Companies can minimize environmental problems by implementing green accounting. In addition, green accounting can also encourage company cost efficiency. This study aims to evaluate the implementation of Green Accounting on company financial performance. Manufacturing companies as a sector were chosen in this study because they are closely related to environmental issues. The sample was selected purposively from manufacturing companies and listed on the Indonesia Stock Exchange for the 2018-2020 period. The results of the study show that environmental performance has a positive influence on return on assets, environmental activity and environmental disclosure, which are indicators in green accounting that show an influence on a company's financial performance.

**Keywords:** Environmental, Financial Performance, Green Accounting, Return on Asset.

I. INTRODUCTION

The existence of human activities that are increasingly numerous and diverse have an impact on the natural environment. This environmental impact from the exploitation of resources and the environment. Human activities that were done to increase economic growth and prosperity trigger the exploitation of resources and the environment. Those activities have caused global warming, climate change, and environmental damage.

Ningsih & Rachmawati [1] revealed that the richer a country, the greater the impact of environmental damage. Companies are expected to not only seek profit but also pay attention to the surrounding environment. Industrial companies such as manufacturing companies are one that has an impact on the environment. One of the environmental pollution cases, coal dust, carried out by PT Karya Citra Nusantara (PT KCN) which polluted the environment around the company. PT KCN was given a sanction by the DKI Jakarta Environment Agency (DLH) in the form of revocation of its environmental permit. Apart from PT KCN, DLH DKI Jakarta also sanctioned PT HSD & PT PBI for similar problems [2].

Corporate social responsibility (CSR) is one of the actions taken by the company voluntarily in its operations that is related to the environment. According to Qureshi, et al. [3] by disclosing sustainability reporting shows good management implementation and increase the trust of stakeholders. Firm value is one of the factors that investors pay attention to in choosing a company to invest their capital in because company value is related to stock prices. Social responsibility implementations carried out by companies give rise to the concept of green business which in turn presents the concept of green accounting. Green accounting is an integrated recognition, measurement of value, reporting and disclosure of financial, social and environmental objects, transactions or events that are relevant for users in making economic and non-economic decisions [4].

Environmental performance, environmental activity and environmental disclosure are indicators in green accounting. Environmental performance is defined as the company's performance in creating a good environment and preserving the environment [5]. According to Zulhaimi [6], environmental performance itself can be seen as one of the outcomes of implementing an environment-based economy, especially green accounting practices where organizations or companies include and budget costs for environmental preservation and the welfare of the surrounding environment, which are often referred to as environmental costs in expenses. company. In more detail, according to Lako [4], environmental performance is defined as the company's performance in creating a better environment. Disclosure regarding environmental performance or environmental disclosure is a form that is carried out by the company as a responsibility towards the environment which is expected to add to the value of the company [7].

Environmental performance is a mechanism that is carried out voluntarily by companies to the environment. Company achievements with the PROPER program (Company Performance Rating Assessment Program in Environmental Management), conducted by the Indonesia Ministry of Environment and Forestry is used to measure company environmental performance. The PROPER performance rating consists of ranking companies in five colors which are then given a score in succession, namely the lowest score of 1 with black warrants to the highest score of 5 with gold.

Activities that carried out by companies to preserve the environment directly or indirectly are called environmental activities. Environmental costs occurred from company environmental activities can be a long-term investment, because it can give the company a good reputation. The form of environmental activity in the field of...
environmental preservation is corporate social responsibility (CSR). The availability of natural resources in the future is one of the values that investors pay attention to, where a company can operate or run its business in the future. There are various forms of activity that show the existence of green accounting practices namely: (1) The use of environmentally friendly raw materials, (2) The existence of waste management that does not cause pollution or damage to the surrounding environment, (3) The existence of Corporate Social Responsibility (CSR), which is evidence of the company’s concern for the surrounding environment [8].

Environmental disclosure is an insight of Corporate Social Responsibility activities. Solikhah et al. [9] exposed that disclosures that contain information about the environment have a purpose as a medium between the public, companies and investors that are used to make economic, social and political decisions. Environmental disclosure can be measured with the ratio of the proportion of environmental disclosure and measurement [10]. This study uses the Global Reporting Initiative (GRI) in measuring environmental disclosure. Environmental disclosure is information that is voluntarily disclosed, either qualitatively or quantitatively which related to the company’s activities and its social responsibility. Environmental disclosures from annual reports issued by companies using the Global Reporting Initiative (GRI). It uses the scoring method, which gives a score of 1 for companies that disclose their environment in accordance with the GRI and 0 for companies that do not disclose it and then the disclosures will be totaled.

