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The Effect of firm characteristics and good corporate governance characteristics to earning management behaviors

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Abstract

Purpose: This research is carried out to investigate the influence of firm characteristics and good governance characteristics to earnings management behavior. Furthermore, the research is expanded to determine the predictive discretionary accruals models in Indonesia. The author utilizing firm listed in Indonesia Stock Exchange during 2014 – 2018 as research object.

Design/methodology/approach: The research samples is selected by utilizing the purposive sampling method. In addition, the data analyze is conducted through E-Views version 10. Three discretionary accruals models is used to define earnings management behavior. The research assumed firm characteristics factors such as financial performance, firm size, leverage, and share issuance activity and good governance characteristics such as board of directors' size and auditor's size.

Findings: The research discovers that firm characteristics can accentuate the earnings management behavior significantly. In other hand, in good corporate governance characteristics only big four auditor is significant. The research also find that discretionary accruals model of Jones, Dechow, and Kothari are predictive in Indonesia.

Practical implications: The discoveries of this research provide understanding for investors that enforcement on both governance and monitoring mechanism are essential approach to reduce earnings management behavior.

Originality/value: The research investigated three models of discretionary accruals' capability in predicting earnings management behavior, and found out all discretionary accruals model are still relevant to be use in predictive to define earnings management behavior in Indonesia.

1. Introduction

Firm valuation is yielded through the performance of firm in the short run and long run which is indicated by firm earnings. Therefore, firm earnings is closely associated with firm valuation. Release of concurrent information around earnings announcement show that there's an increase in market response to earnings announcements (Beaver, McNichols, & Wang, 2019). Consistent with the theory of fraud triangle, financial targets served as a rationalization to commit manipulation (Sukirman & Sari, 2013). Study also found out that managers' ability would increase firm efficiency and decrease the possibility of earnings restatement, which will increase earnings quality eventually (Edi & Suyadi, 2018). Moreover, managers are found to perform aggressive accounting choice and risk taking behavior in financial reporting (Kim, 2015). Managers intentionally exploit the loopholes in financial regulations and accounting choice to obtain inappropriate benefits (Bhasin, 2016). Firm characteristics have strong impact on earnings management behavior. Some of them will accentuate the earnings management behavior, while others will attenuate it. Firm size, firm leverage, and firm financial performance are all found to have significant impact on earnings management (Charfeddine, Riahi, & Omri, 2013). Furthermore, effective good governance mechanism is also believed to constraint earnings management behavior (Salim & Hn, 2019).

In early 2019, PT Garuda Indonesia is discovered to have earnings manipulation during the accounting period of 2018. The state owned company is found to manipulate earnings by recognizing unearned revenue of $239.94 million. The manipulation is deliberately conducted by managers disregard the opposition of the commissioners to make the performance looks better than the prior year. Earnings management is a phenomenon around the world. Recently in August 2019, US's financial watchdog – the SEC conduct investigation towards General Electric. General Electric was suspected to commit bigger fraud than Enron, the accounting fraud it committed is worth for $38 billion which is over 40% of the firm's market capitalization. Again, with the similar manner, the General Electric's managers concealed an approximately $29 billion of losses from the public and is heading to bankruptcy. Accounting fraud is also involving start-up firms in Silicon Valley. In early 2019, WeWork, the unicorn start-up firm whose public offerings is the most expected event is burst out. WeWork suffered substantial losses over years. In 2016, it suffered $429 million of $436 million in revenue, and continually to suffer loss. In 2019, the firm reported loss of $690 million of $1.5 billion in revenue. Poor corporate governance is pointed as the reason behind the problems faced by We Work.

The act of earnings management of course have caused the financial instrument cannot perform as guidelines in making decision (Walker, 2013). Therefore, the research is conducted to provide empirical evidence showing how to recognize earnings management,

which measurement is more appropriate to define earnings management behavior, under what circumstance it could be performed. Accordingly, earnings management behavior could be detected and prevented, and eventually financial and investment environment could be enforced.

