Conference Paper

Earnings Quality: The Association of Board diversity, Executive Compensation, Debt Covenant, and Investment Opportunity Sets

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Abstract

Reliability of the corporate's financial statement earnings is an important information for stakeholders. According to the agency theory, there is a difference of interest between the corporate and stakeholders. Earnings quality is the answer to see it and accomplish the difference interest problem. This research investigates the influence of board diversity, executive compensation, debt covenants, and investment opportunity sets on earnings quality. Data were taken from industrial manufacturing corporates listed in the Indonesia Stock Exchange (IDX) and selected 325 observations from 2012 to 2016. It was found that the board diversity and debt covenants had a positive associations with the earnings quality. It is explained that the presence of board diversity and debt covenants gave a positive level of earnings quality in the manufacturing industry. However, board diversity was not well-regulated in Indonesia. Investment opportunity set has a negative association with earnings quality. The negative association meant that investors did not know and were tricked because management apparently did earnings management. Moreover, executive compensation had no proven effect on earnings quality. Because money is not the main purpose for the top level in the corporate, in the same manner as Mashlow's hierarchy of needs theory is that the top level in corporate focus on self-actualization.

Keywords: board diversity, debt covenants, earnings quality, executive compensation, investment opportunity sets

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1. Introduction

Earnings are one of information that is a concern for the stakeholders in the financial markets. For that reason, the income statements are presented to define and explain the earnings. Broadly speaking, Subramanyam (2017) explains that earnings provide a measurement of the change in property owned by the corporate during the period and the estimated earnings ability of the business nowadays. Earnings also illustrate the extent to which the business accommodate business operations and provide returns for stakeholders.

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Top management as those who determine the policy have roles in the presentation of the corporate's earnings. It can be in forms of accounting policy, restructuring, change management, and others. However, their actions do not reflect the earnings accurately, so they reduce the credibility of earnings information. It is contrast with PSAK No. 1 of 2015 issued by the Indonesian Accountants Association in the book 'Financial Accounting Standards Effective January 1, 2017' explained that the financial statements must be presented as to the real situation.

In July 2015, the business world was shocked by the news of the resignation of the CEO of PT Toshiba, Hisao Tanaka, and other senior officials. They resigned after inflated the earnings reached 151.8 billion yen, equivalent to 16 trillion rupiah last few years (Hakim, 2015). Their actions indicate that the quality of the earnings of PT Toshiba has been low even though the earnings target has been met. However, the way to meet these targets make the information asymmetrically which resulted an misleading information to stakeholders on the economic performance of the corporate. Departing from this state, it is important for stakeholders to consider the economic performance of corporates before making a decision about the sustainability of the relationship with the corporate.

One of the things that can be seen all stakeholders in order to assess the corporate's decision-making is through the earnings quality of the corporate. It reflects a real value of sufficient earnings on management performance and condition of the corporate (Subramanyam, 2017). If it does not provide the real information, it could mislead stakeholders' decision. Therefore stakeholders should be more focused on the corporate's earnings quality as one of consideration decision.

The quality of earnings shows the reliability of the information presented by the corporate's earnings in its financial statements. The higher of the quality of the corporate earnings presented, the more reliable presentation of earnings and vice versa. Risdawary and Subowo (2015) revealed that the corporate which is stable and has earnings sustainability is the one who have a good earnings quality. Subramanyam (2017) in his book explains that there are three factors that determine the earnings quality which are accounting principles, application of accounting, and business risk. Judging from the determinants of earnings quality, we can conclude that the earnings quality is the result of the involvement of top management decisions in the management of earnings.

Based on earnings quality measurement grouping categorized by Dechow et al. (2010), the measurement is based on the nature of earnings as an accepted method in comparison with other measurements. It is because the earnings quality also need to be assessed by how management determines policy in accordance with the applicable provisions of the presentation of earnings before implemented, especially accrual policy. The application of accrual policy in the financial statements led to the recognition of income now despite of the realization of cash in the future (Subramanyam, 2017). In addition it is related to internal factors. Therefore, the earnings quality in this research assessed with measurements based on the nature of income with some internal factors such as the board diversity, executive compensation, debt covenant, and investment opportunity sets.

Diversity in an organization has a role to make the environment of organization more dynamic. The existence of diversity within the corporate would make the corporate thrive because the various aspects of board diversity can bring innovation and solutions for corporates (Robbins, 2015). At the top management, level of diversity is necessary as part of corporate governance in order to run an effective decision-making role and is expected to have a good earnings quality. Mahadeo et al. (2012) mentions the scope of aspects of the board diversity is included age, gender, education and nationality. One of the diversity of corporates that can push a corporate's reported earnings quality is the gender of the board.

The board diversity in the context of a discussion of gender remains unresolved because of a difference in the findings. Findings of previous studies finding a positive influence between the presence of women on board and earning quality (Dimitrova, 2017; Kreder, 2016; Srinidhi, Gul and Tsui, 2011). However, other studies also failed to find a link between the board diversity with the earnings quality (Nasution and Jonnergard, 2016; Hoang, Abeysekera, and Ma, 2015; Ye, Zhang and Rezaee, 2010). In Indonesia, there are no specific rules governing the board diversity, especially in a gender perspective. Meanwhile, in the United Kingdom, in 2016, board diversity has been regulated by Financial Reporting Council that published The UK Corporate Governance Code in which regulated the obligations related woman quota in the board of corporate in the amount of 40%.

