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ABSTRACT
The purpose of this research is to examine the quality of risk management according to investor reactions in property, real estate, and building construction companies listed on Bursa Efek Indonesia (BEI) in 2016-2018. The reaction of investors in this research is indicated by stock returns. In addition, this research also examines wider and more complete disclosure of the company can reduce information asymmetry with investors to make investment decisions. Based on the signaling theory, companies that disclose more information will be used as good news by investors and getting a positive reaction. The population in this research are property company, real estate company, and construction building company which registered on Bursa Efek Indonesia (BEI) in 2016 – 2018. This research is using a sampling method (purposive judgment sampling) for getting 25 from 74 company which registered on Bursa Efek Indonesia (BEI) with 75 samples. This research using multiple regression analysis. The results from the research provided that the disclosure of operations risk and empowerment risk has a positive and significant effect on stock returns while strategic risk, integrity risk, and information processing and technology risks have no significant effect on stock returns. According to this result provided that more disclosure on operations risk management and the risk of corporate empowerment can affect stock returns as a form of investor reaction, while the things that companies need to pay attention to in voluntary disclosure as additional are influence of strategic risk disclosure, integrity risk, and information processing and technology risks.
INTRODUCTION

Stock return is a form of investor reaction to the quality of voluntary disclosure from the company. Investor reaction is a response given by the investor as feedback to the company for the information signal given. According to Fernando et al. (2017), the share price will be low (high) if the level of disclosure before the announcement is high (low). In 2019, Indonesia has shown state-owned companies and well-known issuers who were under the spotlight due to the lack of transparency in the financial statements disclosed. The polemic occurring at PT Garuda Indonesia (Persero) resulted in investors leaving PT Garuda being as the disclosed 2018 financial statements did not meet standards. After providing transparent information through announcements on the IDX website and public exposure, investors repurchased Garuda Indonesia shares, thus soaring the share price of PT Garuda Indonesia (Persero) (Warta Ekonomi. co.id). This event proves that voluntary disclosure is an important factor for investors in making the decision because it is perceived the company provides transparent information.

In general, companies tend to disclose non-financial information voluntarily that is commonly described due to the lack of focus on risk management. Based on Linsley and Shrives (2006), voluntary risk management disclosure includes operational risk, strategic risk, empowerment risk, integrity risk, and information processing and technology risk. Besides Guidry and Patten (2010), Elshandidy and Shrives (2016) discovered that investor reaction showed a positive response to the disclosure of good quality information reported in the annual report. This result contradicts research conducted by Fernando et al. (2017) showing that stock returns were negatively related to the level of voluntary disclosure. As per Bokpin’s (2013) research, it is confirmed that there was no positive relationship between disclosure and share prices, it indicates that disclosure does not affect market reactions. Given those results revealing the inconsistency of previous studies, this issue has become an important topic for research.

When investors experience a lack of information related to risk management information encountered by companies, actions must be taken to boost investors’ trust in the companies’ performance. Therefore, the disclosure of risk management information can provide a good quality of disclosure and can incite investors’ trust in investing. Hence, the purpose of this study is to examine the effect of risk management disclosure on investors’ reactions.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

The signaling theory according to Connelly et al. (2011) elaborates that the use of information is undertaken by two parties with granted access – the signaler party who chooses to communicate (or signal) information and the receiver party who receives and interprets the information (signal). The signaling theory states that a wider and more complete disclosure will provide a positive signal to the company shown by the increasing share price (Suparsa, Ramantha, and Badera, 2017). Investors can respond to the information disclosure as good news to invest, or bad news as the consideration to hold back investment making the company’s share price low.

In explaining the relationship between the reaction of investors and the company, signaling theory states that increasing voluntary risk management disclosure will become good news for investors that will be shown by share purchasing. The reaction displayed by investors will affect the movement of the share price because the more attractive shares will increase the share price. So, the stock return will be expected by investors and if the return obtained exceeds the expectation, it can be considered an abnormal return.