High corporate value will be followed by the prosperity of shareholders, the wealth of shareholders and the company can be represented from the market price of the company’s value [11]. Juminingan [12] explained that financial performance is a description of the company’s financial condition in a certain period in regards of raising funds and distributing funds, which are usually measured by capital adequacy, liquidity, and profitability. One of the ratios in assessing a company’s financial performance in generating profits is Return on Assets (ROA). Kasimir [13] argues that ROA is a ratio that provides information on how and how much profit the company gets by using certain assets.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Disclosure of Corporate social responsibility (CSR) is one of the information that must be included in the company’s annual report. Companies must inform their social and environmental responsibility in annual reports in addition to preparing financial reports. The Indonesian government has also implemented sustainability practices and issued several regulations related to CSR. Regulation of the Minister of Environment and Forestry of the Republic of Indonesia No. 1 of 2021, Regulation of the Minister of SOEs of the Republic of Indonesia No. 5 of 2021 and SE OJK No. 16 of 2021 which is implemented to regulate corporate sustainability governance. This regulation regulates environmental management, social and environmental responsibility to the principles of sustainable finance. Through the disclosure of Corporate Social Responsibility in the annual financial report, shareholders and stakeholders can evaluate efforts to address the climate crisis and environmental preservation to encourage sustainability by aligning industrial practices with economic growth, social balance and environmental preservation.

Beneficial concepts between companies and stakeholders are able to build a company’s business continuity [14]. Efforts made by the company to maintain relationships with stakeholders and to safeguard the interests of the company are described in the sustainability report [15]. Orlitzky et al. [16] revealed that environmental performance and disclosure is an investment that creates opportunities to improve the company’s financial performance in the future. Therefore the organization has accountability to its stakeholders. If the company ignores the interests of the stakeholders it can taint the company’s public image, which can affect the company’s value.

Legitimacy theory asserts that companies continue to strive to ensure that they operate within the norms that exist in the community or environment where the company is located where they try to ensure that company activities are accepted by outsiders [17]. Without a legitimacy companies cannot survive regardless of how well their financial performance is. The two theories, both legitimacy theory and stakeholder theory, are theories that explain the motivation of managers or organizations to disclose sustainable reports. If stakeholder theory is motivated by accountability to stakeholders, legitimacy theory uses motivation to gain approval or acceptance from society.

There are several previous studies that also discuss the effect of green accounting on profitability. Nor et al. [18] showed that there is a significant relationship between the total of environmental disclosure and profit margins. Likewise, Tahu [19] reveals that environmental performance and environmental disclosure affect financial performance.

From the literature review, the following hypotheses can be determined

- **H1**: environmental performance has a significant influence on financial performance
- **H2**: environmental activity has a significant influence on financial performance
- **H3**: environmental disclosure has a significant influence on financial performance
III. RESEARCH METHODS

The research method used in this study is a quantitative method. The data collection technique used is a secondary data (financial reports and annual reports) of manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2018-2020. Purposive sampling method was used in this study as shown in Table I. There are several criteria that must be met in order to obtain a sample that can be used:

2. The sample company is a manufacturing company that participates in (PROPER).
3. The sample companies publish audited annual reports from 2018-2020 which contain CSR information.

<table>
<thead>
<tr>
<th>TABLE I. PURPOSIVE SAMPLING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criteria</td>
</tr>
<tr>
<td>Manufacturing companies listed on the IDX for the year 2018-2020</td>
</tr>
<tr>
<td>Companies that are not listed on the IDX consecutively for the year 2018-2020</td>
</tr>
<tr>
<td>Companies that do not publish financial reports for the year 2018-2020</td>
</tr>
<tr>
<td>Companies with financial reports not denominated in rupiah</td>
</tr>
<tr>
<td>Companies that experience losses in the year 2018-2020</td>
</tr>
<tr>
<td>Manufacturing companies that are not registered follow PROPER</td>
</tr>
<tr>
<td>Companies that do not provide social responsibility cost disclosure information in their financial statements</td>
</tr>
<tr>
<td>The number of companies that meet the criteria</td>
</tr>
<tr>
<td>Total sample for this research (20 x 3)</td>
</tr>
</tbody>
</table>

The variables in this study are:

1. Environmental performance (X1). It is measured by the PROPER program organized by the government, in five colors namely, Gold = 5, Green = 4, Blue = 3, Red = 2, Black = 1.