Furthermore, the compensation is one of motivations for human resources in the corporate to work harder in order to achieve its goals. Provision on executive compensation is a way of corporates motivate executives to act in accordance with the commitments in the interests of the corporate and meet the expectations of stakeholders. The executives referred in this exposure are in the corporate's board. Rasheed, Kaynat, and Nawaz (2016) suggest that the corporate designs executive compensation in order to management acts in the best interests of the corporate, in this case of shareholders. The compensation given to the management corporate is expected to improve the quality of information provided to investors; one of them is the earnings information in the financial statements. Findings research on variable executive compensation to the earnings quality have different findings. The researchers earlier found the positive relationship between executive compensation with the earnings quality (Rasheed, Kaynat, and Nawaz, 2016; Paz and Griffin, 2016; Paz and Zaidi, 2014; Tanomi, 2012). However, these findings differ from research conducted by Safari, Cooper, and Dellaportas (2016) and Gelen (2016) who found a negative effect on executive compensation to the earnings quality. Then Sosiawan (2012) failed to find a relationship between executive compensation with the earnings quality.

In Indonesia, the government regulation about executive compensation applies only to state-owned corporates. It is stipulated in the Peraturan Menteri Badan Usaha Milik Negara Nomor PER - 01/MBU/06/2017 on Guidelines for Determination of Directors, Board of Commissioners and Board of Trustees of State Owned Corporates. Other corporates in relation of disclosing compensation can adjust with the respective corporate policy. Meanwhile, the Securities and Exchange Commission (SEC) has specifically issued regulation 'Executive Compensation and Related Person Disclosure' in relation of disclosing obligations on executive compensation for corporates in the United States.

In the loan agreement, it contains a debt covenants to limit the engagement between the corporates as fundraisers and creditors as funders that must be obeyed. Management tries to avoid the violation of debt covenants to perform accounting policies related to financial performance of corporates which have an impact on the earnings quality. Sutopo (2012) said that if the level of debt held by low corporate, it can raise the corporate's earnings quality. This is because lower debt levels reflect on the management whether it is able to manage the corporate well, so that the debt covenants could be fulfilled. It makes high-quality earnings. The previous researchers found a link debt covenants and the earnings quality has a negative influence outcome (Spiceland, Yang and Zhang, 2015; Ummah and Subroto, 2013; Ghosh and Moon, 2010)and yet in Tanomi's research (2012) cannot find the association between debt covenant and earnings quality

Investment opportunity set can describe the projected growth of a corporate. Mulyani et al. (2007) explains that an opportunity for corporates to choose an alternative investment in the future from the asset market is considered high, thus it indicates that the corporate is growing and has a high earnings quality. Research conducted by Nurhanifah and Jaya (2015) and also Warianto and Rusiti (2014) showed that the investment opportunity set negatively affect the earnings quality. These findings differ from Novianti's research (2012), which revealed that the investment opportunity set positive effect on the earnings quality. However, research conducted by Putra and Subowo (2016) showed that the investment opportunity set did not have an influence on the earnings quality.

The findings of this research have some significances. The research is expected to provide empirical evidence about the influence of the board diversity, executive compensation, debt covenants, and the investment opportunity set against the earnings quality. So the purpose of this research is (i) to enrich the literature on earnings quality and lay the groundwork for future research; (ii) serve as an evaluation for the corporate in achieving high earnings quality; (iii) serve as consideration to the stakeholders in making decision of sustainable working relationships, particularly regarding to the factors that determine the earnings quality presented by the corporate in the financial statements; and (iv) provide an advice to the government in making government policy related to setting the presentation of corporate earnings in order to maintain the earnings quality.

2. Literature Review

Principal as the owner of the funds is expecting a fast and maximum return on capital given while the manager as the agent running the corporate wants an incentive for performance that they did. The agent has more information than the principal who just give the capital. However, in practice, the agent does not always act in accordance with the wishes of principal and asymmetry of information occurs between principal and agent.

In this condition, the agent can manipulate earnings in the presentation of financial statement. When the agent reports earnings which tend to maximize private interests, it can lead to low earnings quality. Low earnings quality will affect the decision-making by the stakeholders. Dimitrova (2017) asserts that managers must have a professional attitude and ethical responsibility to report high earnings quality to stakeholders.

The board diversity in a gender perspective is expected to be a bridge between the interests of management and shareholders. Their psychological differences between women and men in decision-making are shown through the presentation of earnings information. The information, in fact, impacts on the earnings quality.

Executive compensation is the amount of compensation awarded by the corporate in order to motivate the performance of management to act in accordance with the corporate's goals, taken into account the interests of stakeholders. This is implemented to balance the interests of management and stakeholders.

Debt covenants set the boundaries between corporates as agents and creditors as principals in the fulfillment of the debt agreement. It can see through the debt ratio. High levels of debt ratio would make the chances of the violation of debt covenants. As a result, the quality of earnings is low, so it does not correspond to the expectations of creditors as stakeholders.

Accounting earnings are one of sources of information about the condition of the corporate. If a corporate has high earnings, it will earn a high income as well and the interested parties will also benefit. Through a 'signal' given by the corporate which contains information on the condition of good or bad corporates, it will affect the market differently. The market's reaction may indicate high and low earnings quality.

An alternative opportunity set allows corporates to determine a set of investment that can be used by the corporate. When corporates have the opportunity to make an investment in the future, the market value of the corporate's assets is highly valued by stakeholders of the corporate. It gives the 'signals' regarding the quality of corporate earnings.