2. Literature Review and Hypothesis Development

2.1 Theoretical Framework

Factors as firm characteristics, good governance characteristics, and particular firm activity have been reported have significant impact on earnings management behavior (N. H. Dang, Hoang, & Tran, 2017). Consolidated financial statement, executive duality role, firm performance, firm size, and share issuance activity are found to have significant positive relationship with earnings management behavior. In other hand, auditor size as proxy of audit quality and financial leverage have significant negative relationship with earnings management behavior. Additionally, research suggested that cross sectional abnormal accruals model have capability to detect accruals based earnings management. Both standard discretionary accruals model and modified discretionary accruals model have been proved are more capable at identifying revenue and bad debt manipulation earnings management (Peasnell, Pope, & Young, 2000).

Characteristics of earnings management in south-east Asia countries (Indonesia, Philippine, Singapore, Thailand, and Malaysia) is not similar (Wardani & Kusuma, 2012). By focusing on accruals based earnings management and real earnings management, the researchers found out that real earnings management is less aggressive in Indonesia and Philippine compared to the others countries. In contrast, accruals based earnings management is higher in Indonesia and Philippine compared to the others countries. Additionally, the study discovered that earnings management is opportunistic in Indonesia and Malaysia, but informational in Thailand and Philippines. Built on above theoretical framework, this research is conducted to investigate the influence of firm characteristics, good governance characteristics, and firm certain activity on earnings management behavior by utilizing cross sectional and time series discretionary accruals model to identify accrual based the earnings management behavior in Indonesia.

2.2 Earning Management

It has been a common knowledge for every financial statements reasonable users that stated figures in earnings probably be affected by accountant's choices and discretions. Earnings management is an act of manipulating earnings. Manipulate is explained as the capability of management to add or reduce earnings at will (Copeland, 1968). Earnings management has been discovered as a phenomenon in financial reporting process whereas managers of a firm attempted to exhibit a fair earnings quality report to satisfy the high expectation of financial

statements users (Francis, Huang, Rajgopal, & Zang, 2008). By conducting earnings management, managers turned earnings as the report of their enthusiasm instead of as the result of firm financial performance (Levitt, 1998). The definition of earnings management have led us to think about the subjectivity in accounting process and how earnings management is committed.

2.2.1 Accrual Based Earning Management

Accruals based earnings management is interpreted as involvement of managers' choices and discretions in preparing financial statements and constructing transaction, to provide misleading information regarding the financial condition of the firm (Healy & Wahlen, 1999). Accruals based earnings management might not essential to have impact on the cash flow (Cupertino, Martinez, & da Costa, 2015). Compared to real earnings management, accrual based earnings management is more prone to be discovered and less costly (Kothari, Mizik, & Roychowdhury, 2016). Therefore, manager is predicted to commit accruals based earnings management prior to commit real earnings management. That is, a lot of researches (including this paper) are focused on accruals based earnings management to explain the activity of earnings management (Dechow, Sloan, & Sweeney, 1995; Healy, 1985; Jones, 1991; Kothari, Leone, & Wasley, 2005).

2.2.2 Earning Management Measurement

The research employed cash flow approach to acquire the value of total accruals which the equation is as follows:

$$TA_{it} = NI_{it} - OCF_{it}$$

The equation above reflects the value of net operating accruals, which is the amount of short-term accruals obtained from operating activities. Even so, the total value of accruals alone cannot be compared directly with other companies. This is because the value of accruals will be influenced by firm growth factor (DeAngelo, 1986). Therefore, total accruals must be scaled to the average of total assets to be comparable:

$$\frac{TA_{it}}{A_{it-1}} = \frac{(NI_{it} - OCF_{it})}{A_{it-1}}$$

Where:

TA_{it} : Total accruals of firm i on t period.

