Does Sustainability Report Moderate the Effect of Financial Performance on Investor Reaction?
Evidence of Indonesian Listed Firms

Dody Hapsoro\textsuperscript{a} and Zul Fahmi Husain\textsuperscript{b}
\textsuperscript{a} STIE YKPN Yogyakarta
dodyhapsoro@gmail.com
\textsuperscript{b} STIE YKPN Yogyakarta
zulfahmihusain.zh@gmail.com

ABSTRACT

The aim of this research is to test the effect of financial performance to investor reaction with a sustainability report as a moderating variable. The financial performance was measured by five categories. Sustainability report was measured by a sustainability report disclosure index and investor reaction was measured by cumulative abnormal return. The population of this research is all firms listed in the Indonesian Stock Exchange. The research samples are firms which disclose Global Reporting Initiative G4 in a row from 2013-2016 by using purposive sampling. The data analysis method used in this research is the PLS method using WarpPLS 4.0 application. The test result showed that DER and EPS have no effect on the investor reaction. However, ROE, CR, and TAT have a positive effect on the investor reaction. Meanwhile, sustainability report moderate ROE, CR, and DER to investor reaction, but not moderate the effect of TAT and EPS to investor reaction.

\textit{JEL Classifications: M410, M140, Q560}

\textit{Keywords: return on equity; current ratio; total asset turnover; debt to equity ratio; earnings per share; sustainability report; cumulative abnormal return}
I. INTRODUCTION

Currently, many firms in Indonesia are starting to grow and most firms are still focusing on the pursuit of profit. Elkington (1997) said that now business goals are no longer just for profit, but also being responsible to the people and the planet. These three things are known as the triple bottom line or the Three P's. Switching orientation to these three aspects is a management effort to achieve sustainable development. Firms are required to provide transparent information on financial governance as well as the firm's social and environmental activities, such as firm voluntary sustainability reports or often called sustainability reports. For the firm, the sustainability report is one of the instruments that can be used to communicate with stakeholders in the effort of applying the concept of sustainability.

The preparation of a sustainability report is a new breakthrough created by regulators in responding to the public's or stakeholder's wishes towards a firm's concerns about the business processes that are undertaken in relation to the social responsibility and safety of the surrounding environment and has become one of the considerations of firms that have an important role like financial statements. In addition, the disclosure of the sustainability report is also proof of the firm's commitment to the environment and social effects that are useful for investors in making investment decisions.

Darwin (2004) stated that sustainability reports can be grouped into three categories called triple bottom line aspects, namely economic performance, environmental performance, and social performance. In addition, there is also a reporting standard from the Global Reporting Initiative (GRI) in the preparation of sustainability reports. GRI performance indicators are economic performance indicators, environmental indicators, human rights indicators, community performance indicators, and product responsibility performance indicators.

According to Elkington (1997), the firm has responsibility for both positive and negative effects on the economic, social, and environmental aspects. Firms need to build good relationships with all stakeholders, not just maintain relationships with shareholders only and provide social assistance, but firms must also maintain relationships with consumers, government, and the wider community.

The Global Reporting Initiative (GRI) as the sustainability report authority in the world has developed a sustainability report framework. The latest version of the sustainability reporting guidance is called GRI G4. In Indonesia, the disclosure of sustainability report is still voluntary, so there are not many firms that reveal a sustainability report. Nevertheless, the number of firms that disclose sustainability reports from year to year has not decreased, but it has been increasing due to the increasing public demand for the firm's role in providing information, both financial reports, and transparent and accountable sustainability reports.

In addition to sustainability reports, information on a firm's financial governance is also very important for stakeholders, especially investors in deciding to invest in the firm. To select investments that generate returns, investors need a variety of information as the basis for the decision. One of the information that can be used is information about the firm's financial performance. According to Sutrisno (2009), the firm's financial performance is an achievement that the firm achieved in a certain period that reflects the level of firm health. According to Jumingan (2006), financial performance is a description of the firm's financial condition in a certain period, both in terms of
fundraising and fund distribution, which is usually measured by capital adequacy, liquidity and profitability indicators.

For investors, information about the firm's financial performance can be used to consider decisions in investing in firms or looking for other alternatives. The better the firm's financial performance, the firm's value will be higher. High firm values can also reflect high shareholder wealth (Brigham and Gapenski, 1996).

One common way of assessing a firm is to use fundamental analysis. The fundamental analysis provides information relating to the condition of the firm generally shown in the financial statements. In the financial statements, there are some fundamental information, namely financial ratios. Through financial ratios, investors can first analyze the condition of the firm before making an investment, so that in the end they will get a profit (return).

According to Ang (1997), financial ratios are grouped into five, namely the ratio of liquidity, solvency ratio, profitability ratio, activity ratio, and market ratio. These ratios can be used to explain the strengths and weaknesses of a firm's financial condition and can predict stock returns in the stock market.

The above explanation shows that in addition to financial performance, firms that disclose sustainability reports can also increase investor interest in investing. This is supported by Epstein and Friedman (1994) who argued that individual investors are attracted to the social information reported by the firm. Therefore, in this study, we included a sustainability report as a moderating variable that allegedly can moderate the effect of financial performance on investor reaction.

