The Influence of Integrated Reporting and ESG Risk on Sustainable Development Goals in LQ45 Index Companies for the 2020-2022 Period

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Abstract. This study aims to analyze the influence of integrated reporting and ESG risks on sustainable development goals in companies listed in the LQ45 index for the 2020-2022 period. This research method uses a quantitative approach by collecting data from financial reports and company sustainability reports. Integrated reporting is measured using indicators of integrated reporting elements and ESG risks are taken based on risk assessments related to the environment, social and corporate governance published by the IDX in collaboration with Morningstar Sustainalytics. The sampling method used purposive sampling and 36 companies were observed within 3 years so that the resulting data was 108. The results of this research show that integrated reporting has a significant positive influence on sustainable development goals. However, ESG risks have no effect on sustainable development goals. Therefore, companies need to implement integrated reporting practices in contributing to the SDGs.

Keywords: Integrated Reporting, ESG Risk, SDGs, Firm Size, Women on Board

BACKGROUND

Social problems such as global warming, employment, disease, unemployment, human rights, crime, and social inequality have attracted the attention of the general public, especially companies throughout the world (Randa, 2012). Therefore, the United Nations created a sustainable development agenda, namely the sustainable development goals (SDGs).

To achieve the 17 sustainable development goals (SDGs), the role of business is very important, such as managing raw materials, utilizing human resources, and carrying out activities that influence the consumption of environmental resources and health, safety and social welfare (Gunawan et al., 2020). Sustainable development goals (SDGs) must be included in the company's long-term goals and strategies. This will initiate a profound transformation in their business and commercial priorities (Mhlanga et al., 2018).

Integrated reporting has raised corporate reporting standards in recent years (Wachira et al., 2020). Integrated reporting which uses a cohesive multi-dimensional corporate approach, provides interrelated and progressive information about financial and non-financial elements that influence company value creation (Ackers & Grobbelaar, 2022; Kılıç & Kuzey, 2018). Therefore, integrated reports encourage investors and other stakeholders to look beyond short-term economic and financial goals and consider long-term strategies that incorporate a commitment to a sustainable society (Robertson & Samy, 2020; Wachira et al., 2020). As a
result, integrated reports are considered a useful communication tool to help companies adapt their business approach (CGMA, 2018; Izzo et al., 2020; Robertson & Samy, 2020). Companies can benefit from integrated reporting for the SDGs as it allows them to comprehensively describe their contribution to sustainable development. By integrating financial and non-financial information in their reports, companies can show how their business practices support achieving SDGs goals by integrating financial and non-financial information. Integrated reporting also helps companies identify risks and opportunities related to social, environmental and economic aspects, as well as improve transparency and accountability.

The United Nations (UN) started the Sustainable Stock Exchange Initiative to help public companies convey their non-financial information in sustainability reports. This includes data on environmental, social, and governance (ESG). ESG includes a series of activities of a company that are closely related to environmental issues, social relations and corporate governance so that the principles of sustainability in a company can operate (Peng, LS; Issa, 2020). Currently, many global rating agencies have reported environmental, social and governance (ESG) company performance assessments, including the Indonesian stock exchange (IDX), using ESG risk data released by Morningstar Sustainalytics. ESG risk is an assessment to measure how likely it is that a company's ESG will have a negative impact on governance, the environment and society (Maulana, 2023).

Companies with a low level of ESG risk are considered to have good capabilities to handle the company's environmental, social and governance consequences. On the other hand, companies that have high ESG risk are considered to have a poorer ability to handle the impacts of environmental, social and corporate governance. Companies with a low level of ESG risk can make a significant contribution to the country in addressing global problems on the SDGs agenda because the SDGs goals relate to a country's environmental, social and governance issues.

For the research conducted, the samples used were companies included in LQ45 during the 2020–2022 period. Because the LQ45 index is 45 companies listed on the IDX with the highest liquidity in the capital market, it is highly highlighted, including in terms of disclosure as a form of corporate social responsibility (Retno & Priantinah, 2012). In addition, the role of female directors on company boards of directors is very much needed because the presence of women there can improve company performance and encourage balance between female and male directors (Seierstad et al., 2017), which is one of the goals of the SDGs. Therefore, company size and women involved as control variables were chosen to control and reduce the impact that was considered to influence the results of this study.
This research was conducted with the aim of evaluating whether the ESG risks of LQ45 stock products influence or encourage the achievement of the SDGs. This research also investigates whether the elements of integrated reports issued by companies included in LQ45 have been fulfilled and whether integrated reporting practices influence the achievement of the SDGs.

