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THE IMPLICATION OF PROFITABILITY AS A MODERATING IN THE RELATION OF ENVIRONMENTAL CERTIFICATION AND FINANCIAL PERFORMANCE TO MARKET REACTION

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Abstract

This study aims to analyze and empirically evaluate the effect of financial and non-financial information submitted through annual reports on the market reaction, proxied by trading volume activity. A study was conducted in 103 manufacturing companies listed on the Indonesian Stock Exchange for the 2017-2021 period with 515 annual reports. The panel data moderating regression results show that environmental certification and financial performance, measured by Sales growth, market value added, and Tobin's Q Ratio, do not affect the market reaction. However, return on equity as a Profitability measurement can strengthen the relationship between environmental certification and sales growth in trading volume activity. This study implies that a high return on equity in companies attracts an investor more than environmental certification. Besides, it could change the confidence of the investor to invest in a company that has been obtaining ISO 14001 certificates.

INTRODUCTION

During the last five years, the number of investors in the Indonesian capital market has increased due to the ongoing outreach and education conducted by self-regulatory organizations (SRO) and capital market players. Indonesia Stock Exchange launches the "Yuk Nabung Saham" campaign, the Capital Market School (SPM), and the provision of an educational portal ", InvestHub". This program carried out Information dissemination and education on investment aimed at increasing public awareness of the importance of investing (KSEI, 2022) .

PT. Indonesian Central Securities Depository noted that from 2017 to August 2022, there was significant investor growth. In 2021, the number of investors in the Indonesian capital market reached 7,489,337, experiencing very significant investor growth of 92.99 percent from the previous year. PT. Indonesian Central Securities Depository recorded investor growth in stock instruments that have increased over the last five years. A very significant increase in stock investors occurred in 2021 by 103.60 percent, reaching 3,451,513 (KSEI, 2022). The following is a graphic image of investor growth in the Indonesian capital market over the past five years.

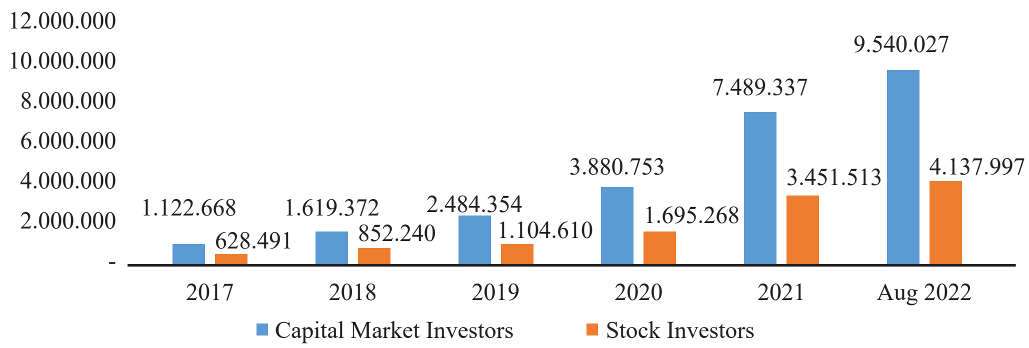

Figure 1. An Investor Growth

The increasing number of investors indicates a bright prospect in the Indonesian capital market. The increase in the number of investors also triggered an increase in stock trading volume on the Indonesia Stock Exchange. In 2020, the stock trading volume reached 2,752,471.35 million shares; in 2021, it increased by 85.15 percent, equivalent to 5,096,450.14 million shares. The average daily trading frequency of stocks increased in 2021 by 91.1 percent, with 1.29 million daily stock transactions (Purwanti, 2022). The following is a graphic image of stock trading activities on the Indonesia Stock Exchange for the last five years.