Several previous studies have been conducted to examine the effect of financial performance on investor reactions. Ayuni and Kurnia (2016) examined the effect of financial performance and dividend policy on investor reactions to automotive firms. The results show that the return on investment (ROI), debt to equity ratio (DER), earnings per share (EPS), and dividend policy (DPR) have a positive effect on investor reaction. Another study conducted by Safitri and Fidiana (2015) examined the effects of sustainability reports on financial performance and market performance. The results showed that the sustainability report has a positive effect on financial performance and market performance.

Based on the above explanation, this study aims to examine the effect of financial performance and dividend policy on investor reactions moderated by sustainability report variables. In this study, financial performance is proxied with five financial ratios.

II. THEORETICAL REVIEW and HYPOTHESES DEVELOPMENT

A. Theoretical Review

1. Stakeholder Theory

According to Freeman (1984), stakeholders are groups and individuals who can affect or be affected by the process of achieving the goals of an organization. The relationship between the firm and its stakeholders must be well maintained, especially those stakeholders who have a strong effect on the availability of resources used for the firm's operational activities, such as labor, the market for firm products, and investors (Ghozali and Chariri, 2007).
Stakeholder theory considers that stakeholder positions are powerful. Stakeholders are the main consideration in disclosing or not disclosing any information in the financial statements (Belkaoui, 2003). Stakeholder theory is reinforced by Donaldson and Preston (1995) who suggested that stakeholder theory extends organizational responsibility to all stakeholders, not just to investors or owners. Therefore, the survival of the organization depends on the support of stakeholders, so that the firm's activity is in order to seek such support.

2. **Legitimacy Theory**

Ghozali and Chariri (2007) stated that the underlying theory of legitimacy is the social contract that occurs between firms and communities in the area around the firm's operational activities. For the firm, the legitimacy of society to the firm becomes an important factor in maintaining and developing the firm's presence in the future. In other words, firms and societies must have the same perception or assumption that firm action is appropriate and in accordance with socially developed norms, values, beliefs and definitions (Suchman, 1995).

Carroll and Bucholtz (2003) stated that the development of the degree of awareness and civilization of society opens up opportunities for increased environmental health awareness. They further state that the legitimacy of the firm in the eyes of stakeholders can be done with the integrity of ethical conduct in the business as well as improving corporate social responsibility.

3. **Signaling Theory**

Ross (1977) stated that the firm executives who have better information about the firm than the prospective investors will be encouraged to convey the firm's information to increase its share price. According to Wolk (2001), the signaling theory explains the reason the firm presents information for the capital market. Signaling theory suggests that firms should signal to stakeholders through information contained in financial statements. Signaling theory can help reduce information asymmetry between the agents, principal, and other stakeholders.

According to Hartono (2008), information published as an announcement will provide a signal for investors in making investment decisions. If the announcement contains a positive value, it is expected the investor will react positively at the time the announcement is received by the market.

4. **Agency Theory**

The agency theory is a concept that explains the contractual relationship between principal and agent. The principal party is the party that mandates the agent to perform all activities on behalf of the principal in his capacity as a decision maker (Jensen and Meckling, 1976). Principals and agents are the main actors in the stock market and both have their own bargaining power in their role and position. The principal as the owner of the capital has access to the firm's internal information, while the agent as the actor in the firm’s operational practices has information about the operation and performance of the firm which is real and comprehensive (Ayu, 2012).
Putri and Nasir (2006) explained that managers are obliged to provide information about the condition of the firm to the owner of capital as a manifestation of its responsibility for the management of the firm, although the information submitted sometimes is not in accordance with the actual firm conditions, so it can trigger agency conflicts. Under such conditions, it is known as asymmetric information or information asymmetry.

5. Definition of Sustainability

The concept of sustainability according to Sperling and Szekely (2005) is a way of building a balance between economic, social, and ecological goals in society. One of the most commonly used approaches for measuring firm sustainability is through a triple bottom line approach. The concept of sustainability is expected to provide information to stakeholders in order to analyze changes in firm performance over time and can support a relative analysis to compare previously reported economic, social, and environmental performance information.

B. Hypotheses Development

1. The Effect of Return on Equity on Investor Reaction

According to Kashmir (2013), return on equity (ROE) is the ratio to measure the ratio of net income after tax with own capital. This ratio shows the efficiency of own capital use, so ROE is also often referred to as own capital rentability. The higher ROE indicates that the firm's performance is getting better and has an effect on rising stock prices. If stock prices increase, then the stock return will also increase, so that investors are increasingly interested to invest their capital in the firm.

