




“The effect of company growth on sustainable performance: A moderating perspective of stock mispricing in Indonesia and Japan”

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THE EFFECT OF COMPANY GROWTH ON SUSTAINABLE PERFORMANCE: A MODERATING PERSPECTIVE OF STOCK MISPRICING IN INDONESIA AND JAPAN

Abstract

The adoption of environmental, social, and governance (ESG) measures to realize socially responsible companies continues to accelerate, becoming a trend amid global uncertainty due to climate change and the COVID-19 pandemic. This study aims to examine the effect of company growth on sustainable performance, moderated by company stock mispricing in Indonesia and Japan, representing a developing and a developed country, respectively. This study uses panel data regression, namely the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM), to test hypotheses. With a total of 42 observations from companies listed on the Indonesia Stock Exchange (IDX) and 112 observations from companies listed on the Japan Stock Exchange (JPX) during 2019–2020, the results show that a company's growth has a negative effect on sustainable performance in Indonesia, while in Japan it has no effect. Stock mispricing strengthens the negative effect of company growth on sustainable performance in Indonesia but has no effect in Japan. This study found that companies in Indonesia place more emphasis on internal growth than on ESG implementation compared to companies in Japan. The implication of this study is that the implementation of ESG shows different dynamics when comparing two countries. Indonesia needs to evaluate the regulations governing socially responsible businesses in order to encourage further improvement of ESG performance. Meanwhile, in Japan, ESG practices have been running voluntarily, so enforcement from regulators is relatively less necessary.

Keywords

environment, social, governance, growth, mispricing, stocks, performance, emerging country, developed country, sustainability

JEL Classification

Q56, Q51, M14

INTRODUCTION

During the growth stage, companies are encouraged to adopt ESG practices to drive innovation and efficiency, and improve competitiveness. However, financial constraints force companies to prioritize between growth and ESG initiatives. These dynamics present diverse motivations for ESG implementation in developing and developed countries, where this is an aspect that is often overlooked in existing research. Stakeholder responses to ESG initiatives can influence stock mispricing, especially when market valuations fail to accurately reflect a company's growth potential. Overvaluation of stocks, driven by ESG adoption in growth-stage companies, can be a source of funding, highlighting the complicated relationship between growth, mispricing, and ESG implementation.

Business growth is a priority for many companies as it is linked to business continuity and meeting financial needs. However, to achieve



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sustainable growth, companies also need to pay attention to environmental, social, and good governance aspects. ESG initiatives, such as environmentally friendly practices, social justice, and transparency in corporate management, can improve corporate reputation, reduce risk, and increase long-term value. Therefore, awareness of the importance of integrating environmental, social, and good governance aspects in business activities is increasing in various countries, both developing and developed. This indicates that the challenge of implementing ESG initiatives has become an important concern at the global level, and is the focus of attention from governments, companies, and the general public.

In the context of developing countries, companies may face additional challenges such as inadequate infrastructure, unclear regulations, or limited access to resources needed to implement ESG initiatives. In Indonesia, many companies face difficulties in implementing ESG practices due to the difficulty in determining criteria, metrics, or performance indicators that are appropriate to the local context. In addition, financial constraints are a major factor that makes companies in Indonesia more likely to focus on internal improvements rather than allocating resources for sustainability initiatives. Meanwhile, in developed countries, companies may be faced with pressure from stakeholders such as investors, consumers, or regulators to adopt ESG practices. In developed countries such as Japan, the demand for implementing ESG has become ingrained in the corporate culture, which has long been established. Values such as sustainability, social responsibility, and environmental awareness have been manifested in Japanese business culture for a long time. Concepts such as “mottainai” (do not waste) reflect ESG principles, making them not just an external demand, but an essential part of corporate identity. Thus, the complex dynamics between business growth and ESG initiatives present a variety of motivations and challenges for companies around the world, and decision-making in this regard often requires taking into account a complex range of economic, social, and environmental factors.

