost for REM because REM does not use accounting standard’s weaknesses to manage earnings but changing some business activities. Companies are engaged in REM to avoid auditor’s scrutiny (Cohen et al. 2008; Roychowdhury 2006).

Mascarenhas et al. (2010) state that the auditor has the motivation to increases AEM of information signaling because Subramanyam (1996) finds AEM of information signaling positively responded by the investor, so the auditor has the interest of the investor's positive response. Investor's positive response indicates that financial information which audited by auditor have high quality and auditor are succeed to reduce asymmetric information. When auditor allows signaling AEM, they show how effective they play their role to improve information quality and reduce asymmetric information. Auditor with effective role play will enjoy higher reputation. Higher reputation is motivation for auditor to increase signaling AEM. Auditors reputation come from auditors role to provide high quality audit by evaluating companies’ accounting policy and estimation that able to predict future earnings. When auditor can provide well evaluation of companies’ accounting policy and estimation that able to predict future earnings, financial statement users also will be able to companies’ potential performance in the future. Since signaling AEM refers to accounting policy and estimation choice to manage current earnings that can give signal of future earnings, auditors will allow companies to engage in signaling AEM so auditor can achieve higher reputation. Signaling AEM will be able to signals informative current earnings to predict future earnings if AEM is done under the supervision of high quality auditor.

Spence (1973) and Ross (1977) explain that if companies want to enjoy the benefit of signaling, then signal must be credible, while credible signal must be costly. In the context of REM, the costs of REM are market share and financial health (Zang 2012). Based on Spence (1973) and Ross (1977) that explain signaling is costly, and Zang (2012) 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 costs of REM and the more REM done by the company (Zang 2012; Abernathy et al. 2014). REM is done by change underlying the company's activities, so the company needs to make sure that they have competitive advantages, such as market share and financial health factors. When
companies have higher market share; they enjoy more competitive advantages than do 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 more to the optimal point (Zang 2012). If companies tend to deviating normal business activities, then it will be easier for higher financial health companies to do it because poorer financial health companies bear more costs (Zang 2012).

In efficient contract, Abernathy et al. (2014) state that the purpose of REM is to improve operational activities. REM can be used to change business activities in to optimal level, such as to generate more sales as well as earnings in current and future period (Gunny 2010). For example, if company is one of market leaders that have high market share, they will perform REM by provide temporary discount price without any worries of sales decreasing in the future because of change of price from discount price to the normal one. They will maintain higher sales in the future because market leader’s competitive advantage of more competitive advantages than do followers, due to their greater cumulative experience, ability to benefit from economies of scale, bargaining power with suppliers and customers that they have. Moreover, discount price strategies can be used by them to introduce new products to the new customers, in addition, they can get new market and generate more sales in the future. In order to achieve optimal level of business activities, companies should have high market share and financial health. REM will be costly to improve operational activities if the company has low market share and financial health. REM will be able to signal the improvement of operation activities and will help to predict future earnings if REM is done by the company with high market share and financial health.

This research is aimed to examine (1) the effect of AEM on future earnings, (2) moderating effect of market share and financial health on the effect of REM on future earnings. This research contribution is to fill previous researches gap that provides contrast result 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 negative one (e.g. Cohen and Zarowin 2010; Filip et al. 2015; Leggett et al. 2015; Vorst 2016; Tabassum et al. 2015). Those contrary results related to absences of earnings management perspectives, which are opportunist behavior or efficient contract perspectives. Previous researches (e.g. Gunny and Zhang 2014; Subramanyam 1996; Siregar and Utama 2009; Beyer et al. 2018; Cohen and Zarowin 2010; Filip et al. 2015; Leggett et al. 2015; Vorst 2016; Tabassum et al. 2015) do not provide some factors, such as limitations of manager to engage in earnings management, to explain when earnings management has a positive effect (as signaling earnings management) and when it has a negative effect (as opportunist earnings management) on future earnings. By not providing those factors, it is not clear if earnings management is done 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 done when companies have lower costs of earnings management (low quality auditor for AEM, lower market share and lower financial health for REM), while information signaling one is done 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). Main core of agency theory is about conflict of interest between management and shareholders. Conflict exists because there is asymmetric information between management and shareholders. In condition of bigger 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 companies’ quality in order to differentiate them from low quality companies (Kirmani and Rao 2000). Asymmetric information is main reason for companies to give signal of private to the external parties. In one hand, agency theory focuses on impact of higher asymmetric information while in the other hand, signaling theory focuses on reduction of asymmetric information. Earnings management can be seen as a way for companies to give signal of future earnings to external parties.