Earnings quality is an abstract concept that is quite difficult to measure correctly (Rutludge, Karim and Kim, 2016). This opinion is also confirmed by Subramanyam (2017) which states that until now there is no formal agreement between researchers on what terms of earnings quality itself. Dechows et al. (2010) defines the earnings quality depends on the financial performance information in making relevant decisions. Subramanyam (2017) says there are three factors that identification materials in the determination of earnings quality, among others: (i) accounting principles; (ii)implementation of accounting; and (iii) Business Risk. Dechows et al. (2010) classify the measurement of the earnings quality into three main categories: income properties (i), Response investor (ii), and external indicators of misstated earnings (iii)

There are structurally two board systems in corporate governance which are the one-tier and two-tier system. One-tier board system is integrated into the role of the board of directors. Meanwhile, in two-tier system, the role of the board is divided into a board of directors and board of commissioners. Indonesia adheres to a two-tier system as it has been regulated in Law Number 40 Year 2007 regarding Limited Liability Corporate stating that the components of the corporate consists of a general meeting of shareholders, board of directors and board of commissioners.

Regarding the board directors, gender diversity is still a debate among researchers. This is because of physiological differences that can lead to differences in decision-making. Mishra and Jhunjhunwala (2013) concluded that the women believe to be more intuitive, able to work multitasking, and are better at building relationships. Meanwhile, men tend to be more focused on the task and make decisions based on the information and procedures. Croson and Gneezy (2009) found that women can choose to change the decision depends on conditions deemed appropriate in decision-making while men adopted a policy in the decision-making despite of the different conditions. In addition, Glover et al. (2002) concluded that women made ethical choices than men.

The board diversity in the context of a discussion of gender remains unresolved because of a difference in the findings. The findings Findings of previous studies showed a positive influence on the presence of women in the corporate's board with earning quality (Dimitrova, 2017; Kreder, 2016; Srinidhi, Gul and Tsui, 2011). However, other studies also failed to find a link between the board diversity with the earnings quality (Nasution and Jonnergard, 2016; Hoang, Abeysekera, and Ma, 2015; Ye, Zhang and Rezaee, 2010).

Executive compensation is remuneration to executives in order to ensure that executives remain motivated so it ultimately improves corporate performance (Gelen, 2016). Remuneration meant by Gelen is wages, bonuses, and even stock options granted to the board of the corporate. Scott (2015) in his book explains that executive compensation is:

"An agency contract between the firm and its manager that attempts to align the interests of owners and managers by basing the manager's compensation on one or more measures of the manager's performance in operating the firm."

Based on these statements, executive compensation acts to balance the interests of managers and shareholders. The compensation can improve the performance of managers in operating corporates that benefit large corporations. Of course it impacts on the earnings quality because when corporate get a lot of earnings, it means earnings quality will high.

The researchers earlier found the positive relationship between executive compensation with the earnings quality (Rasheed, Kaynat, and Nawaz, 2016; Paz and Griffin, 2016; Paz and Zaidi, 2014; Tanomi, 2012). However, these findings differ from research conducted by Safari, Cooper, and Dellaportas (2016) and Gelen (2016) who found a negative effect on executive compensation to the earnings quality. Then Sosiawan (2012) failed to find a relationship between executive compensation with the earnings quality.

Debt covenants is the limitation of the loan agreement between the corporate and creditors (Gibson, 2013). Debt covenants intend to protect the interests of the corporate and its creditors. This is because the creditors do not have direct roles in the corporate's decision, thus it arises the chance of the violation of debt covenants (Higgins, Koski, and Mitton, 2016).

Kieso, Weygandt, Warfield (2012) explains that the debt covenants sometimes limit the amount of debt held by the corporate. As reported by *www.investopedia.com*, the impact of debt covenants has positive and negative for the corporate. The researchers earlier found a link debt covenants and the earnings quality had a negative influence outcome (Spiceland, Yang and Zhang, 2015; Ummah and Subroto, 2013; Ghosh and Moon, 2010). However, the research differ from research conducted by Tanomi (2012) who found that the debt covenants and earnings quality did not have any significant effect.

Investment opportunity set is a growth opportunity for corporates that depend on the choice of the corporate's investment in the future (Wulansari, 2013). Nurhanifah and Jaya (2014) explains that the investment opportunity demonstrates the corporate's ability to generate earnings, so it can be a 'signal', according to Signal Theory, at market reactions that affects the quality of corporate earnings. Kallapur and Trombeley (2001) suggest proxies to measure the investment opportunity set which can be divided into three: price, investments, and variant. Research conducted by Nurhanifah and Jaya (2015) and also Warianto and Rusiti (2014) showed that the investment opportunity set had negatively affect the earnings quality. Whereas these findings differ from Novianti's research (2012) which revealed that the investment opportunity set had positive effect on the earnings quality. Meanwhile, research conducted by the Son and Subowo (2016) argued that the investment opportunity set did not have any influence on the earnings quality.

Findings departing from those literature reviews mentioned earlier, this research is conducted because the earnings quality can contribute to the assessment of the stakeholders in the decision-making sustainability cooperation. It is because the earnings of the corporate as one of the things that becomes important consideration points for stakeholders in decision-making process. In addition, the earnings quality can serve as the liaison between the corporate and the stakeholders. Management has an interest to generate earnings for the sustainability of the corporate, but the stakeholders would like to see the economic condition of the actual corporate's decision-making working relationship accordance with the signal theory. Thus, corporates are encouraged to improve corporate performance so it can berated well by the stakeholders through the earnings quality.

In addition, earnings quality can reduce agency costs so it enhances business activity. When corporates pay attention to the earnings quality as important information for stakeholders, the management can make a decision more carefully and provide accurate earnings information. It has benefit for stakeholders in making decision effectively. Earnings quality is also influenced by many internal factors which are the board diversity (Hoang, Abeysekera, and Ma, 2015; Panzer and Muller, 2015; Srinidhi, Gul and Tsui, 2011), executive compensation (Rasheed, Kaynat, and Nawaz, 2016; Safari, Cooper, and Dellaportas, 2016; Sosiowan, 2012), debt covenants (Spiceland, Yang and Zhang, 2015;

Ummah and Subroto, 2013; Tanomi, 2012), and the investment opportunity set (Men and Subowo, 2016; Warianto and Rusiti, 2014; Novianti, 2012).

