The Impact of ESG Disclosure, Liquidity, and Leverage on Firm Value Mediated by Profitability Performance

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ABSTRACT

The focus of this research is to see how the influence of ESG Disclosure, Liquidity, and Leverage on Firm Value of various companies listed on the Indonesia Stock Exchange. This research is categorized as quantitative research with data collected through Bloomberg Database Terminal. Where the sample in this study were 15 companies listed on the Indonesia Stock Exchange in 2012 to 2021 period. The collected data was processed with the help of Eviews 12 application. Based on the Eviews processing, it was found that ESG Disclosure and DER had a significant effect on Firm Value of various companies listed on the Indonesia Stock Exchange in 2012-2021 with a positive direction. Instead of it, Quick Ratio had a significant effect on Firm Value of various companies listed on the Indonesia Stock Exchange in 2012-2021 with a negative direction. The direction of positive influence means that publishing an ESG Score will increase the firm value of the company. The higher ratio of DER of the company, the more positive firm value will be for Indonesia Stock Exchange listed companies. While, the direction of negative influence means the higher ratio of liquidity of the company, the more negative firm value will be for the company.

Keywords: ESG Disclosure; Liquidity; Leverage; Firm Value; Profitability

INTRODUCTION

Growth in economic and social conditions in Indonesia continues to increase, this has changed the attitudes, behavior and mindset of the people from saving to investing. This is proven by the increasing number of capital market investors in Indonesia (Mubyarto, 2020). This phenomenon can be seen from the data from the Indonesia Central Securities Depository which describes the number of capital market investors as of November 2022 reaching 10,000,628 with 99.78% local investors.
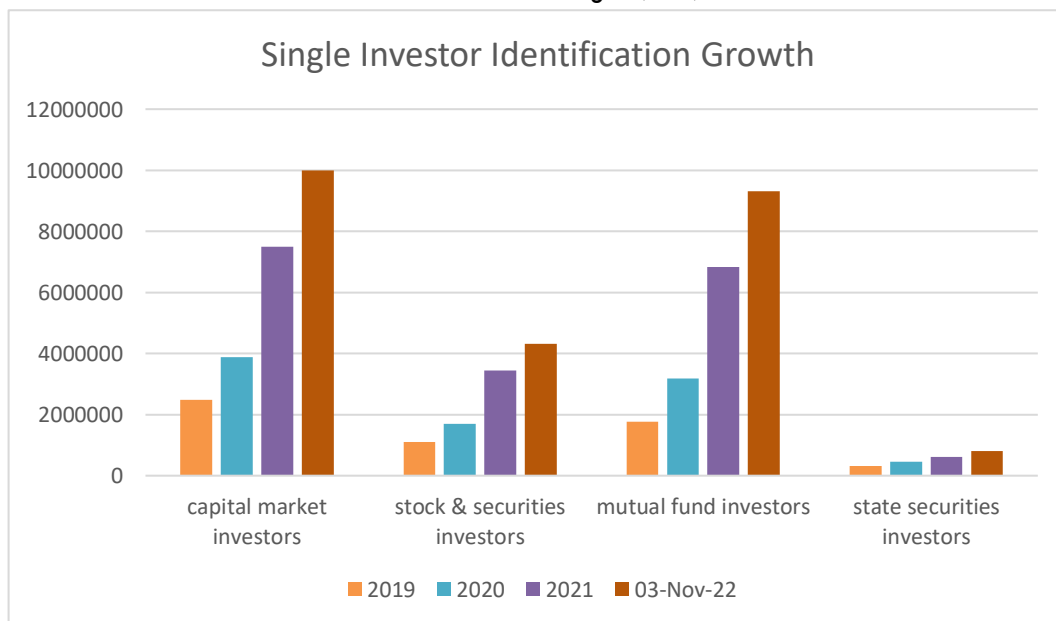
Source: Indonesia Central Securities Depository

The high number of investors provides benefits for business actors in Indonesia in an effort to develop their business profits. This will certainly have a significant impact on the value of each company (Philip Sekuritas Indonesia, 2019). Good company value is an important aspect for a company (Jensen et al., 1976), because company value is able to describe investors' perceptions of a company (Syamsudin et al., 2020). One important aspect in efforts to improve investor perceptions of the company is satisfying financial performance (Agustina & Suryandari, 2017). Financial statement analysis is useful in predicting future conditions as well as the basis for planning actions that will have an impact on future events. Financial performance analysis is considered the best means of reviewing everything about a company's stock price (Anggarani & Adib, 2019).

Estimation of financial performance can be seen from the calculation of leverage ratios, profitability, management efficiency, liquidity, leverage, and growth and valuation (Syamsudin et al., 2020) (Syamsuddin, 2009). Liquidity has a crucial role for company value in fulfilling the company's short-term obligations (Ernawati and Widyawati, 2016). Owolabi (2012) and Jihadi (2021) state that liquidity plays an important role for company success (Jihadi et al., 2021). Meanwhile, Zuhroh I (2019) showed negative and insignificant results and Husna (2019) which actually showed that there was no influence between these variables (Zuhroh, 2019) (Husna & Satria, 2019).