Earnings Management
Earnings management is alternatives used to manipulate reported earnings to fulfill certain purposes. There are two ways to understands earnings management. First, earnings management as management opportunist behavior in maximizes their utilities in terms of face contract of compensation, debt, and political cost (Scott 2019). Second, earnings management as an efficient contract perspective, which is earnings management gives management flexibility to protect themselves and the company in terms of anticipates unexpected events for the benefits of related parties (Scott 2019). Earnings management is one of the important issues in financial reporting because it is related to information quality of earnings (Dechow and Schrand 2004). In Indonesia, researches of earnings management are significant research because it have contribution of 18 percent of all accounting and finance research in National Symposium of Accounting as well as of 45.7 percent of all published research in big five accounting journal (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. Some previous researches examine 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 give the signal of private information, so earnings information user 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, also can be used as a tool to transfer future earnings to the current earnings period. Hao and Yao (2010) ex-
plain that companies will transfer second-period earnings to first period earnings, by income smoothing, if first period earnings are low. It can be either efficient or opportunist earnings management. It becomes efficient motivation if income smoothing done 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 user, earnings forecast takes an important place on the prediction of future earnings. Investors use earnings forecast information to predict future earnings. Earnings forecast information usually provided by companies' management or analyst in the stock market. Gunny and Zhang (2014) state that earnings forecast helps the investor get a signal of companies' favorable looks. Analyst forecast meeting is also companies' 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. It is because data of earnings forecast, either from companies' management or analyst in the stock market, is difficult to be accessed freely.

**Opportunistic Earnings Management**

There are some opinions of earnings management as opportunist behavior. Schipper (1989) argues earnings management as opportunist behavior exists because there is the intervention of management to increases personal gain by misleading financial statement users. Schipper (1989) focuses on the behavior of misleading financial statement users as crucial. 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 the wider view, which is an opportunist and efficient motivation that depends on how the personal gain of management is fulfilled. This research stands for opportunist earnings management is situational, because there is evidence that companies can do earnings management either as 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 have a bad effect in the future. Opportunist earnings management is done based on a bonus scheme or debt covenant as well (Scott 2019). Cohen et al. (2011) find investors recognize the understatement of warranty liabilities in order to managed earnings rather than communicates about performance and liability. Irani and Oesch (2016) state that REM is used to achieves 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 bankruptcy form filing in United State.

Opportunist earnings management, both AEM and REM, have a negative effect 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 looks 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 by avoids impairment loss recognition decreases future growth opportunities. REM leads to bigger real economic cost (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 than companies that miss analyst forecasts without earnings management (Bhojraj et al. 2009). Earnings management impacts of decreasing of economic value, opportunity lost of investment, and bigger economic cost show that earnings management can decreases 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 generates earnings or cash flow in the future (Subramanyam 1996). The main motive of management to use 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 (Simmorma 2018). Subramanyam (1996) finds that managerial accrual discretion improves the ability of earnings to reflect economic value, as well as help, predict future cash flows, earnings, and dividends. Subramanyam (1996) finds that managerial accrual discretion improves the ability of earnings to reflect economic value, as well as help, 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 predict how much cash will be flew in next period, further it helps predict how much earnings that can be generate in next period (Makar and Alam 2003). Lewellen and Resutek (2019) explain accrual helps predict future earnings because accruals respond change of production before the change of production affect earnings (e.g. change of cost of good sold can be predicted from change of inventory cost in balance sheet), and helps predicts 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 reduces uncertainty and increases the predictability of future earnings. Al-Attar et al. (2008) find that abnormal accrual 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 get the result in the improvement of company value (Tangjitprom 2013). Siregar and Utama (2009), as well as Rezaei and Roshani (2012), find evidence that accrual earnings management as 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). Further, 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 advantages. For example, a market leader firm enjoys more competitive advantages than followers do; because of 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, manager in market-leader firm may engage in REM to reflects competitive she/he has (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 performing better in the future. For example, REM by selling fixed assets helps firm to avoid debt covenant, or by cutting R&D expense to smooth earnings in order to reduce cost of capital and get more funding resources in the future (Gunny 2010). Second, the positive association between REM and future performance is as well as consistent with signaling managerial competence or future performance. For example, credible firm issues management forecasting that shows the firm can achieves better performance in the future but fails to beat earnings benchmark in the current period, so that 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 investments cutting, on future earnings. Contrast with the opportunist concept, REM could be 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 some measurements, in order to distinguish earnings management as 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 increases earnings predictability. Innate factors are five factors determined by Francis et al. (2005) that cause accruals management based on firm’s business model; which are firm size, operating cycle, operation cash flow variability, sales variability, and negative earnings (Simamora 2018). This research use 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 Proxy of Cost of AEM**

This research uses auditor quality in order to separates AEM as opportunist behavior and information signaling. Mascarenhas et al. (2010) state that the auditor is motivated to increases information signaling AEM because Subramanyam (1996) finds that information signaling AEM positively responded by the investor, so auditor has interest on it. Even though it is manager 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 high quality signal of private information provided by efficient motive earnings management. For example, management estimates low doubtful allowance not always opportunistically for covering bad performance to get the best compensation, but also giving the signal that the company has good collecting management and has good payment profile customers. High quality auditor suggests where doubtful allowance can reflect real receivable collection.