Diversity of the boardthat is focused on the gender aspect is meant on the number of women in the board of directors and commissioners. Those components are chosen because Indonesia adheres to a two tier system where there is a separation between directors and commissioners, so those components can be measured. Their psychological differences between women and men in decision-making is shown in presenting earnings information. Nevertheless, the earnings information can affect the quality of earnings. Diversity of the board in a gender perspective is expected to be a bridge between the interests of management and shareholders.

If the corporate has women members in the board of directors and commissioners,in making policies, the corporate can get another perspectives. It affects accurately on the presentation of earnings, so it can increase the quality of earnings. However, not many corporates allow the presence of women in their board of directors. The fact was so contrast as findings of previous studies found a positive influence on the corporate's board presence of women with earnings quality (Dimitrova, 2017; Kreder, 2016; Srinidhi, Gul and Tsui, 2011). However, other studies also failed to find a link between the board diversity with the earnings quality (Nasution and Jonnergard, 2016; Hoang, Abeysekera, and Ma, 2015; Ye, Zhang and Rezaee, 2010).

FindingsExecutive compensation is the amount of compensation awarded by the corporate in order to motivate the performance of management to act in accordance with the corporate's goals taken into account the interests of stakeholders. This is done to balance the interests of management and stakeholders. Executive compensation has the potential for increasing earnings, and thus it has an impact on the quality of corporate earnings. The greater the compensation given to executives, the better the performance of managers runs operation of the corporate. Performance of managers can increase the earnings and they are expected to work according to the expectations of stakeholders. Thus, it affects positively on the quality of earnings.

Previous research found the positive relationship between executive compensation with the earnings quality (Rasheed, Kaynat, and Nawaz, 2016; Paz and Griffin, 2016; Paz and Zaidi, 2014; Tanomi, 2012). However, these findings differ from research Safari, Cooper, and Dellaportas (2016) and Gelen (2016) who found a negative effect on executive compensation to the earnings quality. In addition, Sosiawan (2012) failed to find a relationship between executive compensation with the earnings quality.

findingsDebt covenants set the boundaries between corporates and creditors in a debt covenant compliance. It can be seen from debt to equity ratio. The level of debt to equity ratio are high so it can cause the manager took measures to avoid breaching the debt. As a result, earnings quality is low and it does not reach the expectation of stakeholders.

The researchers earlier found a link debt covenants and the earnings quality has a negative influence outcome (Spiceland, Yang and Zhang, 2015; Ummah and Subroto, 2013; Ghosh and Moon, 2010). However, the research differs from research in Tanomi (2012) who found that the debt covenants and earnings quality didnot have any significant effect.

The investment opportunity set shows an alternative so it allows corporates to determine a set of investment that can be used by the corporate. When corporates have the opportunity to make an investment in the future, the market value of the corporate's assets is highly valued by stakeholders of the corporate. It gives the 'signals' regarding the quality of corporate earnings. In this research, it was measured by proxy.

Research conducted by Novianti (2012) revealed that the investment opportunity set has a positive effect on the quality. Meanwhile the findings differ from Nurhanifah and Jaya (2014) and also Warianto and Rusiti (2014) showed that the investment opportunity set negatively affect the earnings quality and yet research conducted by the Son and Subowo (2016) showed that the investment opportunity set did not have any influence on the earnings quality.

By considering those factors, the writers propose the formulation of hypotheses to be tested in this research:

H1: Board diversity has positive effect on the earnings quality.

H2: Executive compensation has positive effect on the earnings quality.

H3: Debt covenants has negative effect on the earnings quality.

H4: Investment opportunity set has positive effect on the earnings quality.

3. Methods

3.1. Population and sample

The population used in this research was industrial manufacturing corporates listed on the Stock Exchange during the years 2012-2016. The research used purposive sampling method in sample selection method which data was selected and required for this research.

The findings of purposive sampling showed that only 83 corporates meet the criteria. After testing the outlier, there are 18 corporates that have a value beyond the criteria so the sample reduced to 65 corporates after deducting 18 corporates. The amount of observable data is multiplied by years of research observations which is 5 years ranged from 2012 to 2016 so the total observation in this research were 325 observations.

3.2. Operationalization variable

3.2.1. Dependent variable

Earnings quality have the understanding level of earnings that describe the actual economic consequences of a business activity (Khotimah, 2016). When measuring the performance of the corporate, the earnings quality is based on the relevance of earnings (Subramanyam, 2017). This research uses a proxy discretionary accruals with Jones modified model for the variable earnings quality. Researchers previously as Julius, Purwohedi, and Warokka (2017), Warianto and Rusiti (2014), Novianti (2012), Tanomi (2012) are also used.