Research on the effect of ROE on investor reactions has been done by several researchers. Research by Cheng and Christiawan (2011) showed that ROE has a significant negative effect on abnormal return. However, in the research of Natarsyah (2000), Wulandari (2005), Limbong (2006), and Susilowati (2011) showed that ROE significantly had a positive effect on stock return. Based on the above description, a hypothesis can be formulated as follows:

\[ H_1: \text{Return on equity has a positive effect on investors' reaction.} \]

2. The Effect of Current Ratio on Investor Reaction

According to Kashmir (2013), the current ratio is a ratio to measure a firm's ability to pay short-term liabilities or debts that will be immediately collected at maturity. The current ratio is said to be good if the firm is able to meet its short-term debt and avoid liquidity problems. The better the firm in terms of short-term debt, the firm's value will increase. This attracts the attention of investors to invest their capital in the firm because if the value of the firm's stock increases, it will provide high stock returns for investors.

Research on the effect of the current ratio on investor reaction has been done by several researchers. The results from the study of Apriliastuti and Andayani (2015) stated that the current ratio has no significant effect on cumulative abnormal return. While
research conducted by Prihantini (2009) and Gejali and Satrio (2013) showed that the current ratio has a significantly positive effect on stock return. Based on the above description, a hypothesis can be formulated as follows:

H₂: Current ratio has a positive effect on investor reaction.

3. **The Effect of Total Asset Turnover on Investor Reaction**

According to Kashmir (2013), the ratio of total asset turnover indicates a firm's ability to use its assets to generate sales. The ratio of total asset turnover can be used to measure the firm's efficiency in managing the firm's assets used in supporting the sales activities. The higher the ratio of the total asset turnover, the more efficient the firm uses assets to increase sales, thus affecting the profit earned. The more profits the firm gains increase the investor's desire to invest. This illustrates the positive reaction of investors in responding to information about the ratio of total asset turnover.

Research on the effect of total asset turnover on investor reactions has been done by several researchers. The research results of Ariyanti (2016) and Wulansari and Handayani (2016) showed that total asset turnover had a negative and insignificant effect on stock return. While the results of research by Nuryana (2013) showed that total asset turnover also had a positive effect on stock return. Based on the above description, a hypothesis can be formulated as follows:

H₃: Total asset turnover has a positive effect on investors' reaction.

4. **The Effect of Debt to Equity Ratio on Investor Reaction**

According to Sawir (2000), debt to equity ratio (DER) is a ratio that describes the ratio of debt to equity in firm funding and shows the ability of own capital to meet all its obligations. In other words, this ratio serves to find out each rupiah own capital is used as a debt security. Own capital in the firm can be capital stock and retained earnings. In investing, investors will tend to invest their capital in firms that have high DER. With high debt, the firm tax will be reduced and the profits to be received by the firm increase. That's because the debt can be used as a tax deduction. If the profit is high, then the return will be obtained by investors will increase.

Research on the effect of DER on investor reactions has been done by several researchers. The research results of Yulindasari and Rharjo (2017) showed that DER negatively affects the market reaction. Similarly, the results of Anam (2003) showed that DER has no significant effect on stock returns. However, the results of Sparta (2000) showed that DER has a positive and significant effect on stock return. Based on the above description, a hypothesis can be formulated as follows:

H₄: Debt to equity ratio has a positive effect on the market reaction.

5. **The Effect of Earning Per Share on Investor Reaction**

According to Kashmir (2013), earnings per share (EPS) are the firm's ability to distribute profits earned to shareholders. The higher the firm's ability to distribute earnings to shareholders describes the firm's success in doing its business.
Research on the effect of EPS on investor reactions has been done by several researchers. The research results of Dodd and Chen (1996) and Wulandari (2005) showed that earnings per share have a positive and significant effect on stock returns. The results of Ayuni and Kurnia (2016) also showed that earnings per share have a positive and significant effect on investor reactions. Based on the above description, a hypothesis can be formulated as follows:

H₅: Earning per share has a positive effect on investors’ reaction.

6. **The Effect of Return on Equity on Investor Reaction with Sustainability Report as Moderation Variable**

Before investing, investors must pay attention to the information presented in the firm’s financial statements, one of which is the profitability of the firm. Profitability measured by using return on equity is one of the interesting aspects for investors to observe. In addition, investors also need to know other important information such as a disclosure sustainability report.

Sustainability report shows to stakeholders that the firm is not only profit-oriented but also pay attention to the environmental and social aspects of the firm in accordance with the concept of the triple bottom line. Sustainability report disclosure is expected to increase investor confidence in the firm so that investors are interested to invest their funds to the firm. The relevance of sustainability report disclosure with return on equity, i.e. higher return on equity plus the disclosure of sustainability reports, it will affect the increase of stock price and investor confidence to the firm, so that investor interest to invest their capital to the firm also increase.

The results of Jenawan and Juniarti (2015) showed that the disclosure of sustainability report does not affect the response of investors. Indra and Hananto (2013) studies showed that the sustainability report has no significant effect on abnormal return. This is different from Adhima (2012) study which showed that the disclosure of sustainability report measured using Sustainability Report Disclosure Index (SRDI) has a positive and significant effect on the profitability of manufacturing firms listed on the BEI. Based on the above description, a hypothesis can be formulated as follows:

H₆: Sustainability report moderates the effect of return on equity on investor reactions.