Disclosure of company operational risks will be used to provide information to interested parties, such as potential investors, current investors, and creditors. Signaling theory explains that disclosure can be measured by how extensive and complete the information shows future risk exposure that investors will respond to as a form of feedback response to the company (Suparsa et al. 2017). Research by Abdullah et al. (2015) shows that the more risk management disclosures, the better the company’s performance is. Likewise, according to Guidry and Patten (2010), it proves that the quality of reports on social and environmental disclosures has a positive and significant effect on abnormal returns as the market reaction that emerges. It differs from the research conducted by Fernando et al. (2017) discovering that the greater the voluntary disclosure of the company, the lower the absolute abnormal returns at the time of the announcement.

Milgrom (1981) suggests that disclosure of
good news about a company’s prospects should always result in an increase in the company’s share price. A positive relationship is perceived as relevant for conducting this research. The more exposures focused on operational risk through voluntary disclosure, investors can predict the company risk in the future. When the uncertainty of the company risk is low (high), it may trigger investors to react to the disclosure as indicated by stock returns. Therefore, the greater and more complete the operational risk information contained in the company’s annual report will affect the increase in stock returns which will result in abnormal returns.

H1: Quality of Operational Risk Management Disclosure Positively Affects Investor Reactions

Each company has its own strategy to achieve its goals. In Oliveira et al. (2006), it is stated that by disclosing strategic risk companies will provide additional information to investors about strategic risk management applied by the company. Signaling theory explains that disclosure can be measured by how extensive and complete the information shows future risk exposure that investors will respond to as a form of feedback response to the company (Suparsa et al. 2017). Fernando et al. (2017) state that the greater the voluntary disclosure of the company, the lower the absolute abnormal returns at the time of the announcement. However, according to research conducted by Guidry and Patten (2010), the quality of the report on social and environmental disclosures has a positive and significant effect on abnormal returns as a market reaction. In addition, Iatridis (2013) states that the quality of environmental disclosure is positively related to share prices.

Milgrom (1981) suggests that disclosure of good news about a company’s prospects should always result in an increase in the company’s share price. A positive relationship is perceived as relevant for conducting this research. The more exposures focused on strategic risk through voluntary disclosure, investors can predict the company risk in the future. When the uncertainty of the company risk is low (high), it may trigger investors to react to the disclosure as indicated by stock returns. Therefore, the greater and more complete the strategic risk information contained in the company’s annual report will affect the increase in stock returns which will result in abnormal returns.

H2: The Quality of Strategic Risk Management Disclosure Positively Affects Investor Reactions

The purpose of empowering human resources is to allow companies to compete with worldwide markets. Investors will consider the company, for instance, by assessing HR management. Signaling theory explains that disclosure can be measured by how extensive and complete the information shows future risk exposure that investors will respond to as a form of feedback response to the company (Suparsa et al. 2017). Previous research conducted by Nègre et al. (2017), it explains that when the downsizing operation was announced through a proactive press release, it was more likely to receive a negative reaction from the market.

Milgrom (1981) suggests that disclosure of good news about a company’s prospects should always result in an increase in the company’s share price. A positive relationship is perceived as relevant for conducting this research. The quality of disclosure is obtained from how extensive and complete disclosures of empowerment risk that investors can use to predict future company risks. When the uncertainty of the company risk is low (high), it may trigger investors to react to the disclosure as indicated by stock returns. Therefore, the greater and more complete the empowerment risk information contained in the company’s annual report will affect the increase in stock returns which will result in abnormal returns.

H3: Quality of Empowerment Risk Management Disclosure Positively Affects Investor Reaction

Integrity is defined as a benchmark of the competence and professionalism of employees in carrying out their jobs and responsibilities by avoiding corruption and other illegal acts (Amstrong 2005, Akir 2012, in Hanim, et al. 2017). A broad and complete strategic risk (integrity risk) disclosure can be responded by investors as good news for investing, or otherwise, as bad news so that investors hold back which results in share price movements. According to Linsley and Shrives (2006) opinion, disclosure of integrity risk is one of the disclosures that affect the performance of the company. Bokpin’s (2013) research shows that voluntary disclosure had a positive but insignificant effect on share prices. It emphasizes the
interrelationship of several factors that determine the effect of disclosure. Meanwhile, according to Fernando et al. (2017), the greater the voluntary disclosure of the company, the lower the absolute abnormal returns at the time of the announcement.