Contradiction of previous research also occurs in the correlation of leverage and firm value. Leverage is the use of funds to cover fixed costs to increase profitability. Kalbuana (2020), which states that leverage has a positive effect on company value, is opposed by Husna and Satria (2019) and AlSlehat (2019) with the presentation that there is no effect of leverage on company value. The high contradiction in the research results from the two ratios above makes these variables even more interesting for further research (Kalbuana et al., 2020) (Al-Slehat, 2019).

Apart from financial aspects, company value is also influenced by non-financial aspects such as sustainability performance (Jihadi et al., 2021). The sustainability performance depicted through the ESG Disclosure is becoming increasingly important in the eyes of investors due to increased investor awareness of how their funds are allocated and changes in the rules for reporting sustainability performance which were originally voluntary but now become mandatory for several industrial sectors. Research by Pulino (2022) and Sreepiya (2023), shows that there is a positive effect of ESG disclosure on company value (Pulino et al., 2022; Sreepriya et al., 2023). Meanwhile, Behl (2022) describes a negative effect, while Ihsani (2021) describes the absence of a correlation between the two variables. The emergence of contradictions in the results of previous studies discussing the effect of leverage, liquidity, and ESG disclosure on firm value is supported by the phenomena that occur, making it necessary to conduct research on these aspects (Behl et al., 2022; Ihsani et al., 2021).

A. Firm Value

Corporate value is considered as the achievement of a company on public trust in its performance. Firm value is also considered a market indicator for investors in analyzing companies (Syamsudin et al., 2020). Wiyono & Kusuma (2017:69) explained that company value is a description of management performance in managing its assets. In addition, firm value is also equated with investors' perceptions of the company's potential to allocate company resources. One proxy that reflects company value/company value is Tobin's Q. This ratio is considered the best information because Tobin's Q includes not only all components of the company's debt and equity, but also all company assets (Syamsudin et al., 2020).

Tobin's Q as a metric has won widespread acceptance among scholars because it is claimed to be both forward-looking and comparable across diverse industries (Anderson, Fornell, Mazvancheryl, 2004). Marketing and management scholars have relied on Tobin's Q approximations to measure a firm's financial performance. The pervasive use of Tobin's Q to measure firm performance is problematic. Approximations of Tobin's Q denominator based upon accounting data underestimate market-based assets, thus overstating firms' performance in intangibles, such as marketing, human resources, and research and development (Butt et al., 2023).

B. ESG Disclosure

ESG is a company evaluation criterion that focuses on environmental, social and governance (ESG) company performance, which is rooted in the field of socially responsible investment (Richardson, 2009). In 1992, the United Nations Environmental finance Institute advocated a program of incorporating ESG factors into their business decision-making processes, marking the beginning of ESG in financial markets. 2006 saw the release of the UN Principles for Responsible Investment and the first ESG study, which marked the initial integration and introduction of the ESG concept. With the rapid development of the economy and society, the importance of the ESG concept is becoming more and more prominent, investors are more willing to invest their capital in companies with outstanding ESG performance (Fink, 2020) and the demand for ESG information companies from other stakeholders is constantly growing. ESG factors have gradually become the three most important dimensions for measuring the economic sustainability of agents in the international community (Yu et al., 2020) .

From a corporate perspective, the ESG concept identifies three core types of business relationship stakeholders: environmental, social and governance (Semenova and Hassel, 2013). This expands the type and breadth of what performance firms have traditionally covered and is an effective way for companies to attract external capital and achieve sustainable growth. However, the key to a company's willingness and approach to ESG lies in the value that ESG practices create for companies. Value is referred to in this paper as a broad concept based on the perspective of the firm and its managers, both in terms of the firm's market value at a point in time and in terms of the financial performance created by the firm over time with its existing assets. Therefore, clarifying the mechanism by which ESG practices create value for companies not only helps academics to deepen their understanding of ESG, but also has great practical significance in motivating companies to actively participate in ESG practices (Wang & Tuttle, 2014).

C. Leverage

Leverage is defined as the use of funds to cover fixed costs to increase profitability. Leverage is divided into 3 types, namely financial leverage, operating leverage, and compound leverage (Amri, 2021). Financial leverage is the use of external money (loans) invested in a business to finance fixed assets (Taqi et al., 2020). So that if a company's financial leverage increases, it will have a negative impact on shareholder profits because of an increase in financial leverage, the cost of finance also increases. An increase in finance costs reduces stock returns (Kothari, 2012).

Operational leverage is defined as the use of fixed asset costs in the company, or choosing to apply capital-intensive or labor-intensive concepts in an effort to make and sell products. While financial leverage is the use of fixed debt costs in the company's capital structure. In operating leverage, the discussion usually centers on the "break-even point" level of sales at which total revenues and expenses equal and operating profit is zero. This concept makes it possible to compare different levels of operating leverage and highlight the risk return aspect. At higher volume levels, leverage pays off in the form of higher operating income, but at lower volume levels, losses can be magnified (Laux, 2010). Muritala (2012) also describes leverage with a greater value being able to increase company performance because it can reduce agency costs and reduce inefficiencies. Meanwhile, combined leverage is used to measure the level of sales against changes in EPS (Amri, 2021).