THEORETICAL STUDY

Stakeholder Theory

Stakeholder theory is a framework that states that companies not only have responsibilities towards their shareholders, but also towards various groups that have an interest in the company's operations and impacts including employees, consumers, suppliers, local communities, government, etc. (Rankin et al., 2018). Businesses that apply stakeholder theory will strive to collaborate with various parties more effectively to achieve the SDGs. By incorporating stakeholder theory into their business strategies and practices, companies can play a more active role in supporting the achievement of the SDGs.

Integrated Reporting

Integrated reports are reports that combine financial and non-financial information to provide stakeholders with a more complete and integrated picture of company performance and value (IAPI, 2021).

ESG Risk

ESG risk is an assessment to measure how likely it is that a company's ESG will cause bad consequences related to the environment, social and governance (Maulana, 2023). ESG components for measuring risk according to (Luqyana, 2022) include environmental, social, and governance.

Sustainable Development Goals

The United Nations (UN) established the Sustainable Development Goals (SDGs) as part of the 2030 Agenda for Sustainable Development. The SDGs seek to solve many of the social, economic and environmental problems currently facing the world. These goals cover various topics, such as eradicating poverty, improving health and prosperity, high quality education, gender balance, availability of clean water and sanitation, availability of clean energy, inclusive economic growth, social equality and justice, environmental sustainability, and peace and strong justice. The four pillars of the SDGs are as follows: social development, economy, environment, and law and governance (Bappenas, 2022).
**Firm Size**

*Firm size* is a description of the size or size of a company which is usually considered an important factor in analyzing business performance and strategy. *Firm size* can be measured by various indicators such as total assets, turnover, or the number of employees a company has (Nurain, 2012).

**Women On Board**

*Women On Board* are women representatives who sit or have positions on the board of directors (Puspitasari & Srimindarti, 2022). Having women on the board of directors will bring many benefits, such as increased creativity and innovation as well as a broader view of decision making that is in line with the interests of stakeholders (Luckerath-Rovers, 2013). According to (Ladista et al., 2023) the presence of female directors signals high sensitivity towards people and the environment so that they are more sensitive and care about the surrounding environment.

**Hypothesis Development**

**The Influence of Integrated Reporting on SDGs**

*Integrated reporting* includes information about the company's financial performance, social and environmental impacts, as well as the actions taken by the company to achieve sustainable goals. *Integrated reporting* can have a significant influence on sustainable development goals (Sustainable Development Goals) because it allows companies to transparently report their performance in achieving the SDGs thereby helping stakeholders to understand the company's social, environmental and economic impacts more comprehensively (Adams, 2017). This encourages companies to adopt better practices and integrate social and environmental aspects in their business strategies. Previous research suggests that companies that have implemented *integrated reporting* have good and consistent conditions so that they are preferred by investors and if a company does not strive to contribute to sustainable development then it will be in poor condition and unable to compete with companies that are able to implement integrated reporting. reporting (Putri, 2022).

H1: *Integrated reporting* has a positive effect on *sustainable development goals* in LQ45 index companies.

**The Influence of ESG Risk on the SDGs**

Sustainable economic development requires practices with ESG principles in the fields of *environmental, social and governance* (Li et al., 2021). Based on stakeholder theory, companies carry out ESG practices as a form of awareness of stakeholders. In recent decades, stakeholders have become increasingly aware of the importance of sustainability, especially after global warming, economic crises and market crashes. ESG risk refers to measuring how companies and investors integrate environmental, social and governance issue factors into their business models from a sustainability perspective (Gillan et al., 2021). Previous research states that environmental disclosure by companies
influences sustainable development goals (Nabila & Arnita, 2021). Another study found that corporate governance is also important for meeting stakeholder requests for information about corporate sustainability (Setyawan et al., 2022).

H2: ESG risk has a negative effect on sustainable development goals in LQ45 index companies.

RESEARCH METHODS

This research study is quantitative research with secondary data obtained from company archives included in the LQ45 index for the 2020-2022 period, such as annual reports and ESG risk scores provided by the Indonesia Stock Exchange in collaboration with Morningstar Sustainalytics.