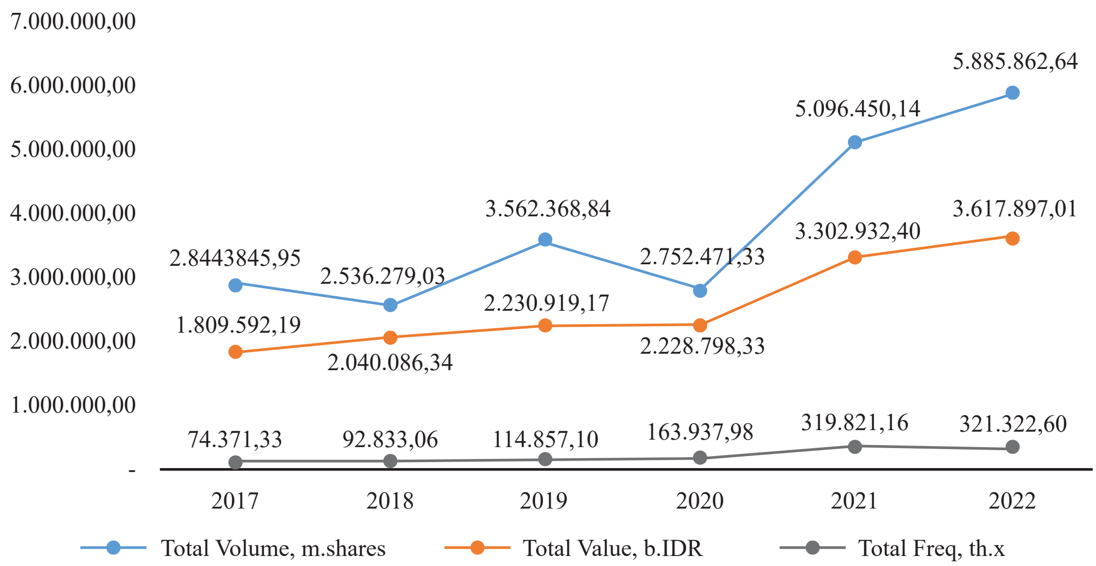

Figure 2. Indonesian Stock Exchange Activities

The increasing stock trading activity will attract potential investors to enliven stock trading on the Indonesia Stock Exchange. Whether a public company publishes financial or non-financial information will affect investors' decision to invest (Widyaningsih & Oksari, 2023). Investors will pay attention to various aspects to assess the feasibility of the company, such as the range of profits to be obtained and the level of stock liquidity, namely the ease of converting shares owned into cash following capital market mechanisms (Natalia, 2019). Stock liquidity can indicate the amount of investor interest in investing in the company. Understanding good company performance will increase investor confidence and trust to invest in the company. The more liquid a stock is, the higher the frequency of stock transactions; it shows the amount of investor interest to invest in the company. Hence, the company should understand factors that influencing stock liquidity to attract investors.

Stock liquidity is an important signal for issuers listed on the Indonesia Stock Exchange. The low level of stock liquidity can be one of the causes of issuers being delisted from the stock exchange because shares are less actively traded. In 2022, several companies were threatened with delisting from the Indonesia Stock Exchange due to low stock liquidity, for instance, PT. Ratu Prabu Energi Tbk was threatened with delisting because the average daily stock trading for the last six months is below Rp 5 million, with a trading volume below 10,000 in the stock market. PT Envy Technologies Indonesia Tbk and PT Panasia Indo Resources Tbk were threatened with delisting due to low transaction liquidity factors and recorded a drastic decline in revenue, reaching 98 percent (Putra, 2022).

Stock liquidity can be influenced by emitting fundamentals and information disclosure (Ang, 1997). The issuer's fundamental condition shows the company's basic condition in managing the company so that it can obtain profits and maintain business continuity. In Signaling Theory, it is explained that companies are required to convey information related to company conditions to reduce the occurrence of information asymmetry and to improve stock performance (Spence, 2002; Ross, 1977). The provision of relevant, accurate, and timely information is needed by potential investors to be used as an analytical tool in investment decision-making (Connelly et al. , 2011). The company has disclosed financial and non-financial information through the annual reports to communicate its condition with potential investors. This research uses information from annual reports that are predicted to affect the liquidity of company shares. The information relates to environmental certification, financial performance measured with sales growth, market value added, Tobin's Q ratio, and return on equity as a profitability indicator.