This study provides empirical evidence that in Indonesia as a developing country prioritizing internal growth over ESG, mispricing exacerbates the negative impact of growth on ESG scores, thus requiring regulatory intervention to accelerate ESG adoption. Conversely, in Japan as a developed country where sustainability is embedded in the corporate culture, growth stage and mispricing show no noticeable impact on ESG adoption. The implication is that regulatory enforcement becomes an unavoidable necessity in developing countries like Indonesia for ESG to be implemented. Therefore, understanding these dynamics is crucial for policymakers and stakeholders who want to encourage sustainable business practices.

1. LITERATURE REVIEW AND HYPOTHESES

The challenge of transitioning to a green economy is increasingly pressing, prompting companies from various sectors to consider a profound transformation in accounting practices. The transition from the conventional capitalism-focused accounting paradigm to green accounting is becoming increasingly important. In the transition to a green economy, which is certainly full of challenges and risks, companies from various industrial sectors must continue to transform from conventional accounting practices based on capitalist accounting to green accounting (Putri, 2016; Wiredu et al., 2023). This increasing challenge is an impetus for companies from all in-

dustries to strategically build a sustainable competitive advantage. Good ESG implementation is a company's effort to become socially responsible. Previous research found that companies listed in the ESG index have higher company value (Aboud & Diab, 2018). Other empirical evidence states that ESG factors affect the financial performance of companies (Evans & Peiris, 2010). Cho (2022) has found that environmentally friendly strategies have a positive effect on company value. Unlike previous studies, this study provides empirical evidence regarding the effect of company growth on ESG implementation.

This study refers to the business life cycle theory. The business life cycle theory usually involves four main stages. These stages are sorted into the in-

roduction, growth, maturity, and decline stages. Among the four stages, the stage that is considered crucial for a company is the growth stage. A company's growth can be defined as the change in total assets owned by the company (Endri et al., 2020; Satrianto et al., 2019). A company's growth, which reflects the company's operational success in the previous year's period, is used to predict future company growth. The company's growth is measured as a percentage increase or decrease in the company's assets in a certain year against the previous year (Sutrisno, 2007). At this stage, the company should develop a long-term strategy to ensure success in the future. Company performance and success are often associated with a company's growth (Rahim, 2017; Vernetta, 2021; Musah et al., 2019; Amouzesh et al., 2011).

As explained earlier, a company's growth stage is the most crucial stage for the company. Therefore, it is important for any company in the growth stage to consider long-term strategies and ensure sustainable performance by integrating ESG risks and opportunities in the company's business, operations, and management, with the hope that the impact of ESG implementation can be felt by all parties (Crespi & Migliavacca, 2020). This sustainable performance measurement method has been carried out transparently and objectively based on the operational standards of corporate sustainability with three indicators, namely environmental, social, and governance measures of companies listed in the ESG index (Martini, 2021). A company that implements good ESG practices is more likely to show better financial performance than companies that do not practice ESG (Cesarone et al., 2022). Therefore, a high ESG score can be a positive signal for investors (Aboud & Diab, 2018). Cho (2022) found that it is crucial for growth-stage firms to commit to sustainable performance. However, both growth and ESG commitment require capital to be invested. Therefore, due to the financial constraint condition, the higher the company's growth, in this case the company is assumed to be in the growth stage, the lower the company's ESG score.