A_{it-1} : Total assets of firm i at the end of t period.

NI_{it} : Net income of firm i on t period.

OCF_{it} : Operating cash flow of firm i on t period.

Accruals consist of discretionary accruals and non-discretionary accruals. Therefore, the value of discretionary accruals can be obtained by subtracting the value of non-discretionary accruals from total accruals.

$$DA_{it} = \frac{TA_{it}}{A_{it-1}} - NDA_{it}$$

Where:

DA_{it} : Discretionary accruals of firm i on t period.

NDA_{it} : Non-discretionary accruals of firm i on t period.

The difference between the models of discretionary accruals that will be used reposed in the measurement approach of non-discretionary accruals. In this research, the discretionary accruals measurement model that will be used are as follows:

1. Model of Jones (1991)

$$NDA_{it} = \alpha_1 \frac{1}{A_{it-1}} + \alpha_2 \frac{\Delta REV_{it}}{A_{it-1}} + \alpha_3 \frac{PPE_{it}}{A_{it-1}} + \varepsilon_{it}$$

Where:

ΔREV_{it} : Change in revenue, which is calculated by subtracting revenue of firm i on t period with revenue on t – 1 period.

PPE_{it} : Value of property, plant, and equipment of firm i at the end of t period.

2. Model of Dechow et al. (1995)

$$NDA_{it} = \alpha_1 \frac{1}{A_{it-1}} + \alpha_2 \frac{\Delta REV_{it} - \Delta REC_{it}}{A_{it-1}} + \alpha_3 \frac{PPE_{it}}{A_{it-1}} + \varepsilon_{it}$$

Where:

ΔREC_{it} : Change in receivables, which is calculated by subtracting receivables of firm i on t period with receivables on t – 1 period.

3. Model of Kothari et al. (2005)

$$NDA_{it} = \alpha_1 \frac{1}{A_{it-1}} + \alpha_2 \frac{\Delta REV_{it} - \Delta REC_{it}}{A_{it-1}} + \alpha_3 \frac{PPE_{it}}{A_{it-1}} + \alpha_4 ROA_{it-1} + \varepsilon_{it}$$

Where:

ROA_{it-1} : Return on asset of firm i on period of t – 1.

2.3 Firm Characteristics and Good Corporate Governance Characteristics

Firm characteristics is described as organization internal factors that emerged within the internal environment of the organization itself and can be controlled which encompasses management influences and firm competencies (Zou & Stan, 1998). Furthermore, firm characteristics is categorized into seven classes: valuation, investment, prior returns, earnings, financial distress, external financing, and other class (Kogan & Tian, 2012). In this research, firm characteristics included are firm size to reflect valuation, firm performance to reflect earnings, leverage to reflect financial distress, and stock issuance activity to reflect external financing.

Mechanism of ownership and control to protect minority rights, legal inhibition against management self-benefit behavior is called corporate governance (Shleifer & Vishny, 1997). Therefore, good governance characteristics is reasoned as attentive oversight characteristics that reflected best practice to prohibit management discretion and restrict their ability to respond to the potentials of a financial crisis which is believed would bring detrimental effect towards a firm (Van Essen, Engelen, & Carney, 2013). The studies encompassed board of director's size to reflect board characteristics and auditor's size to reflect audit quality.

2.3.1 Financial Perfomance

Financial performance indicate the capability of a firm in utilizing assets to generate earnings. Return on assets provides an overview to see how much earnings after tax is obtained after investing in assets. Based on this definition, then in measuring the company's performance, the ratio of return on assets can be used (Alexander & Hengky, 2017; Dewi & Prasetiono, 2012).