2. Environmental activity (X2). It is measured based on environmental costs. Measurement of environmental activity measured by company environmental cost [20]

\[ \text{Environmental costs} = \frac{\text{Cost}}{\text{Profit}} \]  

3. Environmental Disclosure (X3). Environmental disclosure is measured based on GRI disclosures using the scoring method, which gives a score of 1 for companies whose environmental disclosures comply with GRI and 0 for companies that do not disclose them [10].

\[ ED = \frac{\text{The number of items disclosed by the company}}{\text{Number of GRI environmental disclosure items}} \times 100\% \]  

4. Financial performance (Y) is measured based on profitability. The financial ratios used to evaluate the company's financial condition and performance is:

\[ \text{ROA} = \frac{\text{Net income after tax}}{\text{Total Asset}} \]  

This research was carried out by testing the hypothesis which was carried out using multiple linear regression analysis. The regression model formed in this study is as follows:

\[ \text{ROA} = a + \beta_{EP} \times X1 + \beta_{EA} \times X2 + \beta_{ED} \times X3 + e \]  

ROA = Return on Asset
EP = Environmental Performance
EA = Environmental Activity
ED = Environmental Disclosure
e = residual of error
IV. RESULTS AND DISCUSSION

A. Descriptive Statistical Analysis

The statistical test results in this study with normally distributed data are presented in the Table II. It shows that the lowest score for environmental performance is 2, which are Indal Aluminum Industry Tbk in 2019, Indo Acidatama Tbk in 2020, Kabelindo Murni Tbk in 2018, Kino Indonesia Tbk in 2019. While the highest score is 5, for Herbal Medicine Industry and Sido Pharmacy Tbk in 2020. With an average value of 3.13 and a standard deviation of 0.536. The lowest value for environmental activity is 0.0001, for Indo Acidatama Tbk in 2018, while the highest value is 0.5029, namely Voksel Electric Tbk in 2020. And the average value is 0.0686 and the standard deviation is 0.1173. Besides, the lowest value for environmental disclosure is 0.2747 which is owned by Ultra Jaya Milk Industry Tbk in 2020. While the highest value is 0.7692, which is Indal Aluminum Industry Tbk in 2018. With an average value of 0.5024 and a standard deviation of 0.1034. Return on Assets (ROA) has the lowest value of 0.0005, while the highest score is Chitose International Tbk in 2020. The average value is 0.7170 and the standard deviation is 0.0577.

B. Classic assumption test

The classic assumption test in this study consists of four types of tests: normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test. The sample data used passed the four types of classic assumption tests.

C. Coefficient Determination Test (R2)

In this study, the coefficient of determination test (R2) has the objective of measuring the ability of the independent variables to explain very limited variations in variables. The test results for the coefficient of determination (R2) in Table III which shows the Adjusted R Square value is 0.373 or 37.3%. It means that variation of the dependent variable, namely return on assets can be explained by variations of the independent variables, namely environmental performance, environmental activity, environmental disclosure with a value of 37.3%, while the remaining 62.7% is explained by other factors do not present in this study.

D. F Test

The F test in this study was measured by the significance level of 5%, so if (sig) <0.05 and f-count > F-table means that the independent variables simultaneously influenced the dependent variable and vice versa. Table IV, the result from multiple linear regression analysis shows the F value of 12.702, which is greater than the F table value of 2.77 and a significance of 0.000 which is less than 0.05. Then the regression model can be used to predict return on assets or it can be said that the independent variables environmental performance, environmental activity, environmental disclosure simultaneously affect the dependent variable return on assets (ROA).