Leverage is often used as a determinant of a company's business performance (Doan, et al., 2011; Pratheepkanth, 2011). Leverage can be a benchmark in determining the balance between risk and return because companies must consider risks, taxes, financial flexibility (Muritala, 2012). Nimalathasan and Valeriu (2010) support that the debt ratio which can show the level of leverage is positively and strongly related to all profitability ratios. On the other hand, leverage with a greater level will be more risky for the company as well as financial costs (Sinthupundaja & Chiadamrong, 2017).

In the solvency ratio there are several debt ratios, namely; debt to equity ratio (DER), debt to asset ratio (DAR) and so on. The researcher will choose the DER as the first independent variable in this study because the DER is the ratio used to measure the company's ability to pay off all of its debts

by using all of the company's capital. If the DER shows a high number, it will make the risk even greater and make investors afraid to invest so that the stock price will fall which will have an impact on the value of the company. Because investors will assume the company is an illiquid company or has too much debt (Suhendry et al., 2021).

D. Liquidity

The definition of liquidity based on economic literature is the ability of a company or agent to exchange the wealth it has for goods and services or for other assets (Nikolaou, 2009) Mahavidylaya and Ray (2012) consider liquidity as a company's strength related to fulfilling short-term financial obligations (current liabilities) through changing current assets into cash without causing losses.

Liquidity has always affected a company's business and its impact has been proven in many studies. When companies have high liquidity, they are better able to deal with unexpected uncertainties and contingencies (Liargovas and Scandalis, 2010). A high level of liquidity sometimes causes problems when current assets are not utilized properly. As a result, the company will get a low rate of return (Sinthupundaja & Chiadamrong, 2017). According to Musah (2019), companies can maintain liquidity if they have assets that can be transferred or sold quickly with minimum transaction costs and loss of value (Musah, 2019). Liquidity and its management determine a large part of the company's growth and profitability (Owolabi & Obida, 2012). Liquidity can be calculated through the current ratio (Arif & Batool, 2022), Quick Ratio, Cash ratio, EBIT/interest, Current Ratio (Emin Öcal et al., 2007).

Liquidity in this study is proxied by a quick ratio that in its calculation ignores inventory. Husnan and Pudjiastuti (2002) said that inventory is ignored in the calculation because inventory is the longest account to turn into cash and the level of certainty is low, so the inventory account may be excluded from the calculation. The higher the value of the quick ratio, it will increase stock returns received by investors. The results of previous studies conducted by Anwaar (2016), Zunaini (2016), Tyani (2018), Tarmizi (2018) which stated quick ratio had a significant positive effect on stock returns (Prasetya Wijaya et al., 2020).

E. Profitability

Profitability ratios show how well a company uses its assets to generate profits and shareholder value. The profitability ratio shows the company's ability to generate revenue against expenses during a certain period. The ratio reveals how well a company is utilizing its assets to generate profits (Jihadi et al., 2021). Profitability is a performance indicator carried out by management in managing the company's assets as indicated by the profits generated. Broadly speaking, the profits generated by the company come from sales and investments made by the company. Profitability can be measured using ROA (Return On Assets) or return on assets which is useful for measuring how efficient a company is in managing its assets to generate profits during a period. ROA is calculated from net profit after tax divided by total assets (Sondakh, 2019).

The relationship between the variables in this research can be seen in the conceptual framework stated at Figure 1.
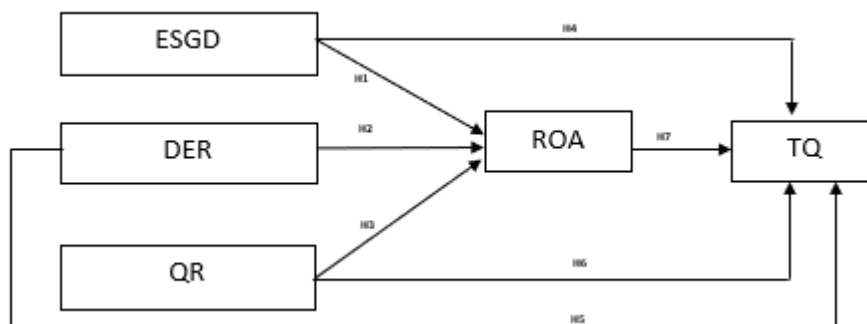
Research Hypotheses

Based on the conceptual framework described earlier, the hypotheses to demonstrate the impact of ESG Disclosure, Debt-to-Equity Ratio, Quick Ratio on Tobin's Q mediated by Return on Asset performance are as follow:

H1 : ESG Disclosure and Return on Asset have significant positive relation.
H2 : Debt-to-Equity Ratio and Return on Asset have significant negative relation.
H3 : Quick Ratio and Return on Asset have significant positive relation.
H4 : ESG Disclosure and Tobin's Q have significant positive relation.
H5 : Debt-to-Equity Ratio and Tobin's Q have significant negative relation.
H6 : Quick Ratio and Tobin's Q have significant positive relation.
H7 : Return on Asset and Tobin's Q have significant positive relation.