The first phase calculates the total accrued using the following formula:

$$TACit = NIit - CFOit$$

Information:

TACit: Total accruals for firm *i* in period *t*

NIit: Operating net income (Net Operating Income) firm *i* in period *t*

CFOit: Operating cash flow the corporate *i* in period *t*

The second stage of calculating non-discretionary accruals using the following formula:

$$TACit/TAit-1 = \alpha 0 + \beta 1\ (1/TAit-1) + \beta 2\ ((\Delta REVit - \Delta RECit)/TAit-1) + \beta 3\ (PPEit/TAit-1) + \epsilon$$

Then the coefficients α and β findings fed back into the formula to find non-discretionary accruals following:

$$NDACit = \alpha 0 + \beta 1\ (1/TAit-1) + \beta 2\ (\Delta REVit - \Delta RECit)/TAit-1) + \beta 3\ (PPEit/TAit-1)$$

Information:

NDACit: Non-discretionary accruals for firm *i* in period

TAit-1: Total assets of the corporate *i* in period *t*–1

ΔREVit: Revenue firm *i* in year *t* minus revenue *t*–1

ΔRECit: Accounts receivable firm *i* in year *t* minus accounts receivable year *t*–1

PPEit: Property, Plant, and Equipment corporate *i* in year *t*

ϵ: Error

Then, it can calculate the value of discretionary accruals by the following formula:

$$DACit = TACit/TAit{-}1 - NDACit$$

Information:

DACit: Discretionary accruals for firm *i* in period *t*

TACit: Total accruals for firm *i* in period *t*

TAi, *t*–1: Total assets of the corporate *i* in period *t*–1

NDACit: Non-discretionary Accruals firm *i* in period *t*

3.2.2. Independent variable

Board diversity can be seen by the demographic attributes of one gender (Hoang, Abeysekara, and Ma, 2017). Moreover, as described by Srinidhi, Gul and Tsui (2011), it was found that gender diversity was one measure of the board diversity contributed in terms of ability, perspective, and experience on the board of the corporate. This research uses the ratio to calculate board diversity. This is supported by research conducted by Panzer and Muller (2015).

$$GDV = \text{Number of Women Board of the Corporate}/\text{The Total Number of Corporate Boards}$$

According to Paz and Grifin (2014), executive compensation is a payment by the owner of the corporate to executives who manage the business. Executive compensation referred to Gelen (2016) affirmed that the kind of remuneration to ensure that the executive can stay motivatedwhich in turn it is expected to improve the corporate's performance. This research uses the natural log of the total cash executive compensation disclosed in the corporate's annual report. This measurement is selected as the previous research conducted by Rasheed, Kaynat, and Nawaz (2016) and Sosiawan (2012) used it in the measurement of executive compensation.

$$KMK = \text{Ln (Total Compensation Disclosed)}$$

Debt covenants is the limitation of the loan agreement between the corporate and creditors (Gibson, 2013). Debt covenants serve as a wayto ensure the corporate can meet the requirements of the debt contract with the creditors (Herath, 2010). The research uses debt to equity ratio (DER) as a proxy. This is supported by research conducted by Tanomi (2012) and Ghosh along with Moon (2010).

DER = Total Debt/Total Equity

Investment opportunities set aims isthe value of the corporate asthe main goal in which it depends on corporate spending in the future (Myers, 1977). Kallapur and Trombeley (2001) states that growing corporates can be seen from the stock price which the market assesess growth of the corporate based on assets value greater than the book value. Nurhanifah and Jaya (2014) explains that the level of investment opportunity is reflected on the quality of the information presented in the corporate's financial statements. This research uses measurements Market to Book Value Assets Ratio (MBVA). This is in line with previous research, the Son and Subowo (2016), Nurhanifah and Jaya (2014), Wulansari (2012),

MBVA = Total Assets – Total Equity + (Shares Outstanding Shares × Closing price)/ Total Assets

3.3. Data collection

This research used secondary data, amount of women members in corporate board to variable board diversity, the amount of compensation for members of the board of the corporate for variable executive compensation, total liabilities and equity for the variable debt covenants, as well as total assets, total equity, the number of shares outstanding and a closing price shares of the corporate for the investment opportunity set variables. The source data was taken from financial statements or annual reports obtained from the official website of Indonesia Stock Exchange (www.idx.co.id) and any related supporting source taken from the literature books, journals, articles, and Internet sites.

3.4. Data analysis method

In analyzing secondary data, it required data processing using data analysis techniques. This research used panel data regression analysis in data processing. Panel data regression analysis is a combination of cross section data and time series data, where the unit of the same cross section measured at different times (Ghozali, 2013).

The research model used in this research are:

$$EQ = \alpha + \beta 1GDVit + \beta 2KMKt + \beta 3DCOVit + \beta 4sIOSit + \epsilon$$

Where:

EQ: Earnings Quality

GDV: Board Diversity

KMK: Executive Compensation

DCOV: Debt Covenant

IOS: Investment Opportunity Set

ϵ: Error

TABLE 1: Descriptive Statistics Analysis Findings.

	EQ	GDV	KMK	DCOV	IOS
Mean	0.050993	0.096884	23.00137	1.016720	2.139351
Maximum	0.293984	0.400000	26.25468	6.340625	29.42868
Minimum	–0.188915	0.000000	19.84497	–4.119820	0.273140
Std. Dev.	0.081710	0.106091	1.375685	1.018972	3.086701
Observations	325	325	325	325	325

Note: EQ = *discretionary accruals* Jones modified model; GDV = Board Diversity, the number of women divided by the total number of corporate boards; KMK = executive compensation, compensation natural logs; DCOV = debt covenants, debt to equity ratio; IOS = set of investment opportunities, market to book value assets ratio.

Source: Author's own work.

4. Result

4.1. Descriptive result

In this research, from the findings of the descriptive analysis, earnings quality (EQ) reached at the minimum value,findings -0.188915, while the maximum value of EQ reached at 0.293984. The minimum value of EQ was found from PT Multi Prima Sejahtera Tbk in 2015 which indicated the management of a policy of earnings declined. Meanwhile, the maximum value is owned by PT Indomobil Sukses Internasional Tbk in 2012 which shows its management chose a policy to increase earnings. From the sample, only 74% corporates have earnings management in order to improve earnings performance. The mean value of the EQ variable is with standard deviation of 0.050993 and 0.081710. From this result, we can conclude that standard deviation was greater than mean value. It also implied that data point was quite far from the mean value and the variation of extensive sample.