One of auditor quality measurement is auditor affiliation. 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, so big four auditors be able to do training and competence improvement investment (Lennox 1999). DeAngelo (1981) finds that big N auditor can maintain independence because they reduce dependence on certain clients. High quality auditor reduces opportunist AEM and increases signaling one in order to reduce monitoring cost (Ching et al. 2015).

H1: Big four auditor strengthen (weaken) positive (negative) effect of AEM on future earnings.
Real Earnings Management, Future Earnings, and Market Share as Proxy of Cost of REM

This research will use market share and financial health in order to separates REM as opportunist behavior and information signaling. Zang (2012) shows that market share is the cost of REM. Zang (2012) stated 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 who have 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 competitive advantages of 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); lower market share companies have disadvantage of it in market position. The disadvantage of market position leads to opportunist REM (Markarian and Santalo’ 2014). Lower market companies engaged in REM, such as doing over sales by discounted price or more lenient credit sales, to cover up their disability to generate more sales than their competitors with higher market share. As a result, subsequent sales decrease because customers are less likely to buy companies’ product without any discounted price, and receivable collectability decrease because lenient credit sales cannot filters customers with good receivable payment and bad one (Roychowdhury 2006); further subsequent earnings will be decreased as well. Lower market share companies cannot maintain higher sales in the future because it generated without any competitive advantages like higher market share companies have. It shows that companies engaging in REM without higher market share will lead to opportunist earnings management and decreases future earnings. Higher market share companies that engaged in REM, such as over sales, can still maintain higher subsequent sales because they use REM as a tool give signal that they have greater cumulative experience, ability to benefit from economies of scale, bargaining power with suppliers and customers, attention from investors, and influence on their competitors. Companies that have high market share lead to high future earnings. High market share will reduce bankruptcy risk and increases companies’ performance (Opler and Titman 1994) and stock market value (Blundell et al. 1999), includes 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 in to optimal level through REM. In that case, REM is useful to give signal of competitive advantage of companies as market leader to increase future earnings.

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

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

Zang (2012) shows 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, as information signaling, such as signal of a healthy financial condition. For example, when companies do overproduction, they will face higher production cost as well. Companies need to be in healthy financial condition to maintain higher production cost does not cause any financial problems.
Since poorer financial health companies have financial problems, over production seems cannot fulfill higher production cost enough. In this case, management of poorer financial health companies might perceive REM as relatively costly (Abernathy et al. 2014). When higher financial health companies face lower financial problem, they can perform effective business activities, so it lead to high financial performance (Opler and Titman 1994; Garlappi and Yan 2011). Healthier companies will take advantage of their position with no financial problem to increase future earnings by improving their operational business in to optimal level through REM. In that case, REM is useful to give signal of free of financial problem to perform effective business activities and increase future earnings.

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

**Research Framework**

Research gap shows that previous researches (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) do not capture any contribution of cost of earnings management as determinant of opportunist versus efficient earnings management nor any figure of it. Based on the literature and hypotheses development that has been built, the research framework can be seen in figure 1.

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

Control variables are loss indicator, company’s size and growth opportunity. Loss indicator, company’s size, and growth opportunities are used to control if abnormal activities came from business condition or indication of REM (Roychowdhury 2006). It is suspected that companies with no negative earnings (no losses), bigger size, and higher growth opportunities, get higher earnings from normal business activities; because they have experience to get earnings (have no losses experience), bigger resources (bigger size), and in a growth condition (higher growth opportunities) (Roychowdhury 2006). Companies with losses experience,
smaller resources (smaller size), and lower growth cannot generate higher earnings from normal business activities, further, they suspected engage in abnormal business activities through REM. Based on above explanation, loss indicator is expected to has negative effect on future earnings, while size and growth opportunity are expected to have positive effect on future earnings (Gunny 2010; Muzir 2011; Liow 2010; Jennings et al. 2015). Current earnings are added as 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 positive effect on future earnings (Gunny 2010).

RESEARCH METHOD

Research Sample

Research sample are manufacture companies listed in Indonesian Stock Exchange 2013-2015. This research determines research period from 2013 because free access of complete financial statement in website www.idx.co.id or companies’ website is mostly started from year 2013. This research chooses manufacture companies because of manufacture industry characteristics is related to production activities, so measurement of over production activities of REM will not bias. The number of the sample used in this research can be seen in table 1.