METHOD

This study applies a quantitative approach to each variable based on a quantitative measurement scale (Eddy Jusuf Sp et al., 2018). This research was conducted on all companies listed on the Indonesia Stock Exchange in 2012-2021. The subject of this study are ESG Disclosure, Liquidity, Leverage and Profitability of various industrial sector companies. The object of research in this study is the company's value which is reflected in the Tobin's Q value of various industrial sector companies listed on the Indonesia Stock Exchange (IDX) in 2012-2021.

The population used in this study are all companies listed on the Indonesia Stock Exchange (IDX) in 2012-2021. The sampling method used was a purposive sampling method with sample selection criteria namely (1) companies that were listed consecutively on the IDX in 2012-2021 and (2) companies that routinely report ESG performance in 2012-2021. The sample in this study is 17 companies listed on the IDX for the 2012-2021 period.

The type of data used in this study is quantitative data sourced from secondary data of annual reports of companies in the various industrial sectors listed on the Indonesia Stock Exchange (IDX) in 2012-2021 from Bloomberg terminal database. In this study, firm value is measured by the Tobin's Q ratio. The formula of the Tobin's Q ratio is according to (Brigham & Houston, 2015).

$$Tobin's\ Q = \frac{Market\ cap + total\ liabilities + preferred\ equity + minority\ interest}{Total\ aset}$$

Leverage is represented through the value of the debt-to-equity ratio (DER) which aims to analyze the value of funds offered by lenders to entrepreneurs. The following is the formulation of the Debt-to-Equity Ratio:

$$Debt\text{-}to\text{-}Equity\ Ratio = \frac{short\ long\ term\ debt}{shareholders\ equity}$$

This study represents liquidity through a quick ratio which is formulated as follows:

$$Quick\ Ratio = \frac{cash + short\ term\ investment + account\ receivable}{current\ liabilitie}$$

This study represents profitability through Return on Assets (ROA) which is formulated as follows:

$$Return\ On\ Assets = \frac{Laba\ bersih}{Total\ aset}$$

The data analysis technique in this study is by using multiple linear regression tests with the following equation:

1st Model $\quad ROA = \alpha + \beta1ESGD + \beta2DER + \beta3QR + e$
2nd Model $\quad TQ = \alpha + \beta1ESGD + \beta2DER + \beta3QR + \beta4ROA + e$

Where:
TQ = Tobins Q
α = constant
β1 - β4 = regression coefficient
ESGD = ESG Disclosure
DER = Debt Equity Ratio

QR   = Quick Ratio
ROA   = Return on Asset

The Sobel test is also used in this study to analyze the effect of intervening variable mediating the relationship between independent and dependent variable (Preacher 2020). The Sobel test equation is as follows:

$$Z = \frac{a * b}{\sqrt{(b^2 * S_a^2 + a^2 * S_b^2)}}$$

Where:

Z   = sobel calculation value
a   = independent variable direct effect coefficient on mediating
 variable
b   = dependent variable direct effect coefficient on mediating variable
Sa   = standart error coefficient a

RESULT and DICUSSION

Classical Assumption Test
Normality Test

Series: Standardized Residuals	
Sample 2012 2021	
Observations 150	
Mean	2.72e-15
Median	0.004004
Maximum	15.03195
Minimum	-13.76877
Std. Dev.	4.681584
Skewness	0.204566
Kurtosis	3.460841
Jarque-Bera	2.373519
Probability	0.305209
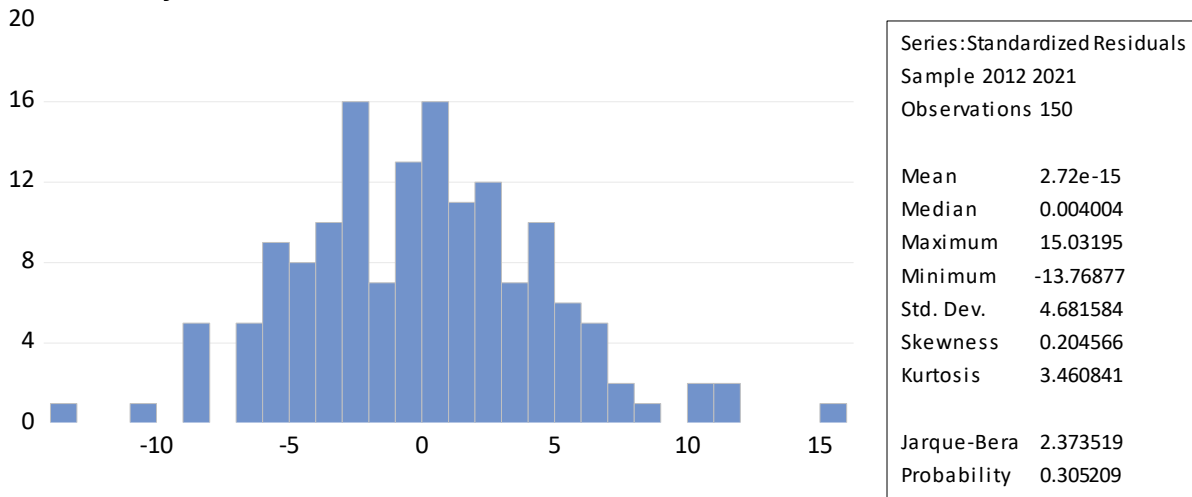
Figure 1. Normality Test 1st Regression Model