7. **The Effect of Current Ratio on Investor Reaction with Sustainability Report as Moderation Variable**

Information on firm liquidity is an important factor for investors in considering investment decisions in a firm. One measure of liquidity is the current ratio. In addition, investors also need to consider other information in the form of non-financial information firm. In this case, the sustainability report firm. Sustainability report can be a positive thing for the firm because investors can give a positive response to the disclosure. This is reflected in the increasing return (earnings) and stock prices. The relevance of sustainability report disclosure with the current ratio, i.e. the better the firm insufficient short term debt, plus the disclosure of sustainability reports, then the value of the firm will also increase. This attracts investors to invest their capital in the firm.
The results of Jenawan and Juniarti (2015) showed that the disclosure of sustainability report does not affect the response of investors. However, the results of Muallifin and Priyadi (2016) showed that the disclosure of sustainability report has a positive effect on the current ratio. The results of Cheng and Christieawan (2011) showed that the disclosure of corporate social responsibility (CSR) has a positive and significant effect on the abnormal return. Based on the above description, a hypothesis can be formulated as follows:

H7: The sustainability report moderates the effect of current ratios on investor reactions.

8. The Effect of Total Asset Turnover on Investor Reaction with Sustainability Report as Moderation Variable

In making investments, investors also need to consider the ratio of firm activity, one of which can be measured by using the ratio of total asset turnover. The higher ratio of total asset turnover means the firm is able to maximize its assets well. In addition, investors also need to consider other information that the firm is able to address the environmental and social situation around the firm through the disclosure of sustainability reports. Sustainability report can increase investor confidence in firm efficiency in managing firm asset and managing environmental and social around the firm. The relevance of sustainability report disclosure with the ratio of total asset turnover, i.e. the better the firm in managing its assets plus the disclosure of sustainability report that can increase investor confidence in the efficiency of the firm in managing the surrounding environment and social, hence the investor interest in investing in the firm also increases.

Lesmana and Tarigan (2014) examined the effect of sustainability reporting on the financial performance of public firms in terms of asset management ratios. The result of the research shows that the sustainability report in the economic and environmental aspects has a negative and significant effect on the improvement of the asset management ratio, while the sustainability report in the social aspect has a positive and significant effect on the improvement of the asset management ratio. Based on the above description, a hypothesis can be formulated as follows:

H8: Sustainability report moderates the effect of total asset turnover on investor reactions.

9. The Effect of Debt to Equity Ratio on Investor Reaction with Sustainability Report as Moderation Variable

Before investing, investors also need to consider the level of firm solvency that can be measured using the debt to equity ratio. The higher debt to equity ratio (DER) means the firm's capital derived from debt will also be higher. However, with the debt the firm can increase its operating assets that can be optimized to increase the number of sales of the firm, so with the high number of sales will increase the firm's profit. With increasing debt, firm taxes can also decrease and the profits to be received by the firm will increase. The relevance of sustainability report disclosure with debt to equity ratio, i.e. the better the firm in maximizing profit from the capital derived from the debt, plus the disclosure sustainability report can increase investor confidence in the firm's efficiency in managing the surrounding environment and social effects, hence the interest of investors in investing in firms are also increasing.
The research results of Muallifin and Priyadi (2016) showed that sustainability report has no effect on financial performance measured by using ROE and DER. While the research results of Widianto (2011) showed that the disclosure of sustainability report has a positive and significant effect on debt to equity ratio (DER). Based on the above description, a hypothesis can be formulated as follows:

H9: Sustainability report moderates the effect of debt to equity ratio on investor reactions

**10. The Effect of Earning Per Share on Investor Reaction with Sustainability Report as Moderation Variable**

The firm's earnings per share are attractive to investors. But in making investments, investors also need to know other important information such as sustainability report disclosure. The disclosure of sustainability report by the firm to the public shows that so far the firm is not only seeking profit but also contributing to society and the environment. The disclosure of sustainability report is expected to increase investor confidence to the firm, so investor interest to invest also increases. The link between sustainability report and earnings per share in attracting investor interest is the higher the firm's ability to distribute its profit to shareholders, coupled with the disclosure of sustainability reports by the firm, investors are increasingly interested to invest.

The research results of Marwati and Yulianti (2015) showed that EPS has a negative and significant effect on the disclosure of sustainability reports. While Septiani (2013) examined the effect of firm characteristics on corporate social responsibility disclosure and its implications for earnings per share. The results showed that the area of voluntary disclosure had a positive effect on EPS. Based on the above description, a hypothesis can be formulated as follows:

H10: Sustainability report moderates the effect of earnings per share on investor reactions

**C. Research Model**

The research model is shown in Figure 1.
III. RESEARCH METHODOLOGY

A. Population and Sample

The population observed in this study are non-financial firms listed on the Indonesia Stock Exchange (BEI) in 2013-2016. The sample selection is done by using purposive sampling method with the criteria of non-financial firms listed in IDX which publish sustainability reports with reference GRI G4 year 2013-2016 in a row, have historical price data year 2013-2016 at the Yahoo Finance website. The number of firms meeting the sample criteria is 60.