Furthermore, companies use different business strategies to maximize value, for example, they can minimize costs or maximize revenue to increase their profit. Company value is defined as

the present value of the current and future performance. Swarnapali (2020) found that sustainable performance has a positive effect on company value. Company value takes into account the long-term impact of managerial decisions on the company's operational performance, including sales revenue, profit, cash flow, and growth prospects (Malik, 2015). Value-enhancing theory suggests that sustainable performance can increase a company's stock market value (Miralles-Quirós et al., 2018; Yoon et al., 2018). Empirical studies related to sustainable performance that increase firm value and based on value-enhancing theory explain that companies that disclose sustainability-related information will have a higher stock market value than companies that do not (Miralles-Quirós et al., 2018; Rodgers et al., 2019; Swarnapali, 2020; Yoon et al., 2018; De Villiers & Marques, 2016; Kuzey & Uyar, 2017; Yu & Zhao, 2015). Relevant research is also conducted in several countries such as the U.S. (Lo & Sheu, 2007; Guidry & Patten, 2010), Canada (Berthelot et al., 2012), and Australia (Bachoo et al., 2013).

A company's stock mispricing can affect the relationship between the company's growth and sustainable performance. Mispricing is an investor error in assessing a company's stock price (Shen et al., 2021). The form of stock mispricing can be divided into two, namely when the stock price is valued higher than the fair value of the stock, commonly known as overvalued stock. However, when the stock price is valued lower than its intrinsic value, it is called undervalued stock. Mispricing reflects that investors value the stock price of ESG-labeled companies higher than their fair value and are willing to pay a premium for these issuers. Investors believe that the companies will have better performance compared to their competitors who do not implement ESG properly, so it can generate high returns for shareholders. Yoon et al. (2018) found that ESG scores used to evaluate company performance positively and significantly affect investor valuations of companies in emerging markets. Companies that experience overvalued stock will have excess capital that can be used to conduct business activities (Seifert & Gonenc, 2012; Graham & Harvey, 2001). The capital that has been collected will be used for various company needs, including to fund the development of new product lines, conduct research and develop-

ment, invest in growth, and pay off debt (Dong et al., 2012). Thus, the higher the company's stock mispricing, the stronger the effect of the company's growth on sustainable performance.

In Indonesia, the SRI-KEHATI index, which was published in 2009, has a consistent performance with an average value of 10%, even higher than the Jakarta Composite Index (JCI) and the LQ45 index. This indicates that investors are increasingly applying non-financial factors as part of their analysis process to identify risks and growth opportunities. Investors have a behavioral tendency to choose green investment indices that are believed to have better corporate governance. Investors believe that companies labeled ESG will have good prospects in the future. Therefore, it can be assumed that investors are more interested, trusting, and willing to pay a premium for companies that take into account the ESG value. Since investors are willing to pay much higher than the fair value, the stock price becomes overvalued. This overvaluation of stocks results in additional funds available above the fair value for the companies. In turn, the additional funds would encourage the companies to eventually implement ESG. The more the company experiences stock mispricing, the stronger the effect of the company's growth on sustainable performance.

In Japan, the application of ESG principles began in the Tokugawa period, around 1603–1868. Japan has implemented a code of conduct called *shuchu kiyaku*. The code of conduct encourages companies to not only be profit-oriented but also committed to preserving the environment and the interests of society. As a developed country, the supplication of ESG in Japan is very well established because this principle has been practiced as an ethos in Japanese culture for centuries. In fact, according to data from

McKinsey (2021), in 2019, Japan's sustainable asset investment reached the third-highest position globally. Indonesia and Japan's commitment to environmental issues is evidenced by signing the Paris Agreement to reduce carbon emissions and achieve net zero carbon by 2050.

This study investigates the impact of company growth on sustainable performance, exploring how stock mispricing moderates this relationship across different countries and providing insights for accelerating ESG implementations.

Study hypotheses are as follows:

- H1: Company growth has a negative effect on sustainable performance.*
- H2: The higher the company's stock mispricing, the stronger the effect of the company's growth on sustainable performance.*

2. METHOD

This study uses annual financial statements of companies listed on the Indonesia Stock Exchange (IDX) and Japan Stock Exchange (JPX), reported in the Osiris Database and Thomson Reuters Database. The sample includes all the financial and non-financial sectors in order to analyze the effect of a company's growth on ESG. The Purposive sampling method is applied to obtain a sample in accordance with the desired criteria, namely active companies included in the financial and non-financial industry sectors that have complete data to measure all research variables.