Population and Sample

The population in this research are companies that have been registered in LQ45 for the 2020-2022 period, namely 55 companies. This research uses a sampling method, namely purposive sampling which is based on certain considerations or criteria with the following sample selection results:

<table>
<thead>
<tr>
<th>No</th>
<th>Criteria</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LQ45 index companies for the 2020-2022 period</td>
<td>55</td>
</tr>
<tr>
<td>2</td>
<td>Incomplete companies report SR for 2020-2022</td>
<td>(10)</td>
</tr>
<tr>
<td>3</td>
<td>Companies that do not have an ESG risk score for the 2020-2022 period on the IDX</td>
<td>(9)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>Number of Samples (36 x 3)</td>
<td>108</td>
</tr>
</tbody>
</table>

Operational Variables

1. Dependent Variable
   a. Sustainable Development Goals

   The UN has established Sustainable Development Goals (SDGs) as a global development agenda for the benefit of humans and the Earth with a total of 17 goals that have been agreed upon (Karyanto & Martiana, 2020). So the formula for measuring SDGs practices is:
   \[
   \text{SDGs} = \frac{\text{Jumlah Tujuan Yang Didukung Perusahaan}}{\text{Total Tujuan}} \times 100
   \]

2. Independent Variable
   a. Integrated Reporting

   An integrated annual report consists of 8 elements with 57 indicators that must be contained in a company's annual report. So the formula for measuring integrated reporting adopted from (Kusuma & K, 2020) is:
   \[
   IR = \frac{\text{jumlah indikator dalam elemen yang diungkapkan perusahaan}}{57} \times 100
   \]
b. ESG Risk
This ESG risk is measured by a score obtained from the Indonesia Stock Exchange which collaborates with Morningstar Sustainalytics to provide ESG assessments for public companies. The Indonesian Stock Exchange together with Morningstar Sustainalytics measures ESG risk level assessments using the concept of risk separation, namely exposure and management (BEI, 2022).

3. Control Variables
a. Firm Size
Because the total assets of each company are different and can produce abnormal values, the company size variable in this study is calculated using the logarithm of total assets. Therefore, to avoid abnormal data, total assets must be logged. So, the formula used to measure firm size is (Nurainai, 2012):

\[ \text{Firm Size} = \log(\text{Total Assets}) \]

b. Women On Board
Women on board are women representatives who sit or have positions on the board of directors (Puspitasari & Srimindarti, 2022). In this research, Women on board was measured using the following formula adopted from (Syamsudin et al., 2017):

\[ \text{WOB} = \frac{\text{Total Dewan Direksi Perempuan}}{\text{Total Seluruh Anggota Dewan Direksi}} \times 100 \]

Data analysis method
1. Classic assumption test
a. Normality test
The normality test is carried out to determine whether the distribution of variable data in the regression model has a normal distribution. This was done using the Kolmogorov Smirnov test and processed using SPSS. A significance value of more than 0.05 is considered to indicate that the data has a normal distribution (Siregar, 2015).

b. Heteroscedasticity Test
The heteroscedasticity test is an examination carried out to identify differences in variance from observations in research regression analysis. Using a scatterplot with ZPRED and SRESID is one way to test heteroscedasticity (Ghozali, 2017).

c. Autocorrelation Test
The autocorrelation test is a test carried out with the aim of testing whether in the regression model there is a correlation between confounding errors in the t-period and confounding errors in the previous t-1 period (Ghozali, 2017). In this study, the Durbin-Watson test was used to evaluate autocorrelation (Santoso, 2012).
d. Multicollinearity Test

The multicollinearity test is carried out to determine whether the regression model contains correlation between the independent variables. If there is no correlation between the independent variables, then the model is considered good. A tolerance value greater than 0.01 or equal to a VIF value of less than 10 is the cut-off value commonly used to indicate the presence of multicollinearity (Ghozali, 2017).

e. Hypothesis testing

Hypothesis testing is testing related to partial tests or t-tests which aims to see the relationship between independent and dependent variables partially or individually. The value requirements that must be met are related to significance to determine a relationship where the value of $a = 5\%$.

2. Descriptive Statistics

Statistical analysis, called descriptive analysis, is used to analyze data by describing or describing the data that has been collected (Sugiyono, 2012), where the research will describe the facts and then analyze them and provide understanding and explanation related to the variables of this research, namely integrated reporting, ESG risks, and sustainable development goals (SDGs).

3. Multiple Linear Regression Analysis

Multiple linear regression analysis was used in the research to determine the influence of the independent variables report integration and ESG risk on SDGs in companies included in LQ45 in 2020–2022. The multiple linear regression model used is as follows:

$$Y = \alpha + \beta_1 IR - \beta_2 ESGRISK + \beta_3 FZ + \beta_4 WOB + e$$

RESULTS AND DISCUSSION

In this study, the population was 55 companies that had been listed on the LQ45 index with a time span of 2020-2022. The criteria for LQ45 companies that report complete annual reports and sustainability reports from 2020-2022 are 36 companies and 19 companies that do not report complete reports.