2.3.2 Firm Size

Firm size indicate the scale of a firm. Numerous of approaches are used to measure firm size, including total assets, market value of equity, and revenues. However, every approach of firm size only measure certain area of implication. The use of market capitalization is more suitable for market oriented and progressive implication, total assets is fit for the measurement of firm resources but not firm performance, and total revenue is an appropriate measurement for product market and non-progressive implication (C. Dang, (Frank) Li, & Yang, 2018). Earnings management engagement is associated with firm performance and is past oriented. Consistent with the argument, this research used the natural logarithm of total revenue approach to measure firm size (N. H. Dang et al., 2017).

2.3.3 Leverage

Leverage shows how a company utilizes debt to obtain economic benefits. In other words, leverage also can be used to measure the capital structure of a firm. Leverage can be obtained by comparing the level of a firm's total debt to the total book value of the firm's assets (Azlina, 2010; Mahawyahrti & Budiasih, 2017).

2.3.4 Board of Director's Size

Board of directors is a group of people that are appointed to supervise, take charge of firm's operational, and act in accordance to firm's objective. An effective board of directors is an implication of good governance mechanism. Board characteristics can be measured in various ways. Board characteristics are identified through the composition of the board, such as: board of directors' size, existence of independent directors, the dual role of Chief Executive Officer, and board tenure (Nugroho & Eko, 2011). Consistent with prior researches, this research use board of directors' size by calculating the number of directors in the board as a

proxy of board characteristics (Neifar, Halioui, & Abdelaziz, 2016; Xie, Davidson, & DaDalt, 2003).

2.3.5 Auditor's Size

The size of firm's independent auditor can be used as a benchmark for audit quality. Numerous of researchers argued that auditors that are associated with big four can provide higher audit quality compared to non-big four auditors (Hussainey, 2009; Rusmin, 2010). Based on this reason, numerous of researches measure the audit quality by categorizing auditor whether it is big four or non-big four auditors (Ahmad, Suhara, & Ilyas, 2016; Alves, 2013).

2.3.6 Share Issuance Activity

Shares issuance is a way for firms to raise funds from external parties. Share issuance activities are believed to be a motivation for earnings management (Cohen & Zarowin, 2010; Yang, Hsu, & Yang, 2013). Therefore, the presence or absence of share issuance activities by firms in a period have an influence on earnings management behavior (N. H. Dang et al., 2017).

2.4 Firm Characteristics, Good Corporate Governance Characteristics and Earning Management Behavior.

2.4.1 Financial Perfomance and Earning Management

The possibility to engage earnings management become higher when executives' compensation are based on firm financial performance (Sun, 2014).

Managers have a tendency to engage earnings management to satisfy financial thresholds in three conditions:

1.   To avoid negative earnings in current performance (Charoenwong & Jiraporn, 2009).

2.   To sustain firm financial performance (Amar & Abaoub, 2010).

3.   To fulfil analyst's prognosis (Doyle, Jennings, & Soliman, 2013).

By comparing firm that missing analyst's prognosis and firm that meeting analyst's prognosis, the research suggested firm that meeting analyst's prognosis by manage accruals expense downwardly will gain short run share price benefit (Bhojraj, Hribar, Picconi, & McInnis, 2009). That is, by mean of earnings management behavior, reported financial performance is expected to be higher. Build upon the exposition above, therefore the first hypotheses in this research is

H_1:   Financial performance has positive and significant influence on earnings management.

2.4.2 Firm Size and Earning Management

Insistence to have a better financial performance, larger possession of assets, and negotiation power to bargain with auditors provided large firms opportunity and motivation to engage more earnings management (Ali, Noor, Khurshid, & Mahmood, 2015). According to the