Table 1
Research Sample

<table>
<thead>
<tr>
<th>Notes</th>
<th>Number of Firms</th>
<th>Number of Firm-Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer companies listed in Indonesian Stock Exchange 2013-2015.</td>
<td>130</td>
<td>390</td>
</tr>
<tr>
<td>Change the financial reporting period in the research period.</td>
<td>(2)</td>
<td>(6)</td>
</tr>
<tr>
<td>Financial statement is not available in <a href="http://www.idx.co.id">www.idx.co.id</a> or in company’s website.</td>
<td>(3)</td>
<td>(9)</td>
</tr>
<tr>
<td>Total</td>
<td>125</td>
<td>375</td>
</tr>
</tbody>
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Emprical Model

This research is aimed 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 followed.

Where AEM is Accrual Earnings Management, REM is Real Earnings Management, BIG refers to 1 if big four auditor and 0 if otherwise, MS is Market Share, Z is Financial Health, LOSS refers to 1 if company experience loss and 0 if otherwise, SIZE is Company’s Size, MVA is Market Value to Asset, EARNINGS is Current Earnings.

Compare to AEM that is done in the ending of the year, REM is done along the year (Roychowdhury 2006). Since companies engage in REM from the beginning to the ending of the year, companies consider the costs of REM (market share and financial health) in the beginning of the year. Based on the explanation, this research measures market share in the beginning of period t (MSt-1), as well as financial health is measured in the beginning of period t (Zt-1). Meanwhile, auditor quality (big four affiliation) is measured in the period t (BIGt) because AEM that is done in the ending of the year. Control variables are occurred match to research period (period t).
Variable Measurements

**Dependent Variable**

Dependent variable is future earnings. Future earnings occurred in one year ahead. Future earnings is measured by model as followed (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 assume 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 assumption by Roychowdhury (2006) that explain companies engage in income maximization REM for avoid losses and beat previous earnings target or analyst forecast. Since AEM is done both for income maximization and minimization, this research uses absolute value of discretionary accruals. As for REM, since it is done for income maximization, positive or negative sign of abnormal activities value matters to determine if companies increase earnings by REM practice.

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

\[
\text{Neutral Earnings} = a + b1AEM_t + b2REM_t + b3BIG_{t-1}xAEM_t + b4MS_{t-1}xREM_t + b5Z_{t-1}xREM_t + b6BIG_{t-1} + b7MS_{t-1} + b8Z_{t-1} + b9LOSS_t + b10SIZE_t + b11MVA_t + b12EARNINGS_t + e \ldots \ldots (1)
\]

\[
\text{Future Earnings} = \frac{\text{Earnings After Tax}_{t+1} - \text{Total Asset}_{t+1}}{\ldots \ldots (2)}
\]

\[
\text{Total Accruals}_{t} \quad \frac{\text{Assets}_{t}}{ Assets_{t}} = a + b0 \frac{1}{ Assets_{t}} + b1 \frac{\Delta Sales_{t}}{ Assets_{t}} + b2 \frac{PPE_{t}}{ Assets_{t}} \ldots \ldots (3)
\]

\[
\text{Nondiscretionary Accruals}_{t} = \hat{a} + b0 \frac{1}{ Assets_{t}} + b1 \frac{\Delta Sales_{t} - \Delta Receivable_{t}}{ Assets_{t}} + b2 \frac{PPE_{t}}{ Assets_{t}} \ldots \ldots (4)
\]

Equation 3 will be run with cross section regression by using 1,602 firm-year of all non-banking and non-financial companies listed in Indonesian Stock Exchange year 2013-2015. Banking and financial companies are excluded because they are in regulated industry and different characteristic of industry among other industries. Parameters of \(a, b0, b1, b2\) from equation 3 are used to calculate nondiscretionary accrual as followed.

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

Equations 6, 7, and 8 will be run with cross section regression by using 1,602 firm-year of all non-banking and non-financial companies listed in Indonesian Stock Exchange year 2013-2015. Banking and financial companies are excluded because they are in regulated industry and different characteristic of industry among other industries. In sales manipulation activities, additional sales do not generate increasing 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 = \frac{\text{Total Accruals}}{\text{Assets}} - \text{Nondiscretionary accruals} \quad \ldots \ldots \quad (5)

\frac{\text{CFO}}{\text{Assets}} = a + b0 + b1 \frac{\text{Sales}}{\text{Assets}} + b2 \frac{\Delta \text{Sales}}{\Delta \text{Assets}} + \epsilon_t \quad \ldots \ldots \quad (6)