In recent years, environmental issues have become increasingly important to corporate stakeholders. Commitment to protect the environment becomes a strategy for companies to attract investors because investors tend to support the company's business that cares about the environment (Radhouane et al. , 2018). One indicator of companies that cares about the environment is a company with an environmental certification, namely ISO 14001 (Kasbun et al., 2016). ISO 14001 certificate ownership is one form of environmental information disclosure which signals to the government, investors, consumers, and other stakeholders that the company has implemented green manufacture (Indriastuti, Chariri and Fuad, 2022; Mao and Wang, 2019). It can be used to improve the company's good image in the eyes of investors and increase stakeholder satisfaction (Tuppura, Toppinen and Puumalainen, 2016; Chiarini, 2017; Purwanto et al. , 2021). Mandatory disclosure of environmental activities significantly affects investor reaction because investors expect environmental activities disclosure will provide cash flow that impacts company operations (Grewal et al., 2019). The longer company implies ISO 14001 the higher acceptance by the market (Martín-de Castro et al., 2016). So environmental certification can influence investors' investment decisions and increase stock liquidity.

Another factor that could affect market reaction is corporate financial performance. Many indicators pictured corporate performance from financial aspects, such as sales growth, market value added (MVA), and Tobin's Q score. Sales growth shows the company's ability to maintain its position in the industry and general economic development (Herianto & Majidah, 2020). Companies with positive sales growth mean that company has been able to run operations and achieve company targets (Amanda & Tasman, 2019). Companies with increasing sales growth are expected to provide large profits in the future for shareholders, thus increasing investor confidence to invest in the company and increasing the liquidity of the company's shares (Herianto and Majidah, 2020; Khaerunnisa, Marota and Octavianty, 2021).

Market value added reflects the assessment of financial performance from an external point of view, which is useful for assessing the company's ability to raise shareholder funds (Endaryani, Marsiwi and Wirofin, 2019). Investors aim to profit from their investment funds, so they must consider the company's financial performance(Rahayu and Aisjah, 2014). Market value added is a benchmark for appropriate financial performance because it reflects the company's ability to create shareholder wealth (Rustamadji, 2016). The higher the market value added, the company can increase shareholder wealth. It boosts investor confidence to invest in the company, affecting increases in stock liquidity.

Tobin's Q ratio describes the effectiveness and efficiency of the company in utilizing resources in the form of assets owned by the company. It can be used to measure investment opportunities in the company (Dzahabiyya et al., 2020). The higher Tobin's Q ratio indicates that the company has successfully managed assets and has high investment growth potential. It causes investors to believe in investing in the company so that the liquidity of the company's shares increases. Research conducted by Reny et al., (2019), Saputra, (2018), and Timothy &; Hutabarat, (2022) state that Tobin's Q ratio has a positive and significant effect on trading volume activity used to measure the market reaction.

The company's ability to generate profits is one of the considerations for investors in making investment decisions (Andriani, 2021) In research conducted by Ichsani &; Suhardi (2015); and Susanti (2020) profitability measured by return on equity has been shown to affect trading volume activity. In other studies, return on equity as a moderation variable has proven to strengthen the relationship between CSR disclosure to firm value (Narayana & Wirakusuma, 2021; Rady Darmastika & Ratnadi, 2019; Tenriwaru & Nasaruddin, 2020). Profitability has proven to affect trading volume activity directly, but has never been tested as a moderation. Based on previous result study, this research explore the role of profitability as a moderating variable in the correlation between environmental certification and financial performance to the market reaction.

This research aims to investigate the effect of environmental certification and financial performance to the market raction. Furthermore, we use return on equity as a profitability indicator to be tested as a moderating variable. Profitability will be tested to determine whether it will strengthen or weaken the relationship between environmental certification and financial performance to market reaction, as measured by trading volume activity. This research model of profitability as a moderation to the environmental certification and financial performance to the market reaction has never been done before and has become the novelty of this research. This research findings will enrich evidence of environmental certification implication and how financial performance will affect shareholder.