Milgrom (1981) suggests that disclosure of good news about a company’s prospects should always result in an increase in the company’s share price. A positive relationship is perceived as relevant for conducting this research. The more exposures focused on integrity risk through voluntary disclosure, investors can predict the company risk in the future. When the uncertainty of the company risk is low (high), it may trigger investors to react to the disclosure as indicated by stock returns. Therefore, the greater and more complete the integrity risk (information and technology risk) contained in the company’s annual report will affect the increase in stock returns which will result in abnormal returns.


RESEARCH METHOD

Research Variable

The dependent variable in this study is the stock return which is a proxy for investors’ reactions. To calculate abnormal returns using individual and combined market price index based on Charles et al. (2009) is using the following formula:

\[ R_t = \frac{P_t - P_{t-1}}{P_{t-1}} \]

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

The operational risk variable used content analysis with coding assistance according to Abdullah et al. (2015), namely by giving score 1 for disclosed indicators and 0 not disclosed indicators. Then, it was calculated using the number of items disclosed divided by the number of items that should be disclosed. Strategic risk variable used content analysis with coding assistance according to Abdullah et al. (2015), namely by giving score 1 for disclosed indicators and 0 for not disclosed indicators. Then, it was calculated using the number of items disclosed divided by the number of items that should be disclosed. The empowerment risk variable used content analysis with coding assistance according to Abdullah et al. (2015), namely by giving score 1 for disclosed indicators and 0 for not disclosed indicators. Then, it was calculated using the number of items disclosed divided by the number of items that should be disclosed. The integrity risk variable used content analysis with coding assistance according to Abdullah et al. (2015), namely by giving score 1 for disclosed indicators and 0 for not disclosed indicators. Then, it was calculated using the number of items disclosed divided by the number of items that should be disclosed. The risk variable for technology and information processing used content analysis with coding assistance according to Abdullah et al. (2015), namely by giving score 1 for disclosed indicator and 0 for not disclosed indicators. Then, it was calculated using the number of items disclosed divided by the number of items.
that should be disclosed. The total Asset control variable in Abdullah et al. (2015) and Linsley and Shrives (2006) used natural logarithms to calculate the firm size (Firm Size = Ln (Total Assets)). Profitability control variable used the calculation of net profit which is proxied by return on equity (ROE is calculated as Net Profit divided by Total Equity). The leverage control variable was calculated by considering the level of debt used to finance the capital. The level of leverage (debt to equity ratio) was calculated by dividing total liabilities by equity (Keni and Sofia 2013). The growth control variable of a company was measured by net sales of the company. (Abdullah et al. (2015), and Linsley and Shrives, (2006)) in calculating growth, it uses the calculation of current sales and previous sales (current sales divided by previous sales).

**Sample Determination**

The sample in this study was obtained using a non-probability judgment sampling and purposive judgment sampling methods, in which the samples are predetermined based on the aims and objectives during the research (Sekaran, 2006). The sample of this study is outlined in Table 1.

The samples used in the study are 75 companies in the property, real estate, and building construction industries listed on the Indonesia Stock Exchange from 2016 to 2018 after being selected based on the criteria.

**Table 1. Sampling Data**

<table>
<thead>
<tr>
<th>Information</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property, Real Estate, and Building construction companies listed on BEI</td>
<td>62</td>
<td>66</td>
<td>74</td>
</tr>
<tr>
<td>Companies that do not disclose annual reports consecutively in the 2016-2018 period</td>
<td>(8)</td>
<td>(3)</td>
<td>(13)</td>
</tr>
<tr>
<td>Companies that experience delisting from windows period</td>
<td>(29)</td>
<td>(38)</td>
<td>(36)</td>
</tr>
<tr>
<td>Companies with complete data</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Total sample</td>
<td>75</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Indonesia Stock Exchange, Secondary Data processed in 2019

**Analysis Method**

In this study, multiple linear regression analysis was used to test the relationship among variables as follows:

\[
CAR = \alpha + \beta_0 \cdot OPSRISK + \beta_1 \cdot STRARISK + \beta_2 \cdot EMRISK + \beta_3 \cdot INTERISK + \beta_4 \cdot ITRISK + \beta_5 \cdot LnFs + \beta_6 \cdot PROFIT + \beta_7 \cdot LEVERAGE + \beta_8 \cdot GROWTH + \varepsilon
\]

