The role of environmental performance to strengthen firm values to financial performance

Hadi Pramono[1], Abdul Rohman[2]
[1]Department of Accounting, Universitas Diponegoro, Universitas Muhammadiyah Purwokerto, Indonesia
[2]Department of Accounting, Universitas Diponegoro, Indonesia
Email corresponding author: pramono.hadi.75@gmail.com

Abstract

Firm value is very closely related to financial performance, which reflects management's achievements in generating profits. For investors, financial performance is an important aspect in determining investment. In addition to financial results, a company's environmental compliance is also important information to attract and influence investors' perceptions, which can add value to the company. Tobin's Q is used to measure the value of the corporate. ROA and ROE measure financial performance, while environmental performance is measured by PROPER. The study results show that ROE positively affects firm value, while ROA has no effect. Environmental performance can strengthen the impact of ROA on firm value, while the relationship between ROE and firm value cannot be strengthened. However, at an alpha level of 0.1, financial results can increase the impact of ROE on firm value.

Keywords: Firm value, financial performance, environmental performance

INTRODUCTION

The era of globalization is marked by the openness of information and its ease of access so that business becomes increasingly competitive. This can be seen by the many companies listed on the IDX, namely 787 companies (idxchannel.com). Intense business competition makes companies must be able to increase value so that investors are interested in investing. Several factors can affect the firm value, one of which is financial performance (Yulianto & Widyasasi, 2020; Deswanto & Siregar, 2018).

Zabetha et al. (2018) explain that firm value is inseparable from the disclosure of financial performance. Financial performance is a representation of the company's performance in earning profits. For investors, financial performance is one aspect of determining a stock investment. Thus, the better the company's financial performance, the more it adds value.

The traditional economic view sees that the company is only oriented to maximizing profits and prospering the company's owners/shareholders. However, in the current era, in carrying out its operational activities, in addition to being profit-oriented and responsible to shareholders, it must also be responsible to users/stakeholders, the environment, and society, which is also known as 3P (profit, planet, and people) (Hussain et al., 2018). Accountability to users, the environment, and society are

important to disclose by companies listed on the stock exchange (Verrecchia, 2001; Kolk & Van Tulder, 2010). Many companies are starting to report their ethical, social, and environmental behavior, which can affect their market share (Sharma, 2019), which is expected to increase firm value in front of investors.

Martin & Moser (2016) state that potential investors positively respond to companies that voluntarily disclose their green investment initiatives. This is in line with what was conveyed by Ghoul et al. (2011), that there are benefits in the form of lower capital costs if companies carry out social and environmental responsibility. In line with stated (Iatridis, 2013), if environmental disclosure contains relevant information value, environmental performance can attract and influence investor perceptions, which benefits the company economically and will ultimately be reflected in firm value.

According to Walhi, in 2021, there will be 159 million hectares of land, of which corporations will already control 82.91%. Based on IPBES data, Indonesia annually loses 680,000 hectares of forest. In addition, 101 out of 105 rivers were polluted with moderate to severe conditions (walhi.or.id). Seeing these conditions, the company's commitment to preserving the environment is important.

Several studies have found that ROA affects firm value (Husna & Satria (2019); Ramadhana & Juniarti, (2022). While research conducted by Sondakh et al. (2019), Dzulhijar et al. (2021) obtained ROA results that do not affect firm value. Research related to the effect of ROE on firm value, among others, was carried out by Chasanah & Mariana (2021), Nursasi (2020), and Rochmah & Fitria (2017), which states that ROE has a positive effect on firm value, meanwhile Light & Riwoe (2018), Ulfa & Fun (2018) stated negative effect. Improving and maintaining financial performance is an obligation for a company so that the shares owned by the company are still known and popular among investors. Thus, if the company's financial performance is good, the value of the company will also be good. Therefore, better financial performance can reflect the capability of large companies to provide returns to investor expectations.

LITERATURE REVIEW

Signaling theory

Signaling theory concerns reducing information asymmetry between the two parties (Spence, 2002). This theory is related to information asymmetry, which indicates the existence of information asymmetry between company management and parties interested in the information. This theory is based on the premise that management will provide information to investors when there is information that benefits the company, such as firm value. However, investors do not trust this information because of the assumption that managers have an interest so in the company and will provide signals regarding the company's financial policies as a form of ownership.

Quality companies will be able to demonstrate successful financial performance, such as paying dividends and paying interest in the long term. Conversely, low-quality companies will not be able to maintain these payments, as a result, this signal influences outsiders' perceptions of company quality concerning firm value (Connelly et al., 2011)

Legitimacy theory

Dowling and Pfeffer (1975) first put forward this legitimacy theory, which focuses on the interaction between companies and society. This theory states that society is an important factor in the long-term development of a company. Companies are required to communicate their responsibilities to the public and investors so that they respond positively to the company.