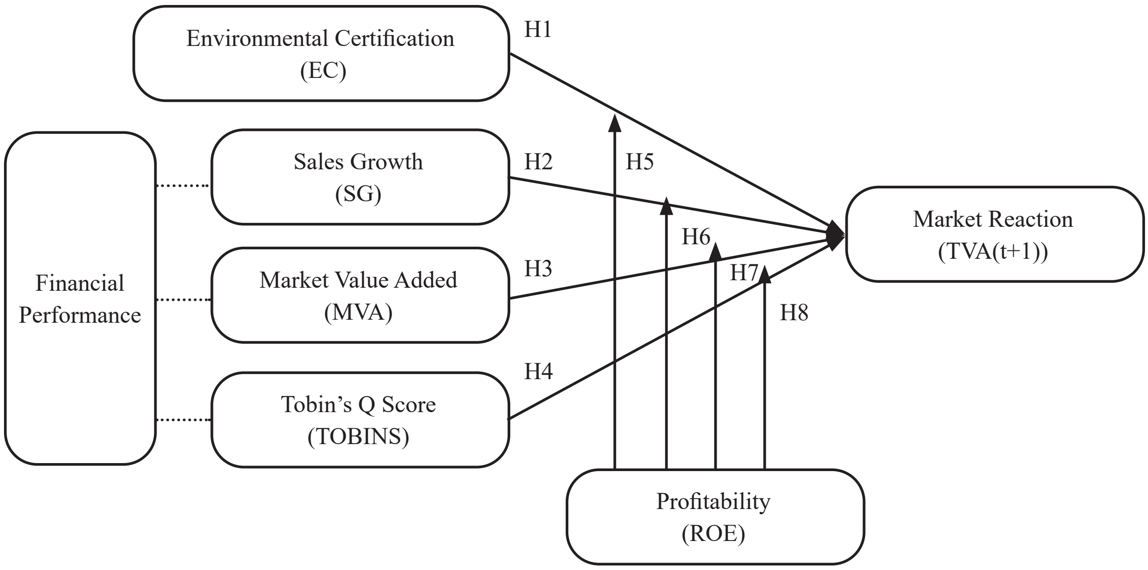

Figure 3. Framework

METHODS

This study uses a quantitative approach with a causality research design to analyze the influence and causal relationship between the independent and dependent variables. It is because this study uses secondary type data derived from the company's annual report and the Indonesia Stock Exchange statistical report to be analyzed. The data analysis technique uses descriptive statistical analysis and moderating panel data regression analysis using the Eviews 9 analysis tool. The descriptive statistical analysis is used to describing the sample data without drawing conclusions (Sugiyono, 2022). To testing the hypothesis, this study using moderating panel data regression analysis because the data categorized as panel data and testing the moderating variable in the research model. Panel data is a combine between cross section and time series data, hence we use Eviews as a powerful statistics tool for panel data in this study.

The population in this study is manufacturing industry sector companies listed on the Indonesia Stock Exchange for the 2017-2021 period. Manufacturing industry has been choosen as a sample of this research due to their business activities close to the environmental damage. Hence, this research want to investigate the company's commitment to the environmental through environmental certification. In addition, this research was doing an observation in 5 years to picturing the economic condition of sample. The method for determining the sample in this study is purposive sampling to be analyzed. The purposive sampling is used when the research sample selected based on several criterias (Sugiyono, 2022). The criteria for the sample targeted at the population are as follows:

Table 1. Sample of Research

No.	Criteria	Total
1.	Companies in the manufacturing industry sector listed on the Indonesian Stock Exchange	175
2.	Companies in the manufacturing industry sector are listed on the Indonesian Stock Exchange for the 2017-2021 period.	(28)
3.	Companies in the manufacturing industry sector that have published annual reports that can be accessed during the period 2017-2021	(11)
4.	The company's financial statements are presented in rupiah during the 2017-2021 observation periods.	(28)
5.	Companies in the manufacturing industry sector did not experience a temporary trading suspension for one year in the 2018-2022 period	(5)
Total samples		103
Years of observation (5 years)		103 x 5
Total sample companies		515

Source: Processed Secondary Data, 2023

All research hypotheses will be processed using panel data moderation regression analysis with the following equation:

$$TVA(t+1)_{it} = \alpha + \beta_1 EC_{1it} + \beta_2 SG_{it} + \beta_3 MVA_{it} + \beta_4 TOBINS_{it} + \beta_5 EC_{it}{*}P_{it} + \beta_6 SG_{it}{*}P_{it} + \beta_7 MVA_{it}{*}P_{it} + \beta_8 TOBINS_{it}{*}P_{it} + e_{it} \quad ...(1)$$