B. Operational Definitions of Variables

1. Sustainability Report

The sustainability report in this study is measured through the Sustainability Report Disclosure Index (SRDI) based on the Global Reporting Initiative (GRI) G4 Guidelines by economic dimension, environmental dimension, and social dimension. In total there are 91 items from the total disclosure of sustainability reports. SRDI measurements are performed by giving a score of 1 if the item is disclosed and 0 if the item is not disclosed. The SRDI calculation formula is as follows:

\[ \text{SRDI} = \frac{V}{M} \]

C. Financial Performance

1. Profitability Ratio

Profitability is measured using ROE. Profit calculated to get ROE from the profit or income available to the owner of the firm for capital invested in the firm. The formula for calculating ROE is as follows:

\[ \text{ROE} = \frac{\text{Net Profit}}{\text{Equity}} \]

2. Liquidity Ratio

The ratio of liquidity in this study is measured by using the current ratio. The current ratio is a ratio that shows the ability of current assets to cover current liabilities. The formula for calculating the current ratio is as follows:

\[ \text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}} \]

3. Activity Ratio

In this research, the activity ratio is measured by using total asset turnover. Total asset turnover is a ratio that shows the level of efficiency of the overall use of the firm's assets in generating a certain sales volume (Syamsuddin, 2009). The formula for calculating total turnover assets is as follows:

\[ \text{Total Asset Turnover} = \frac{\text{Sales}}{\text{Total Asset}} \]
4. **Solvency Ratio**

Solvency ratio used in this research is the debt to equity ratio (DER). DER is a ratio to measure the firm's capital structure. The capital structure is a permanent fund consisting of long-term debt, preferred stock, and shareholder capital (Wahyono, 2002). The formula for calculating DER is as follows:

\[ \text{DER} = \frac{\text{Total Liabilities}}{\text{Capital}} \]

5. **Market Ratio**

The market ratio used in this study is the ratio of earnings per share (EPS). According to Alwi (2003), EPS is generally a concern of investors or potential investors. EPS shows the amount of money generated (return) from one share. The greater the value of EPS, the greater the profit earned by shareholders. Therefore, the EPS reported by the firm can attract the attention of investors or potential investors. According to Tandelilin (2010), EPS can be calculated using the following formula:

\[ \text{EPS} = \frac{\text{Net Income After Interest and Taxes}}{\text{Number of Outstanding Shares}} \]

D. **Investor Reaction**

According to Hartono (2008), abnormal return is the actual excess return compared to the expected return. Therefore, the cumulative abnormal return is cumulative of daily abnormal return of each firm's stock. To calculate the cumulative abnormal return, it takes several steps as follows:

a. Calculate actual stock returns during the event period.

Actual return can be calculated using the formula:

\[ R_{it} = \left( \frac{P_{it} - P_{it-1}}{P_{it-1}} \right) \]

where \( R_{it} \) = Return of stock i on day t; \( P_{it} \) = Stock price i on day t; and \( P_{it-1} \) = Stock price i on day t-1.

b. Calculate the expected daily stock return during the event period.

According to Hartono (2008), the expected return can be calculated by using three estimation models, namely mean adjusted model, market model, and market adjusted model. However, in this study, the expected return calculation model used is a market adjusted model. According to Hartono (2008), this model is considered as the best estimation model to estimate the return of security through market index returns in that period. According to Strong (1992), expected returns for all securities are assumed to be equal (approximate equivalent) with the expected market return in that period:

\[ E(R_{a}) = R_{mt} \]

where \( E(R_{a}) \) = Expected return of stock I; and \( R_{mt} \) = Market return on day t.

Since the expected value of the stock return equals the market return, the expected return formula is by using the market return formula as follows:
\[ R_{mt} = \frac{\text{IHSG}_t - \text{IHSG}_{t-1}}{\text{IHSG}_{t-1}} \]

where \( R_{mt} \) = Market return on day \( t \); \( \text{IHSG}_t \) = Composite stock price index on day \( t \); and \( \text{IHSG}_{t-1} \) = Composite stock price index on day \( t-1 \).

c. Calculate the abnormal share return during the event period.

The abnormal return formula can be calculated as follows:

\[ AR_{it} = R_{it} - E(R_{it}) \]

where \( AR_{it} \) = Abnormal return of stock \( i \) on day \( t \); \( R_{it} \) = Actual return of stock \( i \) on day \( t \); and \( E(R_{it}) \) = Expected return of stock \( i \) on day \( t \).

Because this research uses a market adjusted model which has an assumption that expected return all share equals (approximate equivalent) with expected market return, hence obtained formula as follows:

\[ AR_{it} = R_{it} - R_{mt} \]

where \( AR_{it} \) = Abnormal return of stock \( i \) on day \( t \); \( R_{it} \) = Actual return of stock \( i \) on day \( t \); and \( R_{mt} \) = Market return on day \( t \).

d. Calculate the cumulative abnormal return for \( t-3 \) to \( t+3 \) with the following formula:

\[ CAR_{Nn} = \sum_{t=-3}^{t+3} AAR_{nt} \]

where \( CAR_{Nn} \) = Accumulated abnormal daily return of each share.