\frac{\text{Production}}{\text{Assets}} = a + b0 + b1 \frac{\text{Sales}}{\text{Assets}} + b2 \frac{\Delta \text{Sales}}{\Delta \text{Assets}} + b3 \frac{\Delta \text{Sales}}{\Delta \text{Assets}} + \epsilon_t \quad \ldots \ldots \quad (7)

\frac{\text{Discretionary expenses}}{\text{Assets}} = a + b0 + b1 \frac{\text{Sales}}{\text{Assets}} + \epsilon_t \quad \ldots \ldots \quad (8)

REM = -\text{abnormal CFO} + \text{abnormal PROD} - \text{abnormal DISEXP} \quad \ldots \ldots \quad (9)

Z = 1.2 \text{ working capital to total assets} + 1.4 \text{ retained earnings to total assets} + 3.3 \text{ EBIT to total assets} + 0.6 \text{ market value of equity to total liabilities} + 0.999 \text{ sales to total assets} \quad \ldots \ldots \quad (10)

minus actual) operation cash flow will be negative, and it indicates that companies are engaged in sales manipulation.

In over production activities, companies produce goods more 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 it indicates that companies are engaged in over production.

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

Based on above explanation, 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 et from equation (6). Abnormal PROD is the value of et from equation (7). Abnormal DISEXP is the value of et from equation (8).

If the management of a company is engaged with one type of REM activity, then management will be engaged as well as 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 followed (Tabassum et al. 2014).

**Moderating Variables**

Moderating variables are auditor quality, market share, and financial health. Auditor quality measured by a dummy variable, score 1 if auditor affiliated with big four, and 0 if auditor affiliated with non-big four.

The market share shows the position and competition of 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, the company that has 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 total sales of the company divided by total sales of industry group (within three digits of industry code) at the beginning period (Abernathy et al. 2014; Zang 2012). In this research, the industry group is based on three digits 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 z score of Altman (1968) at the beginning period. Matturungan et al. (2017) state that z score of Altman (1968) has prediction power of evaluates financial distress of Indonesian manufacture companies 87.8 percent (includes in good category). It shows that this research could use z score of Altman (1968) in order to measures financial health. The higher z score, the healthier a company is. Z score of Altman (1968) is as follow.

**Control Variables**

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 condition or indication of real earnings management, while current earnings used to address concern of earnings management is related to performance (Roychowdhury 2006). Loss indicator is measured by a dummy variable, score 1 if earnings have negative value, score 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. 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). The bigger size shows the bigger resource to generate future earnings (Jennings et al. 2015).

**Analysis Method**

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

**RESULT AND DISCUSSION**

**Descriptive Statistics**

Table 2 shows that based on 375 firm-years, the highest future earnings are 0.737, while the lowest are -1.279. The highest current earnings are 2.540, while the lowest are -0.603. The negative value of earnings indicates that this research involves loss companies. The consideration of loss companies involvement is to controls the possibility of opportunist earnings management to delays 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). 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 deviation from the average is 0.126.

The average of AEM is 0.086, means that average manufacture companies manage their level of earnings 0.086 higher or lower from actual earnings relative to lagged total assets by using of accounting choices policy and estimation. The average of REM is 0.022 means that average
Table 2
Descriptive Statistics of Empirical Model Variables

<table>
<thead>
<tr>
<th></th>
<th>Future Earnings</th>
<th>AEM</th>
<th>REM</th>
<th>MS</th>
<th>Z</th>
<th>SIZE</th>
<th>MVA</th>
<th>Current Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.035</td>
<td>0.086</td>
<td>0.022</td>
<td>0.143</td>
<td>6.333</td>
<td>12.289</td>
<td>1.603</td>
<td>0.057</td>
</tr>
<tr>
<td>Maximum</td>
<td>0.737</td>
<td>2.544</td>
<td>1.142</td>
<td>1.000</td>
<td>832.277</td>
<td>14.390</td>
<td>142.568</td>
<td>2.540</td>
</tr>
<tr>
<td>Minimum</td>
<td>-1.279</td>
<td>0.000</td>
<td>-2.336</td>
<td>0.000</td>
<td>-14.184</td>
<td>10.561</td>
<td>0.000</td>
<td>-0.603</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.126</td>
<td>0.165</td>
<td>0.472</td>
<td>0.210</td>
<td>43.119</td>
<td>0.693</td>
<td>7.588</td>
<td>0.183</td>
</tr>
<tr>
<td>Skewness</td>
<td>5.325</td>
<td>9.782</td>
<td>-1.698</td>
<td>1.985</td>
<td>18.820</td>
<td>0.494</td>
<td>14.443</td>
<td>7.239</td>
</tr>
<tr>
<td>Firm-year</td>
<td>375</td>
<td>375</td>
<td>375</td>
<td>375</td>
<td>375</td>
<td>375</td>
<td>375</td>
<td>76</td>
</tr>
</tbody>
</table>