TVA(t+1) is notation for market reaction variable. The market reaction in this study is measured using trading volume activity in the next year. A higher stock trading volume in the next year indicates a better reaction to the market related to the information given by company. The calculation of trading volume activity compares the amount of stock volume traded in a certain period with the amount of the company's stock volume outstanding in a certain period (Timothy & Hutabarat, 2022). The indicator of TVA in this study is the period t+1 of the annual report data used. It is to measure the market reaction after the environmental certification and financial performance published by the company. For instance, when we measure the environmental certification and financial performance in the year of 2017 we measure the TVA in the year of 2018. TVA (t+1). This research uses annual report data for 2017-2021, so trading volume activity (TVA) data uses data for 2018-2022. Here is the formula for the TVA(t+1) variable.

$$TVA\,(t+1) = \frac{\sum \text{The volume of shares traded in the period t+1}}{\sum \text{The volume of outstanding shares in the period t+1}} \quad ....(2)$$

The indicator of environmental certification is ownership of the ISO 14001 certificate. It is an international certificate of environmental management system standards that will help companies to be able to improve environmental performance aimed at increasing competitive advantage and increasing trust from stakeholders (Briggs, 2017). The measurement of this variable uses dummy variables; if the company has an ISO 14001 certificate, it is given a score of 1; for companies that do not have an ISO 14001 certificate, it is given a score of 0 (Aprilasani et al. , 2017).

The first indicator of financial performance in this study is sales growth. Sales growth is an increase in sales from year to year that shows the company's ability to maintain its position in the industry. Sales growth measurement can refer to revenue generation from sales because sales growth is influenced by sales volume and selling prices of company products. In Fatimah & Kharisma's research, (2020) sales growth measurements are used as follows:

$$\text{Sales Growth} = \frac{\text{Total sales of the current period} - \text{Total sales of the previous year}}{\text{Total sales of the previous year}} \times 100\% \quad ....(3)$$

The next indicator of financial performance is Market Value added (MVA). MVA is one of the company's financial performance analysis tools based on added value. The measurement of market value added, according to Lee & Kwon, (2019) is as follows:

$$\begin{aligned} \text{Market value added} &= \text{Market capitalization} - \text{total shareholders' equity} \\ &= (\text{Total shares outstanding*share price}) - \text{total shareholders' equity} \end{aligned}$$

Finally, this research's last financial performance indicator is Tobin's Q ratio. Tobin's Q ratio shows the performance of company management in asset management, which can be used to estimate the return of every fund that has been invested. The high Tobin's Q ratio results indicate the company's success rate in the future (Arief et al. , 2020). Tobin's Q ratio can be calculated by comparing the market capitalization summed with total debt and assets. To find out the value total Debt, we calculate total short-term debt minus total current assets plus Total short-term debt. The formula of Tobin's Q ratio calculation, according to Lindenberg & Ross, (1981) is as follows:

$$\text{Tobin's Q Ratio} = \frac{(\text{Market Value of Share} + \text{Debt})}{\text{Total Assets}} \quad ....(4)$$

The moderating variable in this research is profitability, measured by return on equity (ROE). ROE is a company's ability to generate after-tax profits by utilizing available capital. Return on equity is one of the important signals for investors because the return on equity describes real profits; this is because the return on equity calculation uses the value of net profit after tax earned by the company during a certain period.

$$\text{ROE} = \frac{\text{Earnings After Tax}}{\text{Equity}} \text{ x } 100\% \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (5)$$

RESULTS

Table 2 shows the descriptive statistical analysis results for sales growth, market value added, Tobin's Q ratio, return on equity, and trading volume activity. In addition, Table 3 presents the results of the descriptive analysis of dummy variables for environmental certification.

Table 2. Descriptive Statistic

	N	Minimum	Maximum	Mean	Std. Deviation
Sales growth	515	-96.25416	649.5556	8.115362	37.11006
Market value added	515	-3.11E+13	5.16E+13	1.15E+13	4.70E+13
Tobin’s Q ratio	515	-0.656768	22.86570	1.307512	2.289562
Return on equity	515	-411.2526	224.4585	7.397863	36.51286
Trading volume activity	515	5.09E-08	1447.211	3.267738	63.89955
Observations	515				

Source: Processed Secondary Data, 2023

Table 3. Dummy Variable Descriptive Statistic

Variable	Dummy 0		Dummy 1		Observation	
	Total	Percentage	Total	Percentage	Total	Percentage
Environmental Certification	269	52,23	246	47,77	515	100

Source: Processed Secondary Data, 2023

Based on Table 2 descriptive statistics, this study used 515 data for analysis. The research variable has a mean value smaller than the standard deviation value. It means that each research variable has a vast data deviation. Furthermore, table 3 shows that 246 (47.77 %) of the company sample had ISO 14001 certificates, and 269 companies (52.23 %) did not have ISO 14001 certificates.