Samples that meet the criteria for ESG testing in Indonesia are taken from a total of 81 com-

Table 1. Sample of Indonesian and Japanese companies

Descriptions	Number of Companies
Indonesian companies with complete mispricing data (81 companies x 6 years)	486
Japanese companies with complete mispricing data (938 companies x 6 years)	5,628
Total companies to estimate the market to book prediction 2015–2020	6,114
Indonesian companies with complete ESG score data	21
Japanese companies with complete ESG score data	56
Total final sample (companies)	77
Observation year 2019–2020 (year)	2
Total observations for hypothesis testing (company years)	154

panies across all industry sectors. There are 60 companies that do not have complete data on ESG scores and financial ratios used in empirical testing. Therefore, only 21 financial and non-financial companies listed on the IDX were selected. The selected sample for companies belonging to all industries in Japan amounted to 56 companies out of a total of 938 companies. This is because 882 companies listed on the JPX do not have complete data on ESG scores and financial ratios. As a result, the overall sample amounted to 77 companies, with the observation period of 2019–2020. Then, the number of observations in this study is 154 data (Table 1). This study uses full sample data for estimating stock mispricing; however, for the purpose of hypothesis testing, only companies with ESG scores were used. Data were obtained from the Osiris database for financial data and the Thomson Reuters database for ESG score data.

Table 2 shows all the variables used in this study, both in measurement and proxies. This study uses panel data regression, namely the Common Effect Model (CEM), Fixed Effect Model (FEM) and Random Effect Model (REM). The goodness-of-fit statistical tests are performed to determine the best model. The Chow test is the first used to determine the better-fit model between the OLS and FEM. Then, the second test is the Hausman test to compare the FEM and

REM. The last one is comparing REM and OLS using the LM (Lagrange Multiplier) test. The hypothesis in this study was tested with the following statistical model:

Statistical Model 1:

$$ESG = \alpha_1 + \beta_1 GRWT + c_1 Size + c_2 RoA + c_3 DER + \varepsilon \tag{1}$$

The hypothesis is supported if $\beta_1 > 0$ and significant.

Statistical Model 2:

$$ESG = \alpha_1 + \beta_1 GRWT + \beta_2 MISP + \beta_3 GRWT \cdot MISP + c_1 Size + c_2 RoA + c_3 DER + \varepsilon \tag{2}$$

The hypothesis is supported if $\beta_3 > 0$ and significant; in this case, if $\beta_1 > 0$ and significant or if β_1 not significant.

3. RESULTS

This section begins with descriptive statistics to estimate a company’s stock mispricing using market-to-book prediction. Then, it is followed by showing the descriptive statistics of all research variables and regression analysis for the research hypotheses.

Table 2. Variable measurements

No.	Variable Names	Variables Measurement and Proxy	Reference
1.	ESG (Dependent Variable)	ESG Score (Thomson Reuters) = 0–100 (lowest-highest)	(Thomson Reuters Eikon, 2017; Cardoso, 2022)
2.	GRWT (Independent Variable)	$GRWT = \frac{TA_t - TA_{t-1}}{TA_{t-1}}, \tag{3}$ GRWT – Company’s growth, TA – Total Assets, t – Year	
3.	MISP (Moderating Variable)	$M/B_{Act} = \alpha_0 + \beta_1 EPS_{t-1} + \beta_2 PER_{t-1} + \beta_3 RoE_{t-1} + \beta_4 RoA_{t-1} + \beta_5 DPR_{t-1} + \beta_6 PS_{t-1} + \beta_7 PFCF_{t-1} + \varepsilon_{t-1}, \tag{4}$ EPS _{t-1} – Earning Per Share (Net income/Shares outstanding), PER _{t-1} – Price Earning Ratio (Market stock price/EPS), RoE _{t-1} – Return on Equity (Net income/Total Equity), RoA _{t-1} – Return on Asset (Net income/Total Asset), DPR _{t-1} – Dividend Payout Ratio (Dividend per shares/EPS), PS _{t-1} – Price to Sales (Market stock price/sales per shares), PFCF _{t-1} – Price to FCF (Market price/FCF per shares), ε _{t-1} – Error term	(Trinugroho & Rinofah, 2011; Rhodes-Kropf & Viswanathan, 2005)
4.	Size, ROA, DER (Control Variable)	Company Size (Size) = the natural logarithm of total assets Company Performance (ROA) = the profitability ratio Debt to Equity ratio (DER) = compares the total debt balance on the company’s statement of financial position with the total value of the issuer’s shareholders’ equity	