Information,

CAR : Cumulative Abnormal Return
OPSRISK : Operation Risk
STRARISK : Strategic Risk
EMPRISK : Empowerment Risk
INTERISK : Integrity Risk
ITRISK : Information Processing and Technology Risk
LnFs : Natural Logarithm of Firm Size
PROFIT : Profitability
LEV : Leverage
GROWTH : Sales Growth
\(\alpha\) : Constant
\(\beta\) : Regression Coefficient
\(\varepsilon\) : Error

**RESULTS AND DISCUSSION**

**Descriptive statistics**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPSRISK</td>
<td>75</td>
<td>.22</td>
<td>.78</td>
<td>.5452</td>
<td>.11286</td>
</tr>
<tr>
<td>STRARISK</td>
<td>75</td>
<td>.18</td>
<td>.91</td>
<td>.5745</td>
<td>.16383</td>
</tr>
<tr>
<td>EMRISK</td>
<td>75</td>
<td>.00</td>
<td>.80</td>
<td>.3093</td>
<td>.22128</td>
</tr>
<tr>
<td>INTERISK</td>
<td>75</td>
<td>.00</td>
<td>1.00</td>
<td>.5333</td>
<td>.23887</td>
</tr>
<tr>
<td>ITRISK</td>
<td>75</td>
<td>.00</td>
<td></td>
<td>.3467</td>
<td>.22844</td>
</tr>
<tr>
<td>ABNRETURN</td>
<td>75</td>
<td>-2.01</td>
<td>1.55</td>
<td>-.3020</td>
<td>.73467</td>
</tr>
</tbody>
</table>
From Table 2, it displays that the mean value for risk management disclosures with investor reactions as measured by stock returns showed the highest value on strategic risk disclosure. The average value of strategic risk was 0.5745. Besides, there was a relatively far range of mean values, namely the strategic risk (STRARISK) of 0.5745 and the empowerment risk (EMRISK) of 0.3093. The value of the stock return was measured using the amount of abnormal return. From Table 2, it can be determined that the mean value shown by the abnormal return was negative (-0.3020), which implies that the stock return has decreased. In addition, there were control variables that supported the hypothesis in this research. The highest mean value was shown by total assets of 29.7617.

### Discussion of Research Results

A T-test was performed to find the effect of each independent variable on the dependent variable. To interpret the coefficient of the independent variables in this study, regression analysis was utilized. There is a limit to the level of significance in which the results cannot exceed 0.05.

The regression analysis used in this study shows that 2 of the 5 independent variables in the hypothesis have a positive and significant effect on the dependent variable, which are operational risk and empowerment risk. Each variable was measured by calculating the percentage of risk disclosed divided by the total item.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>B</th>
<th>Sig.</th>
<th>Testing Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational Risk Management Disclosure positively affects Stock Returns</td>
<td>2.136</td>
<td>.004</td>
<td>Accepted</td>
</tr>
<tr>
<td>Strategic Risk Management Disclosure positively affects Stock Returns</td>
<td>-1.154</td>
<td>.042</td>
<td>Rejected</td>
</tr>
<tr>
<td>Empowerment Risk Management Disclosure positively affects Stock Returns</td>
<td>1.069</td>
<td>.012</td>
<td>Rejected</td>
</tr>
<tr>
<td>Integrity Risk Management Disclosure positively affects Stock Returns</td>
<td>.590</td>
<td>.109</td>
<td>Rejected</td>
</tr>
<tr>
<td>Information Processing and Technology Risk Management Disclosure positively affects Stock Returns</td>
<td>.237</td>
<td>.536</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

In the first statistical test, the independent variable OPSRISK in Table 4.3 shows the positive and significant effect on investor reactions. The positive t value was 2.958 and the b value was 2.136 with a significance level below 0.5, which was 0.004 or 0.4%. These results support the signaling theory that the quality of disclosure is measured by how extensive and complete the risk information so that it can be considered good news. With the operational risk disclosure, it can provide information to investors about the risks and opportunities in the company as well as information about the management that had been done and will be performed by the company. Therefore, the company tends to disclose operational risk with the purpose of obtaining positive feedback from investors. The test results show correspondence between the research conducted by Abdullah et al. (2015) and Guidry and Patten (2010).