The first step in panel data testing is to select the fit model for panel data by performing Chow, Hausman, and Lagrange Multiplier tests. Table 4 shows the result of the most-fit model for this research. The first is the Chow test to determine which common or fixed effect is most suitable for the model. The result shows probability value of the cross-section chi-square is 0.5071 > 0.05, which indicates that the Common Effect Model (CEM) is fitter than the Fixed Effect Model (FEM). The next test is the Lagrange multiplier test to examine whether the Common Effect Model (CEM) or Random Effect Model (REM) is the most suitable. The result is shown in Table 4 with the Breusch-Pagan probability value of 0.1788 > 0.05. It means Common Effect Model (CEM) is better than Random Effect Model (REM) for this research model. The summary of model selection for Panel Data Regression in this research can be seen in Table 4 as follows:

Table 4. The Summary Of Model Selection For Panel Data Regression

No.	Test	Probability Value	Decision
1.	Chow test	0.5071 > 0.05	Common Effect Model (CEM)
2.	Lagrange Multiplier Test	0.1788 > 0.05	Common Effect Model (CEM)

Source: Processed Secondary Data, 2023

The classical assumption tests required in the common effect model (CEM) are the multicollinearity and heteroscedasticity tests. The results of the multicollinearity test show that the independent variable in this study has a variance inflation factor (VIF) value of < 10, which means that the independent variable of this study is free from the problem of multicollinearity. The results of the heteroscedasticity test with the white test have a probability value of obs*R-squared of 0.2458 > 0.05, meaning there are no symptoms of heteroscedasticity.

Table 5. Resume of Assumption Classic Test

Dependent Variable	Moderating Variable	Independent Variable	Multicollinearity Test	Heteroscedactisity Test
			VIF	Probability obs*R-Squared
Trading Volume Activity	Return on Equity	Environmental Certification	1.047847	0.2458
		Sales Growth	1.011316	
		Market Value Added	1.953294	
		Tobin's Q Ratio	1.938422	

Source: Processed Secondary Data, 2023

The results of the moderated panel data regression analysis in Table 6 show an adjusted R-squared value of 0.060016 which means that the variables of environmental certification, sales growth, market value added, Tobin's Q ratio, and interaction variables between independent variables and moderation variables can explain the dependent variable (TVA in the next year) by 6 percent and the remaining 94 percent is explained by other factors outside this study. The results of the t-test show that no independent variables affect the dependent variable (TVA in the next year). Return on equity as a moderation variable can only strengthen the relationship between environmental certification and sales growth on trading volume activity in the next year.

Table 6. Moderated Panel Data Regression in Common Effect Model (CEM)

Dependent Variable	Independent Variable	t-Test		Decision	Moderating Variable (Profitability)		Decision
		Coeff.	Prob.		Coeff.	Prob.	
Trading Volume Activity (t+1)	Environmental Certification	-10.56277	0.0658**	Rejected	0.939505	0.0000*	Moderated
	Sales growth	-10.19818	0.1712	Rejected	1.597632	0.0000*	Moderated
	Market Value Added	-1.03E-13	0.4005	Rejected	2.98E-15	0.1907	No Effect
	Tobin's Q ratio	-0.679607	0.7627	Rejected	-0.08987	0.0238*	Moderated
		Adjusted R-squared					0.060016

Source: Eviews software processed 9, 2023

** : probability value 0.1

* : probability value 0.05

DISCUSSION

The results showed that possessing an environmental certification has no affect on trading volume activity in the next period. Implementation of ISO 14001 also lowering the company's stock performance (Paulraj & de Jong, 2011). Ownership of the ISO 14001 certificate creates doubt for investors to invest in the company. Implementing ISO 14001 requires many costs and increasing the company's operational costs (Mao & Wang, 2019). Investors assume that ISO 14001 certification contradicts the main business goal of maximizing shareholder wealth by reducing costs and increasing profits. The company have the motivation to implement ISO 14001 only to increase the recognition of the stakeholders, hence does not provide benefits for investors (Widiastuti, et al., 2022). This study proves that having environmental certification could not impress investors and rise the market's reaction in the next period. Moreover, we suggest the companies to explain the benefits of ISO 14001 impelementation in the company and the effect of efficiency cost or improving profit. It will increase the belief of investors to trust the company and own a share of it. This study result does not in line to previous research which states environmental certification improve market reaction (Grewal et al., 2019; Martín-de Castro et al., 2016).