1. Descriptive Statistical Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>IR</td>
<td>108</td>
<td>70.18</td>
<td>96.49</td>
<td>85.7693</td>
<td>5.75801</td>
</tr>
<tr>
<td>ESGRISK</td>
<td>108</td>
<td>11.45</td>
<td>62.02</td>
<td>32.5056</td>
<td>10.89517</td>
</tr>
<tr>
<td>FZ</td>
<td>108</td>
<td>12.83</td>
<td>15.30</td>
<td>13.7091</td>
<td>0.68592</td>
</tr>
<tr>
<td>WOB</td>
<td>108</td>
<td>0.00</td>
<td>0.60</td>
<td>0.1466</td>
<td>0.15316</td>
</tr>
<tr>
<td>SDGs</td>
<td>108</td>
<td>29.41</td>
<td>100.00</td>
<td>71.1355</td>
<td>18.26120</td>
</tr>
</tbody>
</table>

Source: secondary data processed SPSS 29 (2024)
The Influence of Integrated Reporting and ESG Risk on Sustainable Development Goals in LQ45 Index Companies for the 2020-2022 Period

The table of descriptive statistical analysis results shows that the sustainable development goals variable has the smallest value of 29.41%, the largest value of 100%, and the average value is 71.1335%, which means that 71.13% of companies have contributed to achieving the 17 goals. sustainable development by implementing programs that support these goals. The integrated reporting variable has the smallest value of 70.18%, the largest value of, and the average value is 85.7693%, which means that around 85% of companies have implemented the elements contained in integrated reporting. The ESG risk variable has the smallest value or score of 11.45 and the largest score of 62.02. The firm size variable has the smallest value of 12.83, and the largest value is 15.3. The women on board variable has the smallest value of 0%, the largest value is 0.60, and the average value of women on board is 0.1466 or 14.66%, which means that there are only around 14% of women on the board of directors in LQ45 companies during the 2020-2022 period.

2. Classic assumption test
   a. Normality test

   Table 3. Normality Test Results

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Residuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>108</td>
</tr>
<tr>
<td>Kolmogorov-Smirnov Z</td>
<td>0.80</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>0.082</td>
</tr>
</tbody>
</table>

   Source: secondary data processed SPSS 29 (2024)

   The Kolmogorov-Smirnov test results table above shows that the asymptotic value of sig. (2-tailed) research is 0.082. Because the value is more than 0.05, it can be concluded that the data from this study is normally distributed.

   b. Heteroskedasticity Test

   Figure 1. Scatterplot Test Results

   Source: secondary data processed SPSS 29 (2024)

   scatterplot results show that there is no regular pattern in the data distribution, so it can be said that there are no symptoms of heteroscedasticity in the data in this study.

   c. Autocorrelation Test

   Table 4. Durbin-Watson Test Results

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adj. R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.246</td>
<td>0.061</td>
<td>0.024</td>
<td>18.03986</td>
<td>1.995</td>
</tr>
</tbody>
</table>

   Source: secondary data processed SPSS 29 (2024)
Based on the results of the autocorrelation test above, the Durbin-Watson value in the study was 1.995, which means it is between -2 and +2. So, the conclusion based on the testing criteria is that in this research there was no autocorrelation.

d. Multicollinearity Test

Table 5. Multicollinearity Test Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Collinearity statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
</tr>
<tr>
<td></td>
<td>IR</td>
</tr>
<tr>
<td></td>
<td>ESG RISK</td>
</tr>
<tr>
<td></td>
<td>FZ</td>
</tr>
<tr>
<td></td>
<td>WOB</td>
</tr>
</tbody>
</table>

Source: secondary data processed SPSS 29 (2024)

The results of the multicollinearity test showed that all variables had a tolerance value > 0.01 and a VIF value < 10. Therefore, judging from these results, it can be said that each variable in this study did not have symptoms of multicollinearity.

3. Multiple Linear Regression Analysis

Table 6. Results of Multiple Linear Regression Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstand. Coeff.</th>
<th>Stand. Coeff.</th>
<th>Q</th>
<th>Sig</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>5.120</td>
<td>41.254</td>
<td>0.124</td>
<td>0.901</td>
</tr>
<tr>
<td></td>
<td>IR</td>
<td>0.668</td>
<td>0.322</td>
<td>0.211</td>
<td>2.075</td>
</tr>
<tr>
<td></td>
<td>ESG RISK</td>
<td>-0.021</td>
<td>0.182</td>
<td>-0.013</td>
<td>-0.117</td>
</tr>
<tr>
<td></td>
<td>FZ</td>
<td>0.807</td>
<td>2.811</td>
<td>0.030</td>
<td>0.287</td>
</tr>
<tr>
<td></td>
<td>WOB</td>
<td>11.506</td>
<td>12.523</td>
<td>-0.919</td>
<td>-0.919</td>
</tr>
</tbody>
</table>