Diversity in the board of corporate were obtained in minimum value of value of 0.000000, while the maximum value reached 0.400000. The minimum value is obtained from 33 corporates. Meanwhile, the maximum value is owned by PT Yanaprima Hastapersada Tbk in 2016. From the total sample, diversity reached 54%. The average value obtained from this variable is with the standard deviation 0.096884 and 0.106091. These findings findingsshowed that the data points was quite far from the mean value and large sample variation for the mean value was lower than the standard deviation.

Variable of executive compensation showed that the smallest value reached 19.84497, while the greatest value was 26.25468. The smallest value was obtained from PT Siwani Makmur Tbk in 2015. Meanwhile, the largest value was obtained from PT Japfa Comfeed Indonesia Tbk in 2016. The average value obtained from this variable was 23.00137 and the standard deviation was1.375685. The findings showed findingsthat the mean value was greater than the standard deviation, indicating a close enough data points from the average value and diversity of samples was quite narrow.

Debt covenants in this research reached the smallest value at –4.119820, while the largest value was 6.340625, taken from the sample. The smallest value was owned by PT Siwani Makmur Tbk in 2012. Meanwhile, the greatest value was owned by PT Indal Aluminum Industry Tbk in 2014. The mean value of this variable was withthe standard deviation 1.016720 and 1.018972. From the findings, we can concludefindings that the data points was far from the average value and diversity in sample showed mean value less than standard deviation.

In this research, the investment opportunity set had a minimum value, indicated from the findings of descriptive statistical analysis was 0.273140 while the maximum value was 29.42868. From the data, PT KMI Wire and Cable Tbk was a corporate that owned the minimum value from the sample in 2012.Meanwhile, the maximum value was owned by PT Nippon Indosari Corpindo Tbk in 2012. The average value of the standard deviation was 2.139351 and 3.086701. Thus, it can be concluded that the data points wasquite far from the average value and large sample variation for the mean value obtained waslower than the standard deviation.

4.2. Panel data analysis

Before using panel data analysis, this research determine the basic model of panel data analysis. In this research, the writersuse Chow and Hausman test for determining basic model of panel data analysis that existed in Appendix 1 and Appendix 2. Since both of the test (Chow test and Hausman test result) in the fixed effect model, it did not need further testing. Therefore, the basic model used in this research was the fixed effect.

After the basic model selected, this research must have pass the classical assumption test such as normality test, multicolinearity test, autocorrelation test, and heteroscedasticity test. This research had passed all of the classical assumption test as seen on Appendix 3 until Appendix 6. So, this research can go to the next step for making equation of panel data analysis.

Equation of this panel data analysis is:

$$DAit = 0.007581 - 0.348606\ GDVit + 0.003469\ KMKit - 0.015528\ DCOVit + 0.006159\ IOSit + \epsilon it$$

The regression analysis of panel data in Table 2 showed the board diversity variables had a significance value of 0.0013 and was less than the significance level of 0.05, so it can be concluded that the board diversity had influence with earnings management and wasalso related to the earnings quality. Seen from a comparison of the value *t Table* and *t statistic*, which is 3.248128 > 1.967404, *t-statistic* was less than *t-table* and was in the negative direction. Thus, the board diversity hada negative correlation with earnings management. The result of this negative relationship regarded with the earnings quality as the board diversity can reduce earnings management andthe quality of which will be reflected positive earnings. With this reason, it can be concluded that H1 is accepted.

Based on the findingsfindings in Table 2, the variable executive compensation had a significance level of 0.8426 which exceeded the significance level of 0.05. It indicated that there wasno significant relationship between executive compensation and earnings management. It also can be concluded that there was no significant correlation with the earnings quality. The value of *t-statistics* generated by 0.198776 was smaller than *t-table* obtained 1.967404. Thus, the test findings werenot accepted hypothesis H2.

In Table 2, variable debt covenants (DCOV) acquired a significance value of 0.0886 and exceeded 0.05, it can be concluded that there was no significant effect resulting from the relationship between debt covenants andearnings management which implied the absence of linkage with the earnings quality, Meanwhile, the value of debt covenants *t-statistic* was 1.709361 lower than *t-table* amounted to 1.967404 in the negative direction. Therefore, the hypothesis H3 was not accepted.

However, considering the social science research, it had a tolerance limit of up to 10% significance level (0.10) with *t-statistic* 1.709361 > 1.649629, then the findingsof the research had a significant effect. The findingsof the *t*-statistic was in negative direction and it meant that the debt covenants did not make any significant effect on lower management earningswhich implied on the quality of earnings. This madethe H3 still was not accepted because of different directions with the proposed hypothesis.

In the variable investment opportunity set (IOS) in Table 2, it had a significance level of 0.0357 or less than 0.05 which means that there wasa link to the investment opportunity set significant earnings management and impact on a significant relationship with the earnings quality. Viewed from the value of *t-statistics,* it obtained by 2.111500 and was greater than *t-table* amounted to 1.967404 in a positive direction. It showed that the investment opportunity set motivates increased earnings management, so the quality of earnings were low and it implied that H4 hypothesis was acceptable.

Table 2: Panel Data Regression Analysis.