The window period (event window) as the observation period is the period to be calculated abnormal return. This research uses a window period for daily data of stock price done three days before \( (t-3) \) and three days after \( (t+3) \) from the date of publication of the financial report of each firm. According to Hartono (2008), for the announcement of earnings or the announcement of financial statements, the period of the window used in general is three days (around the date of announcement). The window period is used to determine whether or not information leaks before the information is announced.

E. Data Analysis Method

The method of analysis used in this research is structural equation modeling (SEM) method and analysis tool used is partial least square software (PLS). SEM is one type of multivariate analysis in social science. The software used as an analytics tool is WarpPLS version 4.0.

IV. Research Results and Discussion

A. Partial Least Square Analysis

This analysis is used to calculate the goodness of fit model, calculated by looking at the average R-squared (ARS) to demonstrate the suitability of the model, the average path coefficient (APC) to show the interrelationship between the variables and the average
Hapsoro and Husain

variance inflation factor (AVIF) to show inter-multicollinearity independent. The assessment of the goodness of fit (R-Square) is shown in Table 1.

Table 1

The assessment of goodness of fit ($R^2$)

<table>
<thead>
<tr>
<th>Result</th>
<th>P-Value</th>
<th>Criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>APC= 0.224</td>
<td>P= 0.004</td>
<td>Good If P &lt; 0.05</td>
<td>Supported</td>
</tr>
<tr>
<td>ARS= 0.384</td>
<td>P&lt; 0.001</td>
<td>Good If P &lt; 0.05</td>
<td>Supported</td>
</tr>
<tr>
<td>AVIF= 2.033</td>
<td>P &lt; 5</td>
<td></td>
<td>Supported</td>
</tr>
</tbody>
</table>

Source: Output WarpPLS 4.0

B. Hypothesis Testing Results

1. ROE Positively Affects Investor Reaction

The results of the first hypothesis testing showed that the return on equity has a positive and significant effect on investor reactions. This is evident from the first hypothesis testing which shows that $P$-value = 0.01, smaller than the specified significance level ($\leq 0.05$) and the value of the path coefficient is positive (0.22). Therefore, it can be concluded the first hypothesis in this study which states that the return on equity has a positive effect on investor reactions is supported. The test results show that the higher ROE generated by the firm, the investor will be interested to invest. According to Chrisna (2011), ROE increase is usually followed by a rise in the stock price of the firm. According to Gibson (2001), the increase in firm ROE indicates that the rate of return to be received by investors is also increasing. Thus, increasing ROE can attract investors to invest their money into the firm.

The results of the first hypothesis in this study support the research of Martani et al. (2009) and Nordiana and Budiyanto (2017) which stated that ROE has a significant effect on stock returns. Another study conducted by Permana (2017) stated that ROE has a positive and significant effect on abnormal return.

2. CR Positively Affects Investor Reaction

The result of the second hypothesis test shows that the current ratio has a positive and significant effect on investor reaction. This is indicated by $P$-value = 0.01, smaller than the specified significance level ($\leq 0.05$) and the path coefficient value is positive (0.21). Therefore, it can be concluded the second hypothesis in this study which states that the current ratio has a positive effect on investor reactions is supported. This indicates that investors will be increasingly interested to invest in firms that have the ability to pay off short-term debt. The faster the firm in paying off the short-term debt, the firm’s value will increase. Thus, the high firm value will attract investors to invest their capital into the firm.

The results of this second hypothesis testing support the research that has been done by Prihartini (2009) and Gejali and Satrio (2013) which showed that the current ratio has a significantly positive effect on stock return. Another study conducted by Yulindasari and Riharjo (2017) showed that the current ratio positively affects the market reaction.
3. **TAT Positively Affects Investor Reaction**

The result of the third hypothesis test shows that total asset turnover has a positive and significant effect on investor reaction. This is indicated by \( P\)-value = 0.04, smaller than the specified significance level (≤ 0.05) and the path coefficient value is positive (0.16). Therefore, it can be concluded the third hypothesis in this study which states that total asset turnover has a positive effect on investor reactions is supported. This indicates that the higher total asset turnover of the firm, it will make investors more interested to invest in the firm. The higher the ratio of total asset turnover, the more efficient the firm uses assets to increase sales so that it affects the profit earned. The more profits the firm earns, it will increase the investor's desire to invest. This illustrates the positive reaction of investors in responding to information about the ratio of total asset turnover.

The results of the third hypothesis testing support research conducted by Apriliastuti and Andayani (2015) which showed that total asset turnover has a positive effect on abnormal return. Research conducted by Yulindasari and Riharjo (2017) showed that total asset turnover has a positive effect on the market reaction.

4. **DER Positively Affects Investor Reaction**

The results of the fourth hypothesis test show that the debt to equity ratio has a positive and insignificant effect on investor reactions. This is indicated by \( P\)-value = 0.16, greater than the specified significance level (≤ 0.05) and the path coefficient value is positive (0.09). Therefore, it can be concluded the fourth hypothesis in this study which states that the debt to equity ratio has a positive effect on investor reactions is not supported. The results of these tests indicate that the increase in the debt of the firm is not so considered in making investment decisions by investors.