Table 3
Selection Model Tests

<table>
<thead>
<tr>
<th>Test</th>
<th>Significance</th>
<th>Notes</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redundant fixed effect</td>
<td>0.0003</td>
<td>Fixed effect model is better than the common effect model</td>
<td>Fixed effect model is the best model</td>
</tr>
<tr>
<td>Hausman</td>
<td>0.0000</td>
<td>Fixed effect model is better than the random effect model</td>
<td></td>
</tr>
</tbody>
</table>

Manufacture companies manage their level of earnings 0.022 higher from actual earnings relative to lagged total assets by engaging in sales manipulation, overproduction, and discretionary expenses cutting. Based on report of Leuz et al. (2003) who examine non-banking and financing companies in 31 countries from 1990-1999, Indonesia is included in the cluster of 10 countries with high average of earnings management. It indicates that Indonesia has high potentials of engage in both AEM and REM.

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

Regression Model Selection

This research uses panel data. There are three regression models provided to analyze panel data, which are common effect, fixed effect, and random effect model. In order to choose the best model, this research uses redundant fixed effect test and Hausman test. The result of redundant fixed effect test and Hausman test can be seen in table 3.

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

Multicollinearity Test

Multicollinearity test is used to evaluate the correlation between independent variables because Hartono (2014) explains that there might be a multicollinearity problem in moderating regression model since the model involves
interaction variable between independent and moderating variables. The multicollinearity test is done by the VIF test. The result of the multicollinearity test can be seen in table 4.

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

### Hypotheses Test and Discussion

Based on table 5, in result of regression without moderating variables, AEM has a coefficient value 0.350525 (statistically significant at 0.01 level). AEM has a positive effect on future earnings. It is consistent with Siregar and Utama (2009) that finds discretionary accruals (the proxy of AEM) in the Indonesian Stock Exchange is used to predicts future earnings. In an efficient earnings management perspective, AEM is used as a tool to give a signal of private information.

In result of regression without moderating variables, REM has a coefficient value 0.000008 (statistically insignificant). REM has no effect on future earnings. As previous researches gap (e.g. Gunny and Zhang 2014; Beyer et al. 2018; Cohen and Zarowin 2010; Filip et al. 2015; Leggett et al. 2015; Vorst 2016) that show inconsistent effect of REM on future earnings, REM without interaction with market share and financial health cannot be determined either as opportunist REM or efficient REM to predict future earnings. The effect of REM on future earnings has a clear explanation when REM interacts with market share and financial health.

In result of regression with moderating variables, variable interaction between auditor quality and AEM (BIGxAEM) has a coefficient value 0.312008 (statistically significant at 0.05 level). It indicates that hypothesis 1 is accepted. Since AEM has a positive effect on future earnings, high quality auditor, seen by big four auditors, strengthen the positive effect of AEM on future earnings compared to the low quality auditor, seen by non-big four auditors. Big four auditor needs to maintain its reputation in front of the investor by ensuring the manager uses AEM in order to give private information to the investor. Ojo (2015) states that investors rely on auditor 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, so the auditor has an interest on it. This result is consistent with Mascarenhas et al. (2010) and Zehri and Shabou (2011) that state high quality auditor tends to decreases opportunist AEM that reduce future earnings and increases signaling AEM that predict future earnings. Al-Attar et al. (2008) state that accruals management is not always as noise, but can predict
Table 5
Result of Hypotheses Test

<table>
<thead>
<tr>
<th>Prediction</th>
<th>Coefficient</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Without Moderating Variables</td>
<td>With Moderating Variables</td>
</tr>
<tr>
<td>AEM</td>
<td>+/-</td>
<td>0.350525*</td>
</tr>
<tr>
<td>REM</td>
<td>+/-</td>
<td>-0.000008</td>
</tr>
<tr>
<td>BIGxAEM</td>
<td>+</td>
<td>0.312008**</td>
</tr>
<tr>
<td>MSxREM</td>
<td>+</td>
<td>0.013850**</td>
</tr>
<tr>
<td>ZxREM</td>
<td>+</td>
<td>0.002098**</td>
</tr>
<tr>
<td>BIG</td>
<td>+</td>
<td>0.030578</td>
</tr>
<tr>
<td>MS</td>
<td>+</td>
<td>0.027429</td>
</tr>
<tr>
<td>Z</td>
<td>+</td>
<td>0.000605</td>
</tr>
<tr>
<td>LOSS</td>
<td>-</td>
<td>0.012801</td>
</tr>
<tr>
<td>SIZE</td>
<td>+</td>
<td>-0.103944</td>
</tr>
<tr>
<td>MVA</td>
<td>+</td>
<td>-0.003562</td>
</tr>
<tr>
<td>EARNINGS</td>
<td>+</td>
<td>0.043691**</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td>1.285689</td>
</tr>
<tr>
<td>F-Statistic</td>
<td></td>
<td>4.793524*</td>
</tr>
<tr>
<td>Adjusted R-Squared</td>
<td></td>
<td>0.569406</td>
</tr>
</tbody>
</table>