political cost assumption, large firms might have higher political cost and under more public attention, therefore large firms will engage more earnings management behavior (Rusmin, Scully, & Tower, 2013). Auditors will probably impede earnings management behavior engaged by small firm than large firm. Audit partners in non-big four are found to compromise audit independence for financially significant clients (W. Chi, Douthett, & Lisic, 2012). The predictability of earnings is found lower is large firm due to the higher probability of earnings manipulation to elude negative earnings and government intervention (Ahmed AL-Dhamari & Nor Izah Ku Ismail, 2014). Moreover as firm size increase, family firms will more possible to engage in earnings management behavior (Martin, Campbell, & Gomez-Mejia, 2016). Large firms have more complicated and complex transaction compared to small firm, thus large firm is more prompt to engage earnings management (N. H. Dang et al., 2017). The higher information and agency risk faced by large firm are believed to enable managers to conduct earnings management (Nalarreason, T, & Mardiati, 2019). Other study revealed that large firm prompt to utilize discretionary accruals in placing their seasonal share issuance (Shu & Chiang, 2014). Based on explanation above, therefore the second hypotheses in this research is

H_2:   Firm size has positive and significant influence on earnings management.

2.4.3   Leverage and Earning Management

Creditors and investors are argued to monitor firms that they funded in. Study found out that short term liability is positively associated with earnings management behavior only strong for low creditworthiness firms (Fung & Goodwin, 2013). Firms' earnings management behavior is found decreasing when bank monitoring mechanism's efficiency increased (Ahn & Choi, 2009). The level of leverage is found low in pre-merger and acquisition firms which engage in upward earnings management behavior (Alsharairi & Salama, 2012). Additionally, another study also find that distressed firms are actually less possible to commit earnings management because those firms will used up all means for engaging earnings management (Ghazali, Shafie, & Sanusi, 2015). When level of debt comparatively low, the regression of debt on earnings management is found negative. In contrast, when debt is high, the regression is found positive (Alzoubi, 2018). Debt is found to incline positive earnings management in low transparency and high diversified firms (Rodríguez-Pérez & van Hemmen, 2010). Intensified leverage limiting manager's opportunistic behavior due to strict monitoring therefore alleviate accrual-based earnings management however exacerbate real earnings management (Vakilifard & Mortazavi, 2016). According to the elucidation above, therefore the third hypotheses in this research is

H_3:   Leverage has negative and significant influence on earnings management.

2.4.4 Board of Director' Size and Earning Management

Directors are in charge of firm's daily operation and therefore possessed more information of firm compared to owners which increase information risk. Executives will behave in their own interest, thus have incentive to conduct earnings management. Investigation towards the relationship between corporate governance and earnings management, provide evidence that larger board size are associated with more earnings management behavior (Swastika, 2013). Empirical evidence revealed that large board size vision a failure of board advisory and monitoring role, and caused an negative influence on firm performance (Guest, 2009). A positive relationship between board size and earnings management appear as board's members increases up to seven members (Geraldes Alves, 2011). By categorizing board size, research found out that board size of nine to twelve members are involved with higher earnings management behavior (Epps & Ismail, 2009). These findings suggest that smaller board does provide more effective monitoring role compared to large board. An unduly large board will cause monitoring mechanism become ineffective (Veronica Siregar & Bachtiar, 2010). Other research emphasized that compared to other elements, quality of board is the most essential elements in governance mechanism (Payal & Singh, 2017). In accordance to the explication above, therefore the fourth hypotheses in this research is

H_4: Board of directors' size has positive and significant influence on earnings management.

2.4.4 Auditor's Size and Earning Management

Auditor's size is one of audit quality's attribute. Earnings predictability are found higher when firms are audited by big four auditors compare to non-big four auditors (Hussainey, 2009). Big four auditors are argued to compete with each other on audit value – price and quality by subsidizing in audit technology along with the market size (Sirois & Simunic, 2011). In addition, big auditors are more likely to preserve their independence compare to small auditors (W. Chi et al., 2012). In summary, big four auditors are revealed to reduce earnings management behavior effectively compared to non-big four auditors for several reasons (Rusmin, 2010):

1. Big four auditors have higher motivation to preserve their reputation in international level, thus will improve their audit quality.

2. Big four auditors have higher independence compared to non-big four auditors.

3. Big four auditors have more qualified resource in technology, human, and capital that enable them to provide high audit quality.