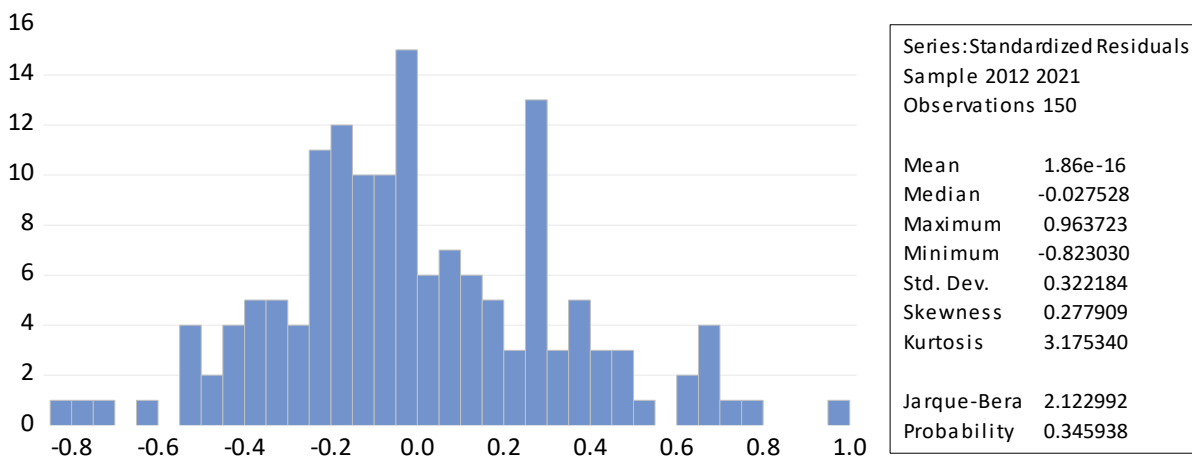| Series: Standardized Residuals	
Sample 2012 2021	
Observations 150	
Mean	1.86e-16
Median	-0.027528
Maximum	0.963723
Minimum	-0.823030
Std. Dev.	0.322184
Skewness	0.277909
Kurtosis	3.175340
Jarque-Bera	2.122992
Probability	0.345938

Figure 2. Normality Test 2nd Regression Model

The distribution of data in this study is normally distributed. This can be seen in the image above. The 1st and 2nd picture above show that the shape of the graph do not deviate to the left or to the right. It can be interpreted that the distribution of data in this study is normally distributed.

Multicollinearity Test

Table 1. Result of 1st Regression Model

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	3.758431	5.079572	NA
ESGQ	0.001372	4.288281	1.095809
DEBT_TO_EQUITY	0.000118	1.838787	1.254685
QR	0.526022	1.959908	1.152148

Table 2. Result of 2nd Regression Model

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	0.088867	2.519811	NA
ROA	8.74E-05	1.732633	1.604630
ESGQ	1.92E-05	2.170972	1.231792
DEBT_TO_EQUITY	1.85E-06	1.611981	1.420366
QR	0.008231	1.506399	1.241225

The detection of deviations from the classical multicollinearity assumption in the table above shows the tolerance value is greater than 0.1 and the Variant Inflation Factor (VIF) value is below 10. It is concluded that the independent variables in the 1st model those are ESG Disclosure, Liquidity, Leverage not correlated with each other. And independent variables in the 2nd model are ESG Disclosure, Liquidity, Leverage and Profitability not correlated with each other.

Multiple Regression Analysis

Table 3. Result of 1st Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.

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C	12.38729	1.938667	6.389589	0.0000
ESGQ	-0.127824	0.037040	-3.450935	0.0007
DEBT_TO_EQUITY	-0.051849	0.010863	-4.772782	0.0000
QR	3.041975	0.725274	4.194243	0.0000

Effects Specification

		S.D.	Rho
Cross-section random		3.111001	0.4053
Idiosyncratic random		3.768732	0.5947

Weighted Statistics

Root MSE	3.700873	R-squared	0.388477
Mean dependent var	2.571506	Adjusted R-squared	0.375911
S.D. dependent var	4.748431	S.E. of regression	3.751227
Sum squared resid	2054.469	F-statistic	30.91600
Durbin-Watson stat	0.956239	Prob(F-statistic)	0.000000

Unweighted Statistics

R-squared	0.445376	Mean dependent var	7.188324
Sum squared resid	3265.667	Durbin-Watson stat	0.601581

Table 4. Result of 2nd Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.285155	0.298106	7.665577	0.0000
ESGQ	-0.023933	0.004386	-5.456397	0.0000
DEBT_TO_EQUITY	0.000722	0.001358	0.531244	0.5961
QR	-0.057614	0.090724	-0.635050	0.5264
ROA	0.064698	0.009347	6.921882	0.0000

Effects Specification

			S.D.	Rho
Cross-section random			0.715709	0.7533
Idiosyncratic random			0.409532	0.2467