The increase in firm debt will not only have a positive effect on the firm but will also have a negative effect. The negative effect due to the increase in debt is the burden that must be borne by the firm becomes bigger that in the end, the firm can risk financial difficulties. Therefore, changes in the level of debt to the firm are not so considered in making investment decisions by investors. The results of the fourth hypothesis testing support research conducted by Martani et al. (2009) and Hanani (2011) which stated that the DER has a positive and insignificant effect on stock returns.

5. **EPS Positively Affects Investor Reaction**

The result of the fifth hypothesis test shows that earnings per share have a negative and insignificant effect on investor reaction. This is indicated by \( P\)-value = 0.09, greater than the specified significance level (≤ 0.05) and the path coefficient value is negative (-0.12). Therefore, it can be concluded the fifth hypothesis in this study which states that earnings per share have a positive effect on investor reactions is not supported. The reason that EPS has no effect on investor reactions because of the EPS is based on the amount of profit/loss contained in the income statement of the firm. The income statement does not reflect any cash inflows or cash outflows. This is because in recognizing income or expense, the firm uses a policy of recording the financial statements on an accrual basis.

According to Ankarath (2012), the International Accounting Standards Board (IASB) framework recognizes that the assumptions underlying the preparation and
presentation of financial statements are the basis of accruals. The recognition of income and expenses by accruals indicates that the profit/loss information used to calculate EPS does not reflect cash income or cash loads acquired or used in conducting the operations of the firm, so it can be said that the profit/loss does not reflect the firm's ability to generate source of funds in cash that can affect the large or small stock returns will be received by investors. Therefore, investors do not consider EPS in deciding to invest in a firm.

The above is in accordance with the research by Setyawati (2011) which stated that EPS does not affect statistically to variable cumulative abnormal return. Another research that supports the results of the fifth hypothesis testing in this study is research conducted by Risdiyanto and Suhermin (2016) who stated that EPS has no significant effect on stock returns.

6. **Sustainability Report Moderates the Effects of ROE on Investor Reactions**

The result of the sixth hypothesis test shows that the sustainability report weakens the effect of return on equity on investor reaction. This is indicated by P-value < 0.01, smaller than the specified significance level (≤ 0.05) and the path coefficient value is negative (-0.49). Negative path coefficient values and P-values below the level of significance indicate that the sustainability report weakens the effect of return on equity on investor reaction significantly.

The disclosure of sustainability report is one of the alternatives for the firm to cover the firm's bad profitability condition so that the firm's image in the eyes of investors is expected to remain good which in turn will attract investors to invest. The results of this study support the research of Munawaroh and Priyadi (2014) which stated that CSR has a negative and significant effect on the relationship of ROE with the value of the firm.

7. **Sustainability Report Moderates the Effect of CR on Investor Reaction**

The results of testing the seventh hypothesis show that the sustainability report strengthens the effect of the current ratio on investor reaction. This is indicated by a P-value < 0.01, smaller than the specified significance level (≤ 0.05) and the path coefficient value is positive (0.24). The value of the path coefficient is positive and P-value below the level of significance indicates that the sustainability report reinforces the effect of the current ratio on investor reaction significantly. In this study, current ratio describes the ability of firms to pay short-term financial obligations in a timely manner (Sartono, 2008). The higher the current ratio added with the sustainability report disclosure by the firm, the higher the level of investor confidence to the firm because the firm is considered not to have financial problems and transparent to the public in disclosing its operational activities related to social and environmental activities around the firm.

8. **Sustainability Report Moderates the Effect of TAT on Investor Reaction**

The results of testing the eighth hypothesis show that sustainability report does not moderate the effect of total asset turnover on investor reaction. This is indicated by P-value = 0.13, greater than the specified significance level (≤ 0.05) and the path coefficient
value is positive (0.10). From these results, it can be concluded that the sustainability report disclosure does not affect or not cause any difference in the ability of firms in managing assets that can affect the reaction of investors.

According to Christy and Tarigan (2014), the high total asset turnover is not necessarily caused by the disclosure of the sustainability report, but the lack of understanding and knowledge of the public, especially investors in Indonesia on the importance of implementing and revealing sustainability reports. In the end, sustainability report cannot affect or provide changes to the effect of total asset turnover on investor reactions.

9. **Sustainability Report Moderates the Effects of DER on Investor Reactions**

The results of the ninth hypothesis test show that the sustainability report weakens the effect of debt to equity ratio on investor reaction. This is indicated by \( P \)-value < 0.01, smaller than the specified significance level (\( \leq 0.05 \)) and the path coefficient value is negative (-0.48). Negative path coefficient values and \( P \)-values below the level of significance indicate that the sustainability report weakens the effect of debt to equity on investor reactions significantly. According to Belkaoui and Karpik (1989), the decision to disclose social information will be followed by expenditures for disclosures that may lower revenues. Therefore, if the level of debt to equity ratio (solvency) is high which is considered to add to the burden of the firm and accompanied by the disclosure sustainability report by firms considered to reduce revenue, investors will consider it as a bad signal that can reduce the interest of investors in investing.