Enforcement on legal system and legal environment can directly affect audit environment. Big four auditors will be capable to alleviate earnings management behavior under sufficient negligence mechanism (Yasar, 2013). Big four auditors constraint earnings management

behavior in effective legal system audit environment (Memiş & Çetenak, 2012). Posit on the description above, therefore the fifth hypotheses in this research is

H_5:   Auditor's size has negative and significant influence on earnings management.

2.4.5   Share Issuance Activity and Earning Management

Earnings management is engaged in order to meet financial threshold and analysts' forecast so that firm's share price will soar up in the short run (Bhojraj et al., 2009). Income increasing earnings management resulted in equity overvaluation (J. (Daniel) Chi & Gupta, 2009). Research discovered that firms which issue multiple seasoned equity offerings will continuously manage discretionary accruals to raise earnings (Chang & Lin, 2018). Moreover, firms are found to engage in both real and accrual-based earnings management during seasoned equity offerings (Cohen & Zarowin, 2010). By analyzing long run performance, the study revealed that firms that managed earnings aggressively during initial public offerings suffered poor share returns after several periods (Yang et al., 2013). Furthermore, researchers documented three movements of discretionary accruals during share issuance (Miloud, 2014):

1.   Grow before share issuance period

2.   Reach the peak on the share issuance period, and

3.   Decline after share issuance period.

Earnings management around seasoned equity offerings engaged by large firm is positively associated with short term performance and negatively associated with long term performance (Shu & Chiang, 2014). Postulate on the findings above, therefore the last hypotheses in this research is

H_6:   Share issuance activity has positive and significant influence on earnings management.

3.   Research Methodology

The research employed firms listed on the Indonesia Stock Exchange (IDX) during 2014 - 2018 as research objects. The research samples are obtained through purposive sampling method, a non-random techniques that are based on distinctive quality of the samples (Etikan, Musa, & Alkassim, 2016). Furthermore, the audited financial statements is obtained from the sample firm official websites and IDX website. The multiple linear regression, the panel regression, the Spearman, data analyze was employed through is the E-Views program version 10.

4. Research Finding

Table 4.1 Result of Hypotheses Test (FEM) – Jones Model

Predictor Variables	Attributed Variable – Jones Discretionary Accruals Model		
	Coefficient	t-Statistics Prob.	Conclusion
Financial Performance	0.271896	0.0000	Significant Positive
Firm Size	-0.014009	0.0001	Significant Negative
Leverage	-0.000731	0.8273	Insignificant Negative
Board of Directors' Size	0.003826	0.1359	Insignificant Positive
Share Issuance Activity	0.018559	0.0030	Significant Positive
Auditor's Size	-0.013734	0.1980	Insignificant Negative

Source: *Authors' calculations (2019)*

Table 4.2 Result of Hypotheses Test (REM) – Dechow Model

Predictor Variables	Attributed Variable – Dechow Discretionary Accruals Model		
	Coefficient	t-Statistics Prob.	Conclusion
Financial Performance	0.301680	0.0000	Significant Positive
Firm Size	0.005372	0.0006	Significant Positive
Leverage	-0.014523	0.0000	Significant Negative
Board of Directors' Size	-4.78E-05	0.9725	Insignificant Negative
Share Issuance Activity	0.018964	0.0008	Significant Positive
Auditor's Size	-0.010663	0.0486	Significant Negative

Source: *Authors' calculations (2019)*

Table 4.3 Result of Hypotheses Test (REM) – Kothari Model

Predictor Variables	Attributed Variable – Kothari Discretionary Accruals Model		
	Coefficient	t-Statistics Prob.	Conclusion
Financial Performance	0.282479	0.0000	Significant Positive
Firm Size	0.005225	0.0010	Significant Positive
Leverage	-0.003991	0.0939	Insignificant Negative
Board of Directors' Size	-5.55E-05	0.9685	Insignificant Negative
Share Issuance Activity	0.019813	0.0006	Significant Positive
Auditor's Size	-0.012365	0.0239	Significant Negative