Weighted Statistics

Root MSE	0.405147	R-squared	0.492117
Mean dependent var	0.309718	Adjusted R-squared	0.478106
S.D. dependent var	0.570405	S.E. of regression	0.412073
Sum squared resid	24.62160	F-statistic	35.12466
Durbin-Watson stat	1.310997	Prob(F-statistic)	0.000000

Unweighted Statistics

R-squared	0.352006	Mean dependent var	1.739444
Sum squared resid	103.2569	Durbin-Watson stat	0.312607

The results of Eviews version 12 in the table above can be written in the following equation for the regression results:

1st Regression Model   **ROA = 12.387 - 0.127ESGQ - 0.052DER + 3.042QR**

If the above equation explains then the value of **12.387** as a constant means that ESG Disclosure, Debt-to-Equity Ratio, and Quick Ratio do not affect Return on Asset variable of **12.387**. If the ESG Disclosure, Debt-to-Equity Ratio, and Quick Ratio variables are assumed to have a value equal to 0.

ESG Disclosure (ESGD) regression coefficient value is **-0.127**. This value explains that ESG Disclosure affects Return on Asset negatively. Theoretically, the negative effect indicates that for every one unit increase in the ESG Disclosure variable , the Return on Asset will decrease by **0.127** with the assumption that Debt-to-Equity Ratio and Quick Ratio value is constant.

Debt-to-Equity Ratio (DER) regression coefficient value is **-0.052**. This value explains that Debt-to-Equity Ratio affects Return on Asset negatively. Theoretically, the negative effect indicates that for every one unit increase in Debt-to-Equity Ratio variable , the Return on Asset will decrease by **0.052** with the assumption that ESG Disclosure and Quick Ratio is constant.

Quick Ratio (QR) regression coefficient value is **3.042**. This value explains that Quick Ratio affects Return on Asset positively. Theoretically, the positive effect indicates that for every one unit increase in Quick Ratio variable, the Return on Asset will increase by **3.042** with the assumption that ESG Disclosure and Debt-to-Equity Ratio is constant.

2nd Regression Model   **TQ   = 2.285 - 0.023ESGQ + 0.0007DER - 0.057QR + 0.064ROA**

If the above equation explains then the value of **2.285** as a constant means that ESG Disclosure, Debt-to-Equity Ratio, Quick Ratio, and Return on Asset do not affect Tobin's Q variable of **2.285**. If the

ESG Disclosure, Debt-to-Equity Ratio, Quick Ratio, and Return on Asset variables are assumed to have a value equal to 0.

ESG Disclosure (ESGD) regression coefficient value is **-0.023**. This value explains that ESG Disclosure affects Tobin's Q negatively. Theoretically, the negative effect indicates that for every one unit increase in the ESG Disclosure variable , the Profitability will decrease by **0.023** with the assumption that Debt-to-Equity Ratio, Quick Ratio, and Return on Asset value is constant.

Debt-to-Equity Ratio (DER) regression coefficient value is **0.0007**. This value explains that Debt-to-Equity Ratio affects Tobin's Q positively. Theoretically, the positive effect indicates that for every one unit increase in Debt-to-Equity Ratio variable, the Tobin's Q will increase by **0.0007** with the assumption that ESG Disclosure, Quick Ratio, and Return on Asset is constant.

Quick Ratio (QR) regression coefficient value is **-0.057**. This value explains that Quick Ratio affects Tobin's Q negatively. Theoretically, the negative effect indicates that for every one unit increase in Quick Ratio variable, the Tobin's Q will decrease by **0.057** with the assumption that ESG Disclosure, Debt-to-Equity Ratio, and Return on Asset is constant.

Return on Asset (ROA) regression coefficient value is **0.064**. This value explains that Return on Asset affects Tobin's Q positively. Theoretically, the positive effect indicates that for every one unit increase in Return on Asset variable, the Tobin's Q will increase by **0.064** with the assumption that ESG Disclosure, Debt-to-Equity Ratio, and Quick Ratio is constant.

Coefficient of Determination Test

1st Regression Model shows the correlation coefficient (multiple R) with a value of 0.388 or 38.8% illustrates that the ability of ESG Disclosure, Debt-to-Equity Ratio, and Quick Ratio variables to correlate with Return on Asset is 38.8%. The regression coefficient (adjusted R square) with a value of 0.375 or 37.5% illustrates that the ability of ESG Disclosure, Debt-to-Equity Ratio, and Quick Ratio variables to influence Return on Asset is 37.5%. It means that there are other variables outside ESG Disclosure, Debt-to-Equity Ratio, and Quick Ratio variables that can affect Return on Asset by 62.5%.

2nd Regression Model shows the correlation coefficient (multiple R) with a value of 0.492 or 49.2% illustrates that the ability of ESG Disclosure, Debt-to-Equity Ratio, Quick Ratio, and Return on Asset variables to correlate with Tobin's Q is 49.2%. The regression coefficient (adjusted R square) with a value of 0.478 or 47.8% illustrates that the ability of ESG Disclosure, Debt-to-Equity Ratio, Quick Ratio, and Return on Asset variables to influence Tobin's Q is 49.2%. It means that there are other variables outside ESG Disclosure, Debt-to-Equity Ratio, Quick Ratio, and Return on Asset variables that can affect Tobin's Q by 50.8%.