Variables	Coefficient	T-Statistic	Prob.
C	0.007581	0.018791	0.9850
GDV	–0.348606	–3.248128	0.0013*
KMK	0.003469	0.198776	0.8426
DCOV	–0.015528	–1.709361	0.0886**
IOS	0.006159	2.111500	0.0357*
R^2	0.310567	*F*-statistic	1.695875
Adjusted R^2	0.127436	Prob (*F*-statistic)	0.001841

Note: *Significance at the 0.05 level; **significance at the 0.10 level; the number of observations 325; EQ = discretionary accruals Jones modified model; GDV = board diversity, the number of women divided by the total number of corporate boards; KMK = executive compensation, compensation natural logs; DCOV = debt covenants, debt to equity ratio; IOS = set of investment opportunities, market to book value assets ratio.

Source: Author's own work.

4.3. Discussion

4.3.1. Testing hypothesis 1

Based on agency theory, Diversity in the board of corporate can reduce agency costs. This is because of the board diversity can establish control and has better control in a corporate (Hoang, Abeysekara, and Ma, 2017). The board diversity in this research is the diversity of board level in terms of gender. Their psychological differences between men and women at the level of the corporate's board can influence decision-making, so the presentation of earnings information may be different. In making a choice, women consider and are more ethical than men (Glover et al., 2002). Therefore, the earnings information becomes closer to the real state because of ethical decisions are made and have good earnings quality.

The findingsof this research indicated that board diversity had positive influence on the earnings quality. It also indicated that the manufacturing industry had realized the importance of board diversity in a gender perspective in order to create good corporate governance. Diversity in board level can make the corporate more dynamic and more ethical in decision-making as obtained from various views.

The findings were consistent with the findings of research conducted by Panzer and Muller (2015) as well as research Srinidhi, Gul and Tsui (2011). Both studies stated that Board Diversity in a gender perspective had a positive impact on the earnings quality. However, the findingsof this research did not support the findingsfindingsof research conducted by Hoang, Abeysekara, and Ma (2015) who did not manage to find the influence of board diversity in gender perspective of the earnings quality. That was because the capital market conditions was low in custody Vietnamese investors.

4.3.2. Testing hypothesis 2 (H2)

Executive compensation was based on the theory of agency into a contract for the agent and the principal in order to fulfill the different needs that occurred (Scott, 2015). Therefore, administration of executive compensation can push the performance of the executive to give a reliable income in accordance with the expectations of stakeholders.

The findings of hypothesis testing can not prove the relationship with the executive compensation earnings quality. Thiswas due to the upper levels of the corporate, so the compensation was not their purpose in doing earnings management actions that impact on the earnings quality. As the needs theory introduced byAbraham Mashlow, at the level of top executives, it prioritize self-actualization which drives the challenges in the corporate of their performance.

The findings of this research were also consistent with research conducted by Sosiawan (2012), which failed to find a relationship between executive compensation on earnings management and it proved it did not have anyinfluential impact on the earnings quality. This was because it was not always compensation given to executives asthe primary motivation in making earnings management policies. The corporate's executives or board members need to analyze the risks and opportunities of earning management and the internal control of the corporate itself. Thus, corporates should evaluate the effectiveness of the administration of executive compensation.

However, this research is different from the research that has been done and provide evidence that executive compensation has positive influence on the earnings quality (Rashed, Khaynat, and Nawaz, 2016; Safari, Cooper, and Dellaportas, 2016; Tanomi, 2012). Itis because the executive has a goal to improve the earnings quality and to manage the interests of executives and stakeholders. The corporate also make a contract management compensation to restrict the actions for the benefit of the best in the business.

4.3.3. Testing hypothesis 3 (H3)

In the agency theory, it explains that the debt covenants is an agency cost of debt (Main, 2002). Debt covenants overcome the problems of divergence of interests between the corporate and its stakeholders, especially its creditors. This is because of the positive and negative side of debt covenants.

The findings of this research hypothesis testing had different findings from what has been described earlier researchers. From hypothesis testing, it indicated that the effect of the debt covenants had positive effect on the earnings quality at a significance level of 10% with each increase in the debt covenants. It can reduce earnings management action. This made the income statement was presented reliably and the earnings quality increases. These findings can be compared with the findings of research conducted by Zein (2016) who studied the effect of liquidity on the earnings quality. Liquidity is one of the indicators of debt covenants. Viewed from the characteristics of the data, in general the findings are greater than the reverse direction of the findings. Therefore, it can be said that the manufacturing sector was quite cautious in making earnings management actions related to debt covenants. The corporate strived to maintain the trust of stakeholders, especially creditors, thereby maintaining the best possible quality of corporate earnings.

However, the findings were not in line with the research that has been done by Spiceland, Yang and Zhang (2015) as well as the Ummah and Broto (2015). The research explained that the debt covenants had a negative influence on the earnings quality due to management actions that avoid breaching the debt agreement. The existence of limited debt covenants could reduce the earnings quality.

4.3.4. Testing hypothesis 4 (H4)

Investment opportunity set is closely related to the theory of signals. Investment opportunity set reflects that the corporate has an investment opportunity in the future because the value of corporate assets valued by the market, so it can be a signal to all stakeholders.

Based on the findings of hypothesis testing, the investment opportunity set had a negative effect on the earnings quality. Corporates with high investment opportunity set of earnings management tended to take action, so that the quality of corporate earnings was low. These findings were consistent with research conducted by Warianto and Rusiti (2014) and Nurhanifah and Jaya (2014).

Set the investment opportunity created by the result of supply and demand of investors as one of the stakeholders in the capital markets on the value of the assets owned by the corporate. Corporates try to attract investors by taking management action earnings, in order to assess the market high-asset corporate and the corporate has an investment alternative in the future. This is because investors in the capital market are dynamic and do not have fixed roles as funding sources like debt. It can be concluded that investors do not get fooled by not symmetrical with knowledge management actions owned by the investor.