E. T Statistic Test

The result of partial significance test (T Test) is shown in the Table V. From the results of multiple linear regression tests, the regression equation is obtained as follows:

\[ \text{ROA} = 0.010 + 0.044 \text{ Environmental Performance} - 0.190 \text{ Environmental Activity} - 0.127 \text{ Environmental Disclosure} + e \]

From the multiple linear regression equation above, it can be explained as follows:

1. The constant value (ROA or Return on Assets) has a positive value of 0.010. The positive sign means that it shows a unidirectional influence between the independent variable and the dependent variable. If all the independent variables which include environmental performance, environmental activity, environmental disclosure are 0 percent or do not change, then the value of ROA is 0.010.
2. The value of the regression coefficient on the environmental performance variable is 0.044. This value indicates a positive or unidirectional effect between environmental performance variables and return on assets (ROA). Where if the environmental performance variable increases by 1%, the ROA variable will increase by 0.0044. Assuming other variables remain constant.
3. The value of the regression coefficient on the environmental disclosure variable has a value of -0.127. Assuming that other variables are held constant. This shows that if environmental disclosure increases by 1%, then on the contrary the variable return on assets (ROA) will decrease by 0.127.
TABLE II. 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>Environmental Performance</td>
<td>60</td>
<td>2</td>
<td>5</td>
<td>3.13</td>
<td>0.536</td>
</tr>
<tr>
<td>Environmental Activity</td>
<td>60</td>
<td>0.0001</td>
<td>0.5029</td>
<td>0.068598</td>
<td>0.1173268</td>
</tr>
<tr>
<td>Environmental Disclosure</td>
<td>60</td>
<td>0.2747</td>
<td>0.7692</td>
<td>0.502378</td>
<td>0.1034244</td>
</tr>
<tr>
<td>ROA</td>
<td>60</td>
<td>0.0005</td>
<td>0.2426</td>
<td>0.071697</td>
<td>0.0576500</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE III. COEFFICIENT DETERMINATION TEST (R²)

<table>
<thead>
<tr>
<th>Model Summary</th>
<th>b</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.606b</td>
<td>0.405</td>
<td>0.373</td>
<td></td>
</tr>
</tbody>
</table>

TABLE IV. F TEST

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>0.079</td>
<td>3</td>
<td>0.026</td>
<td>12.702</td>
<td>0.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>0.117</td>
<td>56</td>
<td>0.002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>0.196</td>
<td>59</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE V. T TEST

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
<th>Std. Error</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>0.010</td>
<td>0.043</td>
<td>0.244</td>
<td>0.808</td>
<td></td>
</tr>
<tr>
<td>Environmental Performance</td>
<td>0.044</td>
<td>0.011</td>
<td>0.409</td>
<td>3.925</td>
<td>0.000</td>
</tr>
<tr>
<td>Environmental Activity</td>
<td>-0.190</td>
<td>0.053</td>
<td>-0.387</td>
<td>-3.564</td>
<td>0.001</td>
</tr>
<tr>
<td>Environmental Disclosure</td>
<td>-0.127</td>
<td>0.061</td>
<td>-0.228</td>
<td>-2.077</td>
<td>0.042</td>
</tr>
</tbody>
</table>

F. Effect of Environmental Performance on Financial Performance

Based on research data that has been conducted from 60 sample data, it proves that environmental performance has a positive influence on return on assets. Based on the t test table, it shows that environmental performance has a significance value of 0.000 which is lower than 0.05 and the value of the t count is 3.925 which is greater than the t table of 2.77. Thus, it can be concluded that environmental performance has a positive influence on return on assets as a measure of company financial performance. This proves that the higher the environmental performance carried out by the company, the higher the company's profit. In line with research conducted by Dita & Ervina [21] which revealed the effect of environmental performance through the PROPER program on company profitability by measuring return on assets (ROA). With the award that is obtained from the PROPER program, which is participated in by the company, it can create a good image for the company where this will have an impact on stakeholders to assess the company's financial performance. The better the company's image, the more influential it will be in increasing company sales which will have an impact on increasing company profits.