T test

The results of Eviews version 12 in the table above also contain a t-test or test of each independent variable on the dependent variable.

1st Regression Model shows the t test for ESG Disclosure variable has a significance value of 0.000. This indicates that ESG Disclosure variable significantly affects Return on Asset. So, it is concluded that if ESG Score are disclose more often, it will increase Return on Asset. T test for Debt-to-Equity Ratio variable has a significance value of 0.0007. It indicates that Debt-to-Equity Ratio variable significantly affects Return on Asset. So, it can be concluded that the better Debt-to-Equity Ratio, the higher impact of Return on Asset. T test for Quick Ratio variable has a significance value of 0.000. It indicates that Quick Ratio variable significantly affects Return on Asset. So, it can be concluded that the better Quick Ratio, the higher impact on Return on Asset.

2nd Regression Model shows the t test for ESG Disclosure variable has a significance value of 0.000. This indicates that ESG Disclosure variable significantly affects Tobin's Q. So, it is concluded that if ESG Score are disclose more often, it will increase Tobin's Q. T test for Debt-to-Equity Ratio variable has a insignificance value of 0.5961. It indicates that Debt-to-Equity Ratio variable insignificantly affects Tobin's Q. So, it can be concluded that the rasio of Debt-to-Equity does not give any effect on Tobin's Q. T test for Quick Ratio variable has a insignificance value of 05264. It indicates

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that Quick Ratio variable insignificantly affects Tobin's Q. So, it can be concluded that the number of Quick Ratio does not give any effect on Tobin's Q. T test for Return on Asset variable has a significance value of 0.000. This indicates that Return on Asset variable significantly affects Tobin's Q. So, it is concluded that the better number Return on Aset, the higher number Tobin's Q.

F test

The results of Eviews version 12 in the table above also contain an F test or simultaneous test of the independent variable on the dependent variable.

The F test in the 1st regression model has a significance value of 0.005 and this value is smaller than the 0.05 alpha level. So, it can be concluded that ESG Disclosure, Debt-to-Equity Ratio, and Quick Ratio variables have a significant effect on Profitability together.

The F test in the 2nd regression model has a significance value of 0.005 and this value is smaller than the 0.05 alpha level. So, it can be concluded that ESG Disclosure, Debt-to-Equity Ratio, Quick Ratio, and Profitability variables have a significant effect on Tobin's Q together.

Sobel Test

The results of Sobel Test conducted by *quantpsy.org* in the figure below also contain a t-test and p-value of each variable.

Input:		Test statistic:	Std. Error:	p-value:
a	-0.127824	Sobel test: -3.08841238	0.00267774	0.00201229
b	0.064698	Aroian test: -3.06291756	0.00270003	0.0021919
s_a	0.037040	Goodman test: -3.11455463	0.00265526	0.00184223
s_b	0.009347	Reset all	Calculate	

Figure 3. Sobel Test of Return on Asset as mediation of ESG Disclosure and Tobin's Q relation

The p-value obtained is 0.00201229 (<0.05) with the T statistic Sobel Test value of -3.08841238, it can be concluded that the ESG Disclosure variable has a significant effect on the Tobin's Q variable through the Return on Assets variable as an intervening or indirectly the Return on Assets variable able to mediate the effect of the ESG Disclosure variable on Tobin's Q variable.

Input:		Test statistic:	Std. Error:	p-value:
a	-0.051849	Sobel test: -3.9293621	0.00085371	0.00008517
b	0.064698	Aroian test: -3.90186165	0.00085972	0.00009546
s_a	0.010863	Goodman test: -3.95745233	0.00084765	0.00007575
s_b	0.009347	Reset all	Calculate	

Figure 4. Sobel Test of Return on Asset as mediation of Debt-to-Equity Ratio and Tobin's Q relation

The *p-value* obtained is 0.00008517 (<0.05) with the Sobel Test statistic T value of -3.9293621, it can be concluded that the Debt-to-Equity Ratio variable has a significant effect on the Tobin's Q variable through the Return on Assets variable as an intervening or indirectly the variable Return on Assets is able to mediate the effect of the Debt-to-Equity Ratio variable on the Tobin's Q variable.

Input:		Test statistic:	Std. Error:	p-value:
a 3.041975	Sobel test:	3.58708705	0.05486616	0.00033439
b 0.064698	Aroian test:	3.56001549	0.05528338	0.00037083
s_a 0.725274	Goodman test:	3.61478574	0.05444574	0.0003006
s_b 0.009347	Reset all	Calculate		

Figure 5. Sobel Test of Return on Asset as mediation of Quick Ratio and Tobin's Q relation

The p-value obtained was 0.00033439 (<0.05) with the T statistic Sobel Test value of 3.58708705, it can be concluded that the Quick Ratio variable has a significant effect on the Tobin's Q variable through the Return on Assets variable as an intervening or indirectly the Return on Assets variable. mediates the effect of the Quick Ratio variable on the Tobin's Q variable.