Legitimacy theory is seen as a systems-oriented perspective, which believes that companies can influence and be influenced by the people in which they operate. Therefore, the theory of legitimacy is used by companies as a basis for disclosing information about social responsibility activities. Deegan (2002) explained that legitimacy could be obtained when there is compatibility between the existence of a company that does not damage or is not in line with the existence of a value system in society and the environment. In addition, it is hoped that the disclosure of social responsibility reports will bring benefits to the company, namely: gaining legitimacy from the public side and increasing company profits in the future.

The theory of legitimacy is also in line with the triple bottom line concept, in which companies in their continuous operations must pay attention to three important aspects, namely profit, people, and planet. Companies do not only focus on profits but also need to pay attention to the community and environmental impacts of company activities (Elkington, 1998).

Hypothesis Development

Financial performance can be important information in making investment decisions because it reflects the health and prospects of a company. Investors can assess the company's financial statements before investing (Karim and nature, 2013).

Said and Ali (2016) argues that profitability is a company's ability to generate profits related to asset management. The higher the ROA and ROE, the better the company is at increasing investor confidence to invest. Under these conditions, the company will increase its share price. The profitability ratio measures the rate of return the company receives from using all assets. Based on this, hypothesis 1 can be formulated as follows:

H_{1a}: ROA can positively influence firm value

H_{1b}: ROE can positively influence firm value

Concern for the environment reflects the company's alignment in protecting the environment from damage and motivates it to incorporate environmental concern into

its strategy (Banerjee et al., 2003). Companies that care about the environment can focus internally and externally. Companies that care about the external environment will look after external communities, such as consumers, financial partners, or external citizens who significantly impact organizational decision-making. Likewise, companies that care about the internal environment will focus their efforts on preserving the environment (Gilal et al., 2019). According to Deswanto & Siregar (2018), if the company wants its share price to increase, it can use environmental responsibility to attract investors' attention. Qiu et al. (2016) explained that companies that carry out environmental performance tend to have a good reputation and can build positive investor perceptions of their financial performance. Based on this, hypothesis 2 can be formulated as follows:

H_{2a}: Environmental performance can strengthen the effect of ROA on firm value

H_{2b}: Environmental performance can strengthen the effect of ROE on firm value

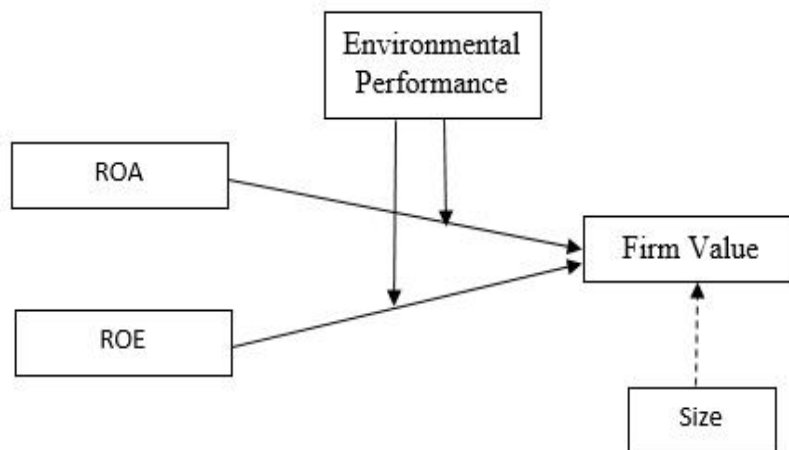Based on these premises, the research model developed is shown in Figure 1.

Figure 1. Research Model

METHODS

The population of this study is companies listed on the Indonesia Stock Exchange. The sampling method uses conditional sample selection, namely companies that meet environmental performance and participate in the company performance rating program in environmental management (PROPER) from 2019 to 2021.

Financial performance is an independent variable that is defined as the results of the company's performance over a certain period and is presented in the company's published financial reports (Nursassi, 2020). Two ratios are used to measure financial performance: ROA and ROE (Cho, 2019). Environmental performance as a moderating variable in the relationship between financial performance and firm value.

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Environmental performance is a company's activities related to environmental maintenance. This study is based on the definition proposed by the Ministry of Environment and contains two categories: conformity and assessment criteria that exceed regulatory requirements (non-compliance) (www.proper.menlhk.go.id). Some researchers measure environmental performance using environmental ratings based on third-party assessments (Yadav et al., 2016). This study uses the Ministry of Environment's PROPER rating to measure environmental performance, is shown in Table 1.