G. Effect of Environmental Activity on Financial Performance

Based on the t test table, it shows that there is an influence of environmental activity on the company's financial performance with financial performance. Environmental activity has a significance value of 0.001 which is lower than 0.05 and the value of the t count is -3.564. It can be concluded that environmental performance has a negative influence on company financial performance. Environmental activity is an activity carried out by companies to preserve the environment as part of green accounting. Environmental activity is an activity carried out by the company to preserve the environment, where in carrying out these activities it causes costs to be incurred by the company and can reduce return on assets (ROA). This research is in line with Asjuwita & Agustin [20] which shows that preserving the environment results in environmental costs incurred by companies but will be able to influence and be used as a strategy to improve the company's reputation.
H. Effect of Environmental Disclosure on Financial Performance

The results of this study indicate that environmental disclosure as an indicator of green accounting has an influence on return on assets (ROA). The t test table shows that environmental disclosure has a significance value of 0.042 which is lower than 0.05 and the calculated t value of -2.077 is smaller than the t table of 2.003. This shows that the higher the environmental disclosure, the higher the company’s profitability. Environmental disclosure is a process used by companies to disclose information related to company activities that have an impact on social and environmental conditions, which is disclosed using the Global Reporting Initiative (GRI). The results of this study are in line with Lusiana et al. [22] which state that there is a significant influence between environmental disclosure on profitability. Disclosure of environmental disclosure can provide information about how the company is socially responsible towards society which is disclosed in the financial statements. Where with this disclosure stakeholders get information about corporate social responsibility in its operations and become a consideration in making decisions regarding investments related to the company.

From the study results, the independent variables consisting of green accounting measured from environmental performance, environmental activity, and environmental disclosure simultaneously have an influence on financial performance. Environmental performance reflects of how the company takes part to preserve the environment. It is undeniable that the company's operations will have an impact on the surrounding community and the environment. Following government programs to preserve the environment such as ranking in PROPER, can influence stakeholder interest, especially investors and the public. The company's environmental performance has an influence on investors, to assess whether the company has performed in accordance with the values in society.

Environmental activity reflects the activities that companies carry out to preserve the environment directly or indirectly. Where the environmental preservation activities will incur costs that will be incurred by the company. Environmental costs are calculated by comparing the costs required in the company's corporate social responsibility activities with net income. Environmental costs are included in CSR costs, which are environmental responsibility costs. This environmental cost information will be presented in the company's annual report which can assist investors in making decisions related to the company and have an influence on company profits. Disclosure of social activities related to the environment or environmental disclosure also provides information in the annual report issued by the company. Environmental disclosure has an influence on corporate governance to reduce problems that arise by monitoring management actions, limiting manager behaviour, and reducing the risks held by shareholders and stakeholders.

V. CONCLUSION

Based on the result, it shows that environmental performance, environmental activity, environmental disclosure have an influence on the company's financial performance in manufacturing companies listed on the Indonesia Stock Exchange in 2018-2020 which can be seen from the value of each variable which is lower than 0.005. This shows that green accounting proxied by environmental performance, environmental activity, and environmental disclosure can affect the assessment of financial performance, especially in manufacturing companies.

The results of this study implicated that companies must be aware that green accounting proxied by environmental performance with PROPER ratings can give good image and public trust. Environmental activity as a corporate social responsibility towards the surrounding environment by incurring environmental costs which are part of social costs is expected to be one of the long-term investments made by the company. Then environmental disclosure by measuring with GRI can attract the attention of stakeholders to the company to increase profitability. Thus providing information related to green accounting in the company's annual report will make stakeholders interested in the company's financial performance and can increase company profits and deal with environmental problems that arise.

Based on the results of the research and the conclusions that have been described, the suggestions that can be given are, (a) For companies, so that it can be taken as a consideration to pay attention to green accounting, especially disclosing information about the environment in accordance with GRI standards, following environmental performance assessment programs such as PROPER and costs incurred for the environment as a form of social responsibility, (b) For investors, the results of this study can be used as a consideration or reference in assessing manufacturing companies in carrying out social responsibility towards the surrounding environment, (c) For further research, to expand in terms of the company population used and use other indicators in green accounting that can affect financial performance. More quantity or variety in using profitability ratios to measure a company's financial performance.

Limitations that may affect the results in this study and require improvement, namely, (1) The independent variables used in the study are limited to only environmental performance, environmental activity, environmental disclosure which are used as indicators of green accounting, (2) The samples used in this study are limited in manufacturing companies, (3) The research year period used is only the 2018-2020, (4) There is no definite way to calculate green accounting in Indonesia.
REFERENCES