Meanwhile, the findings were not consistent with the findings of research conducted by Novianti (2012). It showed that the investment opportunity set had a positive influence on the earnings quality. Investment opportunity set was considered crucial by the corporate because it was considered an alternative investment market and into the future, so the corporate did lower earnings management. Thus, the quality of which reflected in the corporate earnings was high.

Furthermore, this research was also inconsistent with the findings of the Son and Subowo (2016) which they were not able to find the effect of the investment opportunity set against the earnings quality. This was due to the possible influence of the value of total assets and other internal factors unobservable principal unknown whether the action taken has met the expectations of principal.

5. Conclusion

This research was conducted to prove whether the variable board diversity, executive compensation, debt covenants, and the investment opportunity set influence on the earnings quality.

Looking at the findings of hypothesis testing, reference the corporate, and the goal of this research itself, this research can be concluded in some of the following:

1. Board diversity has positive effect on the earnings quality. This occurs because of the psychological differences between women and men in decision-making.

Diversity at board level can reduce earnings management action in the corporate, so the quality of the corporate's earnings high.

2. Executive compensation does not affect the earnings quality. This is because the compensation is assumed that it does not motivate the corporate's board members to act earnings management, so it does not impact on the earnings quality.

3. Debt covenants have positive effect on the earnings quality at 10% significance. It shows that the debt covenants motivate to reduce earnings management actions that have an impact on the increase in the quality of corporate earnings. However, these findings reject the hypothesis.

4. Investment opportunities set has negatively affects the earnings quality. This occurs because the investment opportunity set motivates management to manage earnings which implies low earnings quality of the corporate.

For future research, population should not be in manufacturing sector but on the other sectors listed in Indonesia Stock Exchange or by a particular index in order to enrich the broader scope of research. Then, further research is recommended to use a proxy for other variables that the findings of further research can provide mixed findings and serves a comparison. For corporates diversity at the level of the corporate's board, it should be sufficient to provide varying views in decision-making presentation of earnings. Later, the corporate also needs to evaluate the administration of executive compensation based on the findings of this research although it does not have a significant effect on the earnings quality. For stakeholders given the findings of this research, they need to be careful in assessing the earnings quality Based on the investment opportunity set for the findings of this research, it showed a negative relationship where low earnings quality. Referring to the findings of this research that the positive influence between board diversity and earnings quality should be considered by the government as the regulator to issue rules regarding board diversity. As regulated inthe United Kingdom, it has created special rules in The UK Corporate Governance Code. Arranged board diversity can create a more dynamic business environment and corporate disclosure tends to better reflect the corporate as it should be.

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Appendix A

A.1. Based model

Chow test

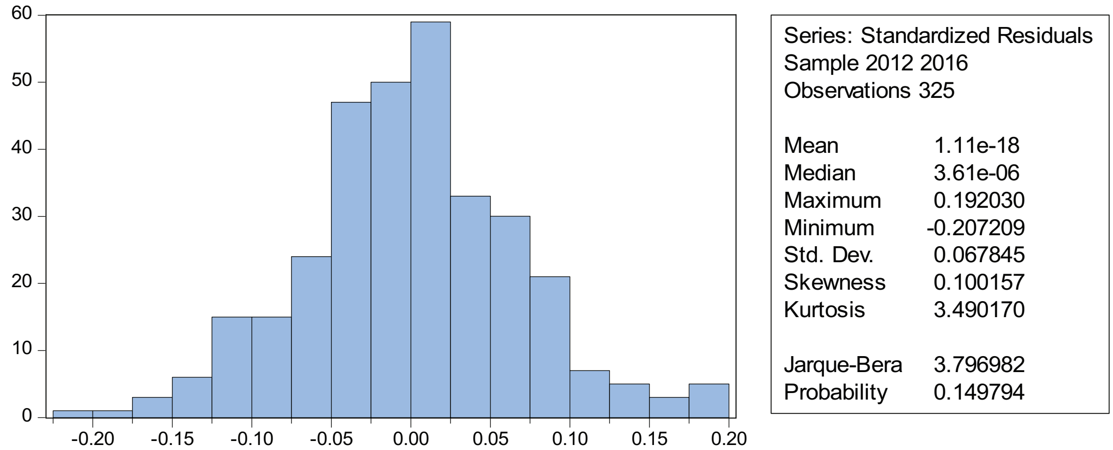
Redundant Fixed Effects Tests			
Equation: FIXED			
Test cross-section fixed effects			
Effects Test	**Statistic**	**d.f.**	**Prob.**
Cross-section F	1.616247	(64,256)	0.0050
Cross-section Chi-square	110.295002	64	0.0003
Source: Eviews 8			

Hausman test

Correlated Random Effects - Hausman Test			
Equation: Untitled			
Test cross-section random effects			
Test Summary	**Chi-Sq. Statistic**	**Chi-Sq. d.f.**	**Prob.**
Cross-section random	13.280383	4	0.0100
Source: Eviews 8			

A.2. Classical assumption

Normality Test



Source: Eviews 8

Multicolinearity test

	GDV	KMK	DCOV	IOS
GDV	1.000000			
KMK	–0.087029	1.000000		
DCOV	0.004553	0.090009	1.000000	
IOS	0.113492	0.269722	0.044257	1.000000
Source: Eviews 8				

Autocorelation test

Akaike info criterion	–2.121640
Schwarz criterion	–1.318304
Hannan–Quinn criterion	–1.801027
Durbin–Watson stat	2.378518
Source: Eviews 8	

Heteroscedasticity test

Variable	Prob.
C	0.4054
GDV	0.5971
KMK	0.5106
DCOV	0.0824
IOS	0.0566
Source: Eviews 8	