Source: *Authors' calculations (2019)*

The research discovered that financial performance, firm size, and share issuance activity can accentuate the earnings management behavior significantly on firms listed in Indonesia Stock Exchange (IDX). In other hand, big four auditors can attenuate the earnings management behavior significantly. Leverage can decrease earnings management behavior however is partially significant. Board of directors' size have negative influence on earnings management behavior, however the influence is insignificant. Moreover, the result show that the hypotheses test of Jones' model is different from Dechow and Kothari's model. Therefore, the Spearman's Rank correlation analyze is carried out to investigate the predictive capability of Jones' model.

Table 4.4 The Spearman's Rank Correlation Analyze

Cases	JONES	DECHOW	KOTHARI
JONES	1.000000		
Probability	-----		
DECHOW	0.927880	1.000000	
Probability	0.0000	-----	
KOTHARI	0.926605	0.990788	1.000000
Probability	0.0000	0.0000	-----

Source: *Authors' calculations (2019)*

The Spearman's Rank correlation test show that all discretionary accruals are strongly correlated. The correlation between Dechow model and Kothari model is higher compared to the correlation towards Jones model. In the discretionary accruals of Jones model, it was assumed that revenue cannot be influenced by managers' discretion or is non-discretionary (Dechow et al., 1995). However, earnings management could have been managed through revenue. Managers use strategic revenue recognition by utilizing both deferral sales account and accrual sales account to avert earnings uncertainty (Caylor, 2010). Therefore, although all discretionary accruals are strongly correlated, the hypotheses result of Jones model is different from the other models. But the jones model, dechow and Kothari are still relevant as a measurement for earning management.

5. Conclusion

Managers might engage earnings management to obtain short run stock benefit (Bhojraj et al., 2009). Larger firms possesses more incentives and opportunities to conduct earnings management (Ali et al., 2015; N. H. Dang et al., 2017). This phenomenon signify that governance practice and earnings quality in large firm might not better than small firms. In other hand, big four auditors can attenuate the earnings management behavior significantly. This suggest Indonesia have an efficient audit environment that enable the big four auditors to perform effectively. As studies suggested big four auditors might limit earnings management behavior under enforced legal environment (Memiş & Çetenak, 2012; Yasar, 2013). Leverage

can decrease earnings management behavior however is partially significant. This indicate that creditors such as bank could serve as external monitor mechanism on firms, however needs more enforcement from the internal monitor mechanism from firm itself. Board of directors' size have negative influence on earnings management behavior, however the influence is insignificant.

Due to the different hypotheses result among Jones' model and the other two models, the Spearman's Rank correlation is carried out. The findings in the research show that all discretionary accruals model are predictive in Indonesia. However, correlation between Dechow and Kothari's model are slightly higher than Jones' model.

The findings suggest that enforcement on legal system should not only be applied on audit environment but also firm corporate governance policy. Moreover, as bank efficiency increased, debt firms' earnings management behavior could be decreased (Ahn & Choi, 2009). That is, monitor and control mechanism to protect investor should be relied on both internal mechanism (through corporate governance) and external mechanism (through independent auditors and banks). For investors and creditors, discoveries of this research provide novel understanding that firm valuation should not only based on financial figures such as firm performance and firm size. Qualitative measure such as managerial ability and corporate governance practice and characteristics should also be emphasized (Edi & Suyadi, 2018; Salim & Hn, 2019). Further research might concentrated on variables that constraint earnings management behavior such as leverage and board structures. The extend of leverage in distressed firm that would attenuate earnings management behavior could be focused on (Alzoubi, 2018). In addition, further research could also focused on the quality of boards rather than only focused on boards' size (Payal & Singh, 2017).

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