Table 1. PROPER rating score

Rating	Information	Score
Gold	Very very good	5
Green	Very good	4
Blue	Good	3
Red	Bad	2
Black	Very bad	1

Firm value is defined as a reflection of the shareholder's perception of the company to the share price. When the company's value is high, the prosperity of shareholders will be guaranteed so that shareholders will have confidence in the company's prospects (Mardiana & Wouriani, 2019). The firm value is calculated using Tobin's Q. Company Age (UP) was added as a control variable in this study. UP is calculated by the company's life span from the year it was founded to the research period.

This study uses panel data regression analysis with three models: the PLS approach, the Fixed Effect Model (FEM), and Random Effect Model (REM).

Test hypotheses 1_a and 2_a with the following statistical equation (1).

Firm Value = α + β_1ROA + β_2Environmental Performance + β_3ROA*Environmental Performance + β_4Age + ε ………………………………………………………….(1)

Test hypotheses 1b and 2b with the following statistical equations (2).

Firm Value = α + β_1ROE + β_2Environmental Performance + β_3ROE*Environmental Performance + β_4Age + ε ...………………………………………………...……….(2)

RESULTS

The number of companies listed on the Indonesia Stock Exchange in 2019-2021 is 787 companies. Based on these criteria, a sample of 63 companies was obtained, so the total data obtained was 189. Description of the data obtained is presented in Table 2.

Table 2. Descriptive statistics

	Firm value	ROA	ROE	Environmental performance
Means	1.786406	0.063506	0.105547	3.264550
Median	1.118306	0.038625	0.075010	3,000000
Maximum	16.26333	0.611327	1.450882	5,000000
Minimum	0.331977	-0.375159	-0.554233	2,000000
std. Dev.	2.109565	0.121835	0.231292	0.679379
Sum Sq. Dev.	836.6500	2.790649	10.05726	86.77249

Table 2 shows that the average firm value is 1.79, which means that the firm value is high and indicates if the firm value is greater than the total recorded assets. The average ROA shows that financial performance with asset management can generate a profit of 6.35% as measured by asset management, whereas using equity can generate a profit of 10.5%. The environmental performance of the sample companies shows a value of 3.26 which means it is between blue and green but tends to be in a good position.

Classic Assumption Test

Based on the normality test for 189 data, it produces a probability value below 0.05, so the data is not normally distributed. For this reason, data reduction is carried out in the outlier category. After that, there were 153 data remaining, then tested for normality again. The results of the normality test can be seen in Figure 2. The normality test produces a probability value of 0.148, so the data is normally distributed.
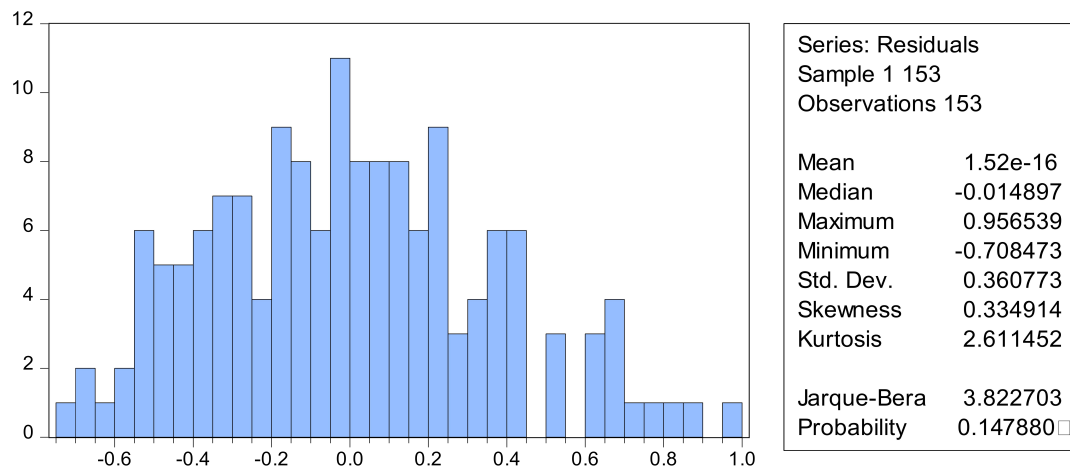

Series: Residuals
Sample 1 153
Observations 153

Mean	1.52e-16
Median	-0.014897
Maximum	0.956539
Minimum	-0.708473
Std. Dev.	0.360773
Skewness	0.334914
Kurtosis	2.611452
Jarque-Bera	3.822703
Probability	0.147880

Figure 2. Normality test

Multicollinearity test is carried out using the test Variance Inflation Factors. The results of the multicollinearity test get centered VIF results below 10, so the data is free from multicollinearity (Table 3).

Table 3. Multicollinearity test

Variables	Coefficient variances	Uncentered VIF	Centered VIF
C	0.020629	23.77120	NA
ROA	0.081934	1.719138	1.419337
ROE	0.043245	1.696386	1.434081
EP	0.001875	24.09386	1.017042

This test is carried out using the model Breusch-Pagan-Godfrey. The test results show that the probability value of 0.8092 is greater than 0.05, so the data is heteroscedasticity-free (Table 4).

Table 4. Heteroscedasticity test

F-statistics	0.315900	Prob. F (3,149)	0.8139
Obs*R-squared	0.966991	Prob. Chi-Square (3)	0.8092
Scaled explained SS	0.738924	Prob. Chi-Square (3)	0.8640

The autocorrelation test results yield a Durbin-Watson (DW) value of 1.889, so it is declared free from autocorrelation because the DW value is between -2 and 2. The Breusch-Godfrey Serial Correlation produces a probability value of 0.59, greater than 0.05, so it is declared free from autocorrelation (Table 5).

Table 5. Durbin-Watson & Breusch-Godfrey serial correlation LM test

Mean dependent var	0.067190
SD dependent var	0.479456
Akaike info criterion	0.844595
Schwarz criterion	0.923822
Hannan-Quinn criter.	0.876778
Durbin-Watson stat	1.889409
Obs*R-squared	1.059144
Prob. Chi-Square (2)	0.5889

Test hypotheses 1_a and 2_a using the Fixed Effect Model (FEM). This is because, based on the Chow test, with a probability value of 0.000 then, choosing FEM over the Common Effect Model (CEM). After the Hausman test was carried out, a probability value of 0.05 was obtained so that FEM was still chosen for hypothesis testing rather than the Random Effect Model (REM). The results of the FEM test can be seen in Table 6.

Table 6. Hypothesis test 1_a and 2_a

Variables	coefficient	std. Error	t-Statistics	Prob.
C	3.435274	5.190445	0.661846	0.5102
ROA	0.141064	0.605082	0.233132	0.8163
ROA*EP	0.239033	0.120849	1.977952	0.0518
Size	-0.044708	0.020748	-2.154750	0.0345

Test hypotheses 1_b and 2_b using the Random Effect Model (REM) results. This was done because the Chow test results chose FEM compared to CEM. After that, the Hausman test was carried out to compare FEM with REM, and a probability value of 0.1129 was obtained so that REM was chosen for hypothesis testing. REM test results can be seen in Table 7.

Table 7. Test of hypotheses 1_b and 2_b

Variables	coefficient	std. Error	t-Statistics	Prob.
C	-1.169367	0.784006	-1.491528	0.1383
ROE	3.104270	0.788421	3.937324	0.0001
ROE*EP	-0.440316	0.232782	-1.891536	0.0608
Size	0.005189	0.002123	2.444604	0.0159

DISCUSSION

Table 6 shows that the probability value of the influence of ROA on firm value is 0.8163, which means that ROA does not influence firm value, so H_{1a} is rejected. However, if the effect of ROA on firm value has interacted with environmental performance, then the effect becomes significant with a probability value of 0.052 so that H_{2a} is accepted.

The H_{1a} hypothesis that ROA affects firm value is not supported, indicating that investors do not see the company's ability to generate profits from asset management. This is also supported by descriptive statistical data, which shows an average ROA value of 6.3% which indicates that the assets owned by the company are only able to produce a ratio of 0.06: 1. However, interesting from the results of this study results that environmental performance can strengthen the relationship between ROA and firm value. This indicates that the company's concern for the environment is a factor important carried out by the company. Based on Table 7, it is also known if the effect of ROE on firm value shows influence significantly positively with a probability value of 0.0001, so H_{1b} is accepted. The interaction between ROE and environmental performance has a probability value of 0.061, so H_{2b} is rejected at a level of $\alpha = 0.05$, but acceptable at a level of $\alpha = 0.1$.

These results indicate if investors see the company's ability to manage equity to make a profit. This can be seen in the descriptive statistical data, which shows an average value of ROE of 10.5%. In addition, the company's concern for environmental performance is also a concern for investors.

CONCLUSION

This study examines the effect of financial performance proxied by ROA and ROE on firm value, with environmental performance as a moderating variable. The results show that ROA cannot influence firm value, but if it has interacted with environmental performance, the effect of ROA becomes significant on firm value.

While the results of the test of the effect of ROE on firm value show that ROE can influence firm value, environmental performance can also strengthen the effect of roe on firm value even though it is at an alpha level of 10%. Suggestions for future researchers to add other variables, such as company ownership and type of company, because these two variables may impact environmental performance policies.

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Pramono[1], Rahman[2]