10. **Sustainability Report Moderates the Effect of EPS on Investor Reaction**

The results of the tenth hypothesis testing show that the sustainability report moderates the effect of earnings per share on investor reactions. This is indicated by \( P \)-value = 0.08, smaller than the specified significance level (\( \leq 0.05 \)) and the path coefficient value is negative (-0.13). From these results, the tenth hypothesis which states that the sustainability report moderates the effect of earnings per share on investor reactions is supported. This shows that the sustainability report disclosed by the firm is able to give a meaningful influence for investors to replace the information about earnings per share. A sustainability report is a positive thing expressed by the firm on its commitment to social and environmental responsibility, this shows that investors have an understanding and knowledge about the importance of sustainability report disclosure information so that the information can affect the effect of earnings per share on investor reactions.

The result of this study does not support the research of Yaparto et al. (2013) which stated that CSR has no effect on earnings per share. In addition, the results of this study also do not support the results of research Jenawan and Juniarti (2015) who stated that the sustainability report does not affect the reaction of investors.

Overall, the results of hypothesis testing are shown in Figure 2 and Table 2.
Table 2
Hypothesis testing results

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Prediction</th>
<th>Variable</th>
<th>Path Coef.</th>
<th>P value</th>
<th>Significance</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>+</td>
<td>ROE \rightarrow CAR</td>
<td>0.22</td>
<td>0.01</td>
<td>Significant</td>
<td>Supported</td>
</tr>
<tr>
<td>H2</td>
<td>+</td>
<td>CR \rightarrow CAR</td>
<td>0.21</td>
<td>0.01</td>
<td>Significant</td>
<td>Supported</td>
</tr>
<tr>
<td>H3</td>
<td>+</td>
<td>TAT \rightarrow CAR</td>
<td>0.16</td>
<td>0.04</td>
<td>Significant</td>
<td>Supported</td>
</tr>
<tr>
<td>H4</td>
<td>+</td>
<td>DER \rightarrow CAR</td>
<td>0.09</td>
<td>0.16</td>
<td>Not Significant</td>
<td>Rejected</td>
</tr>
<tr>
<td>H5</td>
<td>+/-</td>
<td>EPS \rightarrow CAR</td>
<td>-0.12</td>
<td>0.09</td>
<td>Not Significant</td>
<td>Rejected</td>
</tr>
<tr>
<td>H6</td>
<td>+/-</td>
<td>SR \rightarrow (ROE \rightarrow CAR)</td>
<td>-0.49</td>
<td>&lt;0.01</td>
<td>Significant</td>
<td>Supported</td>
</tr>
<tr>
<td>H7</td>
<td>+/-</td>
<td>SR \rightarrow (CR \rightarrow CAR)</td>
<td>0.24</td>
<td>&lt;0.01</td>
<td>Significant</td>
<td>Supported</td>
</tr>
<tr>
<td>H8</td>
<td>+/-</td>
<td>SR \rightarrow (TAT \rightarrow CAR)</td>
<td>0.10</td>
<td>0.13</td>
<td>Not Significant</td>
<td>Rejected</td>
</tr>
<tr>
<td>H9</td>
<td>+/-</td>
<td>SR \rightarrow (DER \rightarrow CAR)</td>
<td>-0.48</td>
<td>&lt;0.01</td>
<td>Significant</td>
<td>Supported</td>
</tr>
<tr>
<td>H10</td>
<td>+/-</td>
<td>SR \rightarrow (EPS \rightarrow CAR)</td>
<td>-0.13</td>
<td>0.08</td>
<td>Not Significant</td>
<td>Rejected</td>
</tr>
</tbody>
</table>
V. CONCLUSIONS, LIMITATIONS, SUGGESTIONS, AND IMPLICATIONS

Based on the results of the analysis that has been done in this study, it can be concluded that DER and EPS have no effect on investor reaction. However, ROE, CR, and TAT have a positive effect on investor reactions. Meanwhile, sustainability reports can moderate the effect of ROE, CR, DER and EPS on investor reactions, but not moderate TAT against investor reactions.

This study has the limitations that the results of this study cannot be generalized because the data used only non-financial firms. In addition, most firms do not disclose sustainability reports on an ongoing basis from year to year. This is because the disclosure of sustainability report in Indonesia is still voluntary. Therefore, with these limitations, it is hoped that further research can add samples other than non-financial firms so that the results can be generalized to all firms. Further research can also be done using data other than panel data (data collected over time and having multiple objects), e.g. using cross-section data or time series data.

This study has implications for investors that with the disclosure of sustainability reports by the firm is able to provide information that the disclosure of sustainability report gives a positive or negative effect in making investment decisions which have been only relying on information about the firm’s financial performance. In addition, the results of this study can also encourage firms to remain consistent in disclosing a sustainability report as investors are now considering other information related to the responsibility and transparency of activities that have been done by the firm through the disclosure of sustainability reports.

REFERENCES