*Significant in level 0.01
**Significant in level 0.05

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

Variable interaction between market share and REM (MSxREM) has a coefficient value 0.013850 (statistically significant at 0.05 level). It indicates that hypothesis 2 is accepted. Result of the effect of REM on future earnings shows that REM has a negative coefficient, so higher market share weakens the negative effect of REM on future earnings compared to lower market share. Since REM is done by performing abnormal operation activities; there is potentially lost, such as the potential of sales reducing, in the future when companies are returning to performs normal operation activities. Companies with a higher market share can reduce the potential loss because they have a strong position in the market, while in the context of the efficient contract, it also can be seen as REM that used to give the signal of the position of companies in the market. Because market share can reduce future loss of using REM so that higher market share weakens the negative effect of REM on future earnings. This result consistent with Gunny (2010) that states REM is a strategy to shows competitive advantages and the ability to generates better profitability in the future. In this case, market share is a competitive advantage that can increases 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, in the other hands, Abernathy et al. (2014) and Zang (2012) states that company with a strong market position that does REM will improve business activities. For example, a company that does over sales by giving discount price will not lose future sales
Table 6
Additional Test

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>REM = -Abnormal CFO</th>
<th>REM = +Abnormal Production</th>
<th>REM = -Abnormal Discretionary Expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEM</td>
<td>0.258119*</td>
<td>0.242778*</td>
<td>0.252464*</td>
</tr>
<tr>
<td>REM</td>
<td>0.088441</td>
<td>0.011277</td>
<td>0.203078</td>
</tr>
<tr>
<td>BIGxAEM</td>
<td>0.347422**</td>
<td>0.316863**</td>
<td>0.297154**</td>
</tr>
<tr>
<td>MSxREM</td>
<td>0.264723*</td>
<td>-0.427412</td>
<td>0.190226*</td>
</tr>
<tr>
<td>ZxREM</td>
<td>0.000965***</td>
<td>-3.91E-05</td>
<td>6.96E-05</td>
</tr>
<tr>
<td>BIG</td>
<td>0.022656</td>
<td>0.034757</td>
<td>0.025953</td>
</tr>
<tr>
<td>MS</td>
<td>-0.003070</td>
<td>0.194588</td>
<td>0.005018</td>
</tr>
<tr>
<td>Z</td>
<td>0.000996***</td>
<td>-3.91E-05</td>
<td>6.96E-05</td>
</tr>
<tr>
<td>LOSS</td>
<td>0.021669</td>
<td>0.019091</td>
<td>0.022226</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.091920</td>
<td>-0.112946</td>
<td>-0.107076</td>
</tr>
<tr>
<td>MVA</td>
<td>-0.005605</td>
<td>-0.006439</td>
<td>-0.006320</td>
</tr>
<tr>
<td>EARNINGS</td>
<td>0.042108**</td>
<td>0.050760**</td>
<td>0.046592**</td>
</tr>
<tr>
<td>Constant</td>
<td>1.112855</td>
<td>1.350418</td>
<td>1.305916</td>
</tr>
<tr>
<td>VIF</td>
<td>Below 10</td>
<td>Below 10</td>
<td>Below 10</td>
</tr>
<tr>
<td>Fixed-Effect</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>F-Statistic</td>
<td>4.726352*</td>
<td>4.691871*</td>
<td>4.652743*</td>
</tr>
<tr>
<td>Adjusted R-Squared</td>
<td>0.575378</td>
<td>0.573105</td>
<td>0.570497</td>
</tr>
</tbody>
</table>

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

when given standard price (before discounted) back in the future because high market share maintains company to get high sales.