The results of the second statistical test are that the independent variable STRARISK that could not support the hypothesis (rejected). The value shows a negative t of -2.071 and a negative beta coefficient of -1.154 with a significance level of below 0.5, which was 0.042 or 4.2%. This test contradicts the signaling theory that broader and more extensive disclosures will give positive reactions from investors. The large number of disclosures dominated by strategic risks on the company’s planning and strategy in the marketing cycle agitates investors about the company’s future. More company disclosures are considered bad news by investors, resulting in a decrease in stock returns. This study is in accordance with previous research conducted by Fernando et al. (2017).

In the third test, the independent variable EMRISK shows a positive t value of 2.593 and beta coefficient value of 1.069 with a significance level of
0.012 or 1.2%, which was below the reasonable limit of 0.5 (5%). It denotes that the third hypothesis in this study is accepted with a positive and significant effect on investors’ reactions. In accordance with the signaling theory, a company that discloses non-financial information is considered to have high performance and value. Given these figures, it shows that the empowerment risk disclosure is very important so the company will attempt to increase risk disclosure to achieve better quality disclosure, therefore, investors’ responses are always positive and stock returns continue to increase. The test results show correlations between the research conducted by Iatridis (2013) and Abdullah et al. (2015).

The fourth test with the independent variable INTERISK shows the significance level exceeding the reasonable limit of 0.5 or 5%, which was 0.109 or 10.9% with a positive t value of 1.627 and beta coefficient value of 0.590. These results show that the fourth hypothesis of this study does not affect so it is rejected. It contradicts the signaling theory that more disclosures will give a positive reaction from investors and are considered good news. Investors think that more integrity risk disclosures will hold back investors to invest due to concerns. When disclosure is related to reputation or good image related to outside parties, it will be considered bad news by investors. It is in line with research conducted by Bokpin (2013).

In the fifth test with the independent variable ITRISK, the significance level exceeded the normal limit of 0.5 or 5%, which was 0.536 or 53.6% with a positive t value of 0.622 and beta coefficient value of 0.237. It is contrary to the signaling theory that a complete and good risk disclosure can improve the quality of the company and if the risk disclosure is incomplete it may cause information misleading and uninformative for its users. Currently, information technology is a benchmark for the quality of the company. The lack of information technology risks disclosure of the company is considered the incapability to follow the competition in the digital era and cannot enter the international market. Given this thesis, the information about this risk is used as bad news by investors. These results support the evidence of research conducted by Bokpin (2013).

CONCLUSION

Nowadays, several studies have been conducted to evaluate the impact of voluntary disclosure on investor reactions and share prices, and generally show negative effects. However, to researchers’ knowledge, no research clearly shows the effect of voluntary risk management disclosure on investors’ reactions as indicated by stock returns. Therefore, this study fills this gap and shows that risk management disclosure can affect stock returns in 25 companies in the Property, Real Estate, and Building Construction sectors listed on BEI for 3 consecutive periods.

In the first test, it was found that the operational risk disclosure and investor reactions had a positive and significant relationship. It means that the number of disclosures is considered as a quality of good news disclosures so that investors give a positive reaction. Second, the strategic risk disclosure on investors’ reactions showed a significant negative value. This finding reflects the increasing number of company disclosures that are considered bad news by investors, resulting in a decrease in stock returns. Third, empowerment risk disclosure positively and significantly influenced investors’ reactions. Empowerment risk disclosure is very important and the company considers the quality of disclosure to be good news so that it gets a positive response from the market and it increases stock returns. The fourth and fifth hypotheses showed the same results, the existence of risk disclosure, both integrity and management of technology and information, was proven insignificant to investors’ reactions. This finding is based on the fact that investors consider the quality of bad news disclosure so that they are reluctant to invest and it causes the company’s stock return to be more likely decreased.

It can be concluded that voluntary disclosure has not been proven to have a good impact on investors’ reactions to the company’s stock return proxy. This finding supports the evidence from the research conducted by Fernando et al. (2017) that shows a negative relationship between voluntary disclosure and abnormal returns. The limitation of this research is that in the process of identifying the independent variable, it still used a partial discussion so that the testing remains subjective. So it is suggested for further research to conduct simultaneous testing by adding several aspects as the object. In addition, for companies, this research can be used as learning to focus more on improving the information that will be disclosed – strategic risk, integrity risk, and technology and information processing risk in order to attract investors’ attention to make investments.