Sales growth does not affect trading volume activity in the next period. This study's result is in contrast to Herianto and Majidah, (2020) which states sales growth in companies increasing investor confidence to invest in the company. However, the result aligns with those conducted by Khaerunnisa et al., (2021) which states that sales growth does not affect the stock price in the market. Sales growth is not one of the analytical tools investors consider in making investment decisions. Based on sample data analysis, most companies with positive sales growth face decreased profits. It is because when sales increase from year to year will be followed by an increase in the cost of goods sold so that the net profit obtained by the company does not necessarily increase.

Market value added also does not affect the market reaction to increase trading volume activity next year in the table 6. Investors in Indonesia are more interested in using the information in the annual report and technical analysis to see market price trends (Pernamasari, 2020). In addition, investors are tend to interest on high stock return and not the value added for them (Silitonga et al., 2018). MVA information is unavailable in the annual report, making it difficult for investors to analyze. They need to consider the market capitalization and and inteprating before make an invenstment decision.

Table 6 shows Tobin's Q ratio does not affect the market reaction. The results of this study are not in line with research conducted by Reny et al. (2019); Saputra (2018); and Timothy &; Hutabarat (2022) who stated that tobin's Q ratio has a positive and significant effect on trading volume activity (TVA). This study assumes that investors do not know the value of Tobin's Q ratio, which describes the company's investment growth potential. Information related to Tobin's Q ratio is not written in the annual report. The annual report only presented the information needed to calculate Tobin's Q ratio. Like MVA, Tobin's Q ratio makes it difficult for investors to do calculations independently, so Tobin's Q ratio is not a factor that becomes a consideration in making investment decisions for investors. This finding suggest to the companies to disclose further its financial performance such as MVA and Tobins Q ratio in the annual report to help stakeholders understanding the company's financial condition and make a decision.

In Table 6, profitability as a moderation variable can moderated correlation between environmental certification, sales growth and Tobins Q ratio to the market reaction. It strenghten the relationship of environmental certification and sales growth to the market reaction but weaken the relationship of Tobins Q ratio to the market reaction. One of the factors that investors take into account when making investment selections is the company's potential to make profits (Andriani, 2021). ROE has been shown to affect directly to the trading volume activity (Ichsani &; Suhardi, 2015; and Susanti, 2020). This research study enrich theoritical implication for the role of profitability as a moderation.

ROE statistically has an effect of positive and significant to the ISO 14001 ownership to the trading volume activity in the next period. It means profitability can strengthen the relationship of environmental certification to market reaction. Investors do not believe in companies that carry out environmental management under the ISO 14001 certificate because it will cost environmental operations. However, when the company can bring profitability through return on equity, the investors believe that environmental certification will not affect financial performance. In other words, the market's reaction will still increase for the company rather than owning an environmental certification and providing profitability. Signaling Theory states that information submitted by company executives through published annual reports is expected to improve the performance of company shares and increase investor interest in investing in the company. Companies that disclose the information related to the possession of ISO 14001 certificate on environmental management will be considered to have contributed well and responsibly to society and the environment for the impact caused by the company's activities.

Table 6 shows return on equity also can strengthen the relationship between sales growth and market reaction. The statistic result shows it have positive and significant effect in the corellation of sales growth and trading volume activity in the next period. Companies with high sales growth cannot attract investors' attention to investing in the company. It is because high sales growth does not guarantee the amount of profit obtained. However, when the company provides high profitability through return on equity, the market reaction increases, causing high trading activity volume in the next year. A high return on equity value illustrates that the company can generate profits by utilizing the resources owned to increase the profits received by shareholders. This situation will encourage investors to invest in the company so that the next period of trading volume activity of the company's shares increases. Signaling Theory indicates that the increase in the company's return on equity and sales growth recorded in the financial statements is a way for the company to give a positive signal to shareholders related to the company's prospects in the future. Companies with increasing sales growth and supported by higher company return on equity can increase trading volume activity for the next period. Investors assume that the company has increased sales growth, indicating that the company can compete in the industry because the public can accept the products issued. Supported by the company's ability to generate net profit and manage its equity effectively, as measured by the level of return on equity. It will attract investors to invest in the company to increase the value of the next trading volume activity period.