Variable interaction between financial health and REM (ZxREM) has a coefficient value 0.002098 (statistically significant at 0.05 level). It indicates that hypothesis 3 is accepted. Result of the effect of REM on future earnings shows 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 normal. It will be followed by potential lost because it needs more abnormal level of resource to do abnormal activities, such as financial difficulties after overproduction because to perform overproduction companies need so many resources and it has to be financially funded. Further, 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, while in the context of the efficient contract, it also can be seen as REM that used to give the signal of financial health condition. Because the good financial condition can reduce financial difficulties that can make companies struggle to generate earnings so that financial health weakens the negative effect of REM on future earnings. This result consistent with Gunny (2010) that states REM is a strategy to shows competitive advantages and the ability to generates better profitability in the future. In this case, financial health is a competitive advantage that can increases performance (Opler and Titman 1994). Fisher et al. (2016) state that a company tends to manage earnings opportunistically to avoid a bankruptcy filing, on the other hand, Abernathy et al. (2014) and Zang (2012) states that a healthy company that does REM will improve business activities. For example, a company that does
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 activities that have information signaling to increases future earnings. In signaling context, one activity gives different information content compared to another, further, it gives different signal (eg. Connelly 2011). Over sales activity (level of -abnormal CFO), overproduction activity (level of +abnormal production cost), and discretionary expenses cutting activity (level of -abnormal discretionary expenses) are examined partially to shows if different REM activities explain different signal of competitive advantages in order to increase future earnings.

Table 6 shows that interaction between market share and over sales activities has a positive effect on future earnings, while the interaction between financial health and over sales has no effect on future earnings. Zang (2012) explains that higher market share companies have competitive advantages such as greater cumulative experience, 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 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 which done by higher financial health companies do not communicate information about healthy financial condition. For example, higher market share companies cut advertisement expense to give signal that they have advantages of greater experience, economics of scale, and bargaining power with customers.

Interaction between market share and discretionary expenses cutting activities has a positive effect on future earnings, while the interaction between financial health and discretionary expenses cutting has no effect on future earnings. Since Zang (2012) explains that higher market share companies have competitive advantages such as greater cumulative experience, ability to benefit from economies of scale, bargaining power with suppliers and customers, attention from investors, and influence on their competitors; discretionary expenses cutting activities which done by higher market share companies are more likely to communicate information about it while discretionary expenses cutting activities which done by higher financial health companies do not communicate information about healthy financial condition. For example, higher market share companies cut advertisement expense to give signal that they have advantages of greater experience, economics of scale, and bargaining power with customers to make customer buy their products without any advertisement, further, it will increases future earnings. Based on explanation of Connelly (2011) that states different activity gives different signal, when companies are engaged in different REM activities, it give different
signal of companies’ 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. It indicates that high quality auditor is more likely to increases 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. It indicates that a company with a higher market share is more likely to engage in efficient REM than opportunist REM to increases future performance. Financial health weakens the negative effect of REM on future earnings. It indicates that a healthier company is more likely to engage in efficient REM than opportunist REM to increases future performance. The cost of earnings management explains if earnings management is done opportunistically or with efficient contract motivation.

There are some limitations of this research. First, this research does not consider analyst forecast of future earnings because of limited access to analyst forecast data, because earnings management can be used to beat analyst forecast, either for opportunistic (eg. Vorst 2016) or efficient motivation (eg. Gunny 2010; Beyer et al. 2018). Second, this research has limitations of variables measurements, such as earnings management only measured by discretionary accruals and abnormal activities and it is estimated by companies’ data of this research sample only, while there are other measurements of earnings management like income smoothing (eg. Eckel 1981) or classification shifting (McVay 2006), market share measured based on Indonesian Stock Exchange listed companies only that does not reflect true market share compared to other unlisted companies. Third, this research only use manufacture companies as research sample so that the result cannot be generalized to non-manufacture companies. Fourth, this research use future earnings only for one year ahead but does not consider long run future earnings two or three years ahead. Fifth, this research does not consider about downward REM for income minimization where Francis et al. (2016) find existence of downward REM when there is managerial incentive for share repurchase, management buyouts, and CEO option awards. Future research is suggested to consider the analyst forecast of future earnings to ensure companies are engaged in earnings management for analyst forecast beating purpose, use other measurement of earnings management, consider unlisted companies’ sales to measure true market share, use non-manufacture companies as research sample, use earnings two or three years ahead to measure long run future earnings, and examine the downward REM for income minimization especially in cases of share repurchase, management buyouts, and CEO option awards.

This research’s findings have some implications. For academicians, this research fills the previous research gap by providing auditor quality, market share, and financial health factors in order to determine if earnings management is done based on opportunistic act or efficient contract purpose. For companies, they can consider high quality auditor, market share, and financial health to give signal of better future earnings by using earnings management. For investors, they can evaluate auditor quality, market share, and financial health to use earnings information for investment decision making.

**REFERENCES**


Journal of Accounting, Auditing & Finance, 31 (2), 212-248.


Ikatan Akuntan Publik Indonesia. 2015. Standar Audit 200: Tujuan Kese-


Shirur, S. 2011. Tunneling vs Agency Effect: A Case Study of Enron and