Source: secondary data processed SPSS 29 (2024)

The equation obtained from the results of multiple linear regression analysis is as follows:
SDGs = 5.120 + 0.668IR - 0.021ESGRISK + 0.807FZ - 11.506WOB + 41.254

The interpretation based on the equation above is a constant value of 5.120, which means that if the IR, ESGRISK, FZ, and WOB variables are assumed to have a value of 0, the SDGs value is 5.120.

The IR variable has a positive coefficient value of 0.668, which means that when the IR value increases by 1 value it will increase the level or value of sustainable development goals by 0.668.

The significance value of the IR variable is 0.040 or 4%. The interpretation of these two values is that the IR variable has a significant positive effect on the company's sustainable development goals.

The ESG risk variable has a negative coefficient value of 0.021, which means it will reduce the level or value of sustainable development goals by 0.021 when the value increases by 1 value.

However, the significance value of the ESG risk variable is 0.907 or 90.7%, so the interpretation
of these two values is that the ESG risk variable has no impact on the company's sustainable development goals.

The FZ variable has a positive coefficient value of 0.807, which means that when the firm size value increases by 1 value it will increase the level or value of sustainable development goals by 0.807. The significance value of the FZ variable is 0.775 or 77.5%. The interpretation of these two values is that the firm size variable has no effect on the company's sustainable development goals.

The WOB variable has a negative coefficient value of 11.506, which means that when the WOB value increases by 1 value it will reduce the level or value of sustainable development goals by 11.506. The significance value of the WOB variable is 0.360 or 36%, so the interpretation of these two values is that women on board have no effect on the company's sustainable development goals.

**DISCUSSION**

1. **The Influence of Integrated Reporting on Sustainable Development Goals**

   The test results show that the integration report coefficient is positive, which means it has a positive influence on the SDGs. The significant value of IR is 0.040 indicating that IR has a significant influence on achieving the SDGs. Therefore, H1 can be accepted or supported because IR has a significant influence on SDGs. This is also in line with stakeholder theory, which emphasizes the importance of considering the needs and interests of various parties, transparency and accountability, and how company decisions and actions impact all parties in the long term. Integrated reporting promotes transparency by presenting comprehensive information about organizational performance, including social, environmental and economic impacts. This enables organizations to engage their stakeholders more effectively in setting priorities and measuring their performance in relation to the SDGs. Therefore, organizations have the ability to ensure that their performance is in line with the SDGs. This finding supports research conducted by Putri (2022) which found that companies in Indonesia are encouraging the achievement of SDGs by using integrated reports (Putri, 2022).

2. **The Influence of ESG Risk on Sustainable Development Goals**

   The test results show that ESG risk has a negative impact on the SDGs, because the ESG risk coefficient is negative and companies included in LQ45 in 2020–2022 do not achieve the SDGs because the significant value of ESG risk is 0.907. Therefore, the H2 created has no support. This is in line with legitimacy theory, which states that companies and society have a social contract because companies are built based on people's trust. Therefore, companies will prioritize maintaining the legitimacy of their business by implementing and respecting
environmental, social and leadership aspects as part of their responsibility to the surrounding community in the hope of helping the sustainability of their business. This study supports research conducted by Elbert et al. (2023) who revealed that because most companies in Indonesia have not used indicator measures that are in accordance with the SDGs or disclosed SDGs indicators that are not in accordance with the company’s business model, ESG has an indirect influence on the achievement of the SDGs in Indonesia. However, research findings conducted by Nabila & Arnita, (2021); Setyawan et al., (2022); and Tapaningsih et al., (2022) do not support the findings of this study.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results and discussions related to integrated reporting and ESG risks on sustainable development goals (SDGs) in LQ45 companies for the 2020-2022 period, the conclusion is that integrated reporting has a significant positive effect on SDGs. ESG risks have no effect on SDGs. This research also tests two control variables, namely firm size and women on board. The results of the regression test show that the two control variables have no effect on sustainable development goals. This shows that the control variables firm size and women on board cannot control the influence between the independent and dependent variables. With this research, it is hoped that future research can test other variables such as business strategy, the level of company social and economic investment funds, and others that can influence sustainable development goals, as well as using different company samples or company samples outside Indonesia to generalize this and previous research.

REFERENCE LIST