DISCUSSION

a. **Effect of ESG Disclosure Against Return on Aset of Indonesia Stock Exchange (IDX) listed company in 2012-2021**

Hypothesis testing gives results with a value stating that ESG Disclosure has a **negative and significant effect** on Return on Aset of Indonesia Stock Exchange (IDX) listed company in 2012-2021. This study is in line with research conducted by Buallay (2019) who found that ESG Disclosure has a negative and significant effect on Return on Aset based on Cost-of-Capital Reduction Perspective. But it's invalidated another prior research such as Zhao (2018) and Ghazali (2020) that explain the significant positive correlation between ESG Disclosure and Return on Asset based on Stakeholder Theory.

b. **Effect of Debt-to-Equity Ratio Against Return on Aset of Indonesia Stock Exchange (IDX) listed company in 2012-2021**

Hypothesis testing gives results with a value stating that Debt-to-Equity Ratio has a **negative and significant effect** on Return on Aset of Indonesia Stock Exchange (IDX) listed company in 2012-2021. This study is in line with research conducted by Kalash (2021) where in its findings explain that a company's debt burden is in line with the company's potential failure to meet obligations in the form of interest and principal. Therefore, bankruptcy risk will follow if the increase in interest outweighs the benefit from the tax savings. Another prior research also shows the same result such as Musah and Kong (2018) and Kalash (2023).

c. **Effect of Quick Ratio Against Return on Aset of Indonesia Stock Exchange (IDX) listed company in 2012-2021**

Hypothesis testing gives results with a value stating that Quick Ratio has a **positive and significant effect** on Return on Aset of Indonesia Stock Exchange (IDX) listed company in 2012-2021. This result is related to another research conducted by Li (2020) and Madushanka (2018) that explains insufficient liquidity or excess liquidity is harmful to the smooth operation of value organizations.

d. **Effect of ESG Disclosure Against Tobin's Q of Indonesia Stock Exchange (IDX) listed company in 2012-2021**

Hypothesis testing gives results with a value stating that ESG Disclosure has a **negative and significant effect** on Tobin's Q of Indonesia Stock Exchange (IDX) listed company in 2012-2021. This study is in not line with research conducted by Drempetic (2019) who found that ESG Disclosure has a positive and significant effect on Tobin's based on Legitimacy Theory. This research also invalidated another prior research such as Abdi (2020) and Gerged (2023) that explain the significant positive correlation between ESG Disclosure and Tobin's Q.

e. **Effect of Debt-to-Equity Ratio Against Tobin's Q of Indonesia Stock Exchange (IDX) listed company in 2012-2021**

Hypothesis testing gives results with a value stating that Debt-to-Equity Ratio has a **positive and significant effect** on Tobin's Q of Indonesia Stock Exchange (IDX) listed company in 2012-2021. This result is not related to another prior research explained by Markonah (2020) suggest reducing the amount of debt because amount of the company's debt is in line with the company's inability to finance its obligations in the form of interest and principal. Similarly, the risk of bankruptcy will increase if the interest is greater than the benefits of tax savings. Information on high debt levels will then show a signal to investors that the company has a large burden.

f. **Effect of Quick Ratio Against Tobin's Q of Indonesia Stock Exchange (IDX) listed company in 2012-2021**

Hypothesis testing gives results with a value stating that Quick Ratio has a **negative and significant effect** on Tobin's Q of Indonesia Stock Exchange (IDX) listed company in 2012-2021. This result is not related to another prior research Explained by Farooq & Masood (2016). Farooq & Masood research outlines the significant positive impact of liquidity on firm value / firm value. Companies with a high level of liquidity increase investors' perceptions of their good performance.

g. **Effect of Return on Asset Against Tobin's Q of Indonesia Stock Exchange (IDX) listed company in 2012-2021**

Hypothesis testing gives results with a value stating that Quick Ratio has a **positive and significant effect** on Tobin's Q of Indonesia Stock Exchange (IDX) listed company in 2012-2021. This is in line with previous research by Anggarani and Adib (2020) that explain high profitability is good information for investors, so based on signaling theory this will have an impact on increasing firm value as reflected through Tobin's Q.

CONCLUSION

This research has the purpose to investigate the influence of ESG Disclosure, Debt-to-Equity Ratio, Quick Ratio on Tobin's Q mediated by Return on Asset. Three variables such as ESG Disclosure, Debt-to-Equity Ratio, and Quick Ratio are employed to assess the Tobin's Q, whereas ROA is used as the intervening variable. Data of 15 listed companies at Indonesia Stock Exchange (IDX) for the span of 10 years (2012-2021) is critically analyzed. With the utilization of Panel Least Square regression analysis, the end result divulge that ESG Disclosure, Debt-to-Equity Ratio have negative significant influence on Return on Asset, While Quick Ratio have remarkable positive influence on ROA, which is employed as the proxy of profitability performance. ESG Disclosure and Quick Ratio have negative significant influence on Tobin's Q, DER and ROA have positive significant influence on Tobin's Q. To end this, the financing decisions or capital structure has an impact on the value of firms.

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