Table 3. Descriptive statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Indonesia					
<i>MB</i>	486	0.008	82.444	3.357	7.818
<i>Shares</i>	486	196,121	99,062,216	10,065,788	14,160,077
<i>MP</i>	486	50	17,6	2,055	2,781
<i>TE</i>	486	132,478,000	195,454,000,000	9,513,441,428	2,257,539,632
<i>EPSt-1</i>	486	-442.376	1,190.20	128.735	169.6
<i>PERt-1</i>	486	-1,230.61	689.08	25.75	82.092
<i>1/PERt-1</i>	486	-8.082	502.689	1.115	22.809
<i>RoEt-1</i>	486	-150.26	160.99	14.954	22.108
<i>RoAt-1</i>	486	-13.82	52.66	7.849	7.797
<i>DPRt-1</i>	486	0	139.393	17.65	25.412
<i>PSt-1</i>	486	0.016	18.657	2.173	2.572
<i>PFCFt-1</i>	486	-265.094	546.968	17.538	39.767
<i>SPSt-1</i>	486	21.499	14,558.68	1,826.16	2,312.39
<i>FPSt-1</i>	486	-929.992	1,958.51	180.801	285.014
Japan					
<i>MB</i>	5,628	0.032	49.311	1.413	1.735
<i>Shares</i>	5,628	595	15,188,379	104,74	514,113
<i>MP</i>	5,628	52	64,31	2,315	3,096
<i>TE</i>	5,628	485,063	24,288,329,000	190,830,698	817,703,992
<i>EPSt-1</i>	5,628	0.101	2,735.43	158.626	178.688
<i>PERt-1</i>	5,628	0.135	43,663.37	31.787	583.61
<i>1/PERt-1</i>	5,628	0	7.407	0.089	0.155
<i>RoEt-1</i>	5,628	0.01	78.22	8.672	5.145
<i>RoAt-1</i>	5,628	0.01	36.71	5.166	3.244
<i>DPRt-1</i>	5,628	0	16,584.45	41.446	240.402
<i>PSt-1</i>	5,628	0	28.04	1.253	1.725
<i>PFCFt-1</i>	5,628	-37.78	57,424.24	31.131	771.12
<i>SPSt-1</i>	5,628	58.682	71,093.85	3,288.39	3,884.53
<i>FPSt-1</i>	5,628	-45.424	29,869.94	232.901	475.766

Note: $N = 486$ data estimation of mispricing models with the market to book in Indonesia in 2015–2020 (81 companies x 6 years). $N = 5,628$ data estimation of mispricing models with the market to book in Japan in 2015–2020 (938 companies x 6 years)

Based on Table 3, the amount of data used to estimate a company's stock mispricing in Indonesia is 81, with the research focus on the last 6 years, namely 2015 to 2020. Thus, the total company data from all industrial sectors in Indonesia used to estimate a company's stock mispricing is 486 observations. To estimate a company's stock mispricing in Japan, 938 data for 6 years from 2015 to 2020 are used. Thus, there are 5,628 observations used to estimate company stock mispricing in Japan. As shown in the descriptive statistics in Table 2, the M/B , EPS_{