Profitability cannot moderated the relationship between market value added to trading volume activity. It is based on the regression analysis results of panel data moderation with the common effect model approach in Table 6, which shows that statistically return on equity has no significant effect in the relationship between market value added and trading volume activity. Researchers assume that investors do not know the value of market value added, which reflects the company's ability to increase company wealth and shareholder wealth because information related to market value added is not stated in the annual report, so investors must calculate independently. In addition, during the observation period, the company's market value added of 42 percent shows that the company has not been able to increase the company's wealth and shareholder wealth, so market value added is not a factor that becomes a consideration in making investment decisions by investors. The existence of return on equity cannot strengthen the relationship between market value added to trading volume activity (TVA). During the observation period, return on equity tends to be in the medium category, so investors are not entirely sure to invest in the company. Information not written in the annual report and with the ability to generate moderate profits cannot attract investors to invest in the company so that it does not affect trading volume activity (TVA).

Profitability weakens the relationship between Tobin's Q ratio and the next trading volume activity period. Table 6 shows that profitability significantly has negative coefficient on Tobins Q ratio and market reaction relationship. Tobin's Q ratio shows the firm value compared to the book value. The high ratio of Tobins's Q indicates that the market believes the company has a higher value than the physical assets value of a company. Tobin's Q ratio, which continues to increase, will require companies to pay more attention to company performance and maximize the management of resources owned to run operations effectively and efficiently. Return on equity shows the company's ability to earn profits by utilizing the capital resources owned by the company. Higher Tobins Q ratio is a positive signal for investors to invest, but if it is not supported by the ability to obtain high returns, it will be a bad signal. It is because the signal indicates a misalignment with the investor's goal of investing, namely to obtain large profits (Paulraj and de Jong, 2011). Research data from 515 data analysis units shows that 65.44 percent of companies are undervalued and can generate profits in the medium category, as much as 68 percent. Return on equity cannot strengthen the relationship between Tobin's Q ratio to trading volume activity (TVA). The condition of companies that can not manage company assets makes investors not interested in investing in the company because of low investment growth. The ability to generate profits in moderate conditions is insufficient to increase investor interest in investing in the company.

CONCLUSIONS

The research examined 515 annual reports of manufacturing companies listed on the Indonesia Stock Exchange during 2017-2021. The results show that environmental certification negatively affects the market reaction. Investors are doubtful and not interested in investing in a company that implements ISO 14001 because it will need extra costs for environmental activities, which does not benefit investors. Furthermore, financial performance such as sales growth, market value added, and Tobin's Q ratio do not affect the market reaction. This financial performance information is not stated in the annual report and needs to calculate independently to analyze, making it difficult for investors to understand the financial condition. Profitability as a moderation can strengthen the relationship between environmental certification and sales growth on trading volume activity in the next period. Profitability through return on equity increases the belief of investors to trust the company and own a share of it. High ROE is a good signal for a company; implementing ISO 14001 and rising sales growth will not affect company performance. Hence it proves that company have contributed well and responsibly to society and the environment and the consumers accept the company's product.

This research result implies that profitability through ROE can moderate the relationship of environmental certification, sales growth and Tobin's Q ratio to the market reaction. In addition, the practical implication of this study is to suggest that companies disclose the benefits of ISO 14001 implementation in the company and the effect of efficiency cost or improving profit. Also, disclose further financial performance such as MVA and Tobins Q ratio in the annual report to help stakeholders understand the company's financial condition and decide.

The low explanatory power of environmental certification, sales growth, market value added, and Tobin's Q ratio to the trading volume activity in the next year might be caused by other factors not considered in the study. It can be seen from the result of the adjusted R-squared value, which shows that independent variables and interaction between independent variables and moderation variables can explain the dependent variable by 6 per cent only. Therefore we suggest that future research to add other independent variables such as shareholding structure, earning per share ratio and company size. Additionally, we suggest researching the high-profile companies that are more sensitive to public response, as it may provide further insights into the relationships examined in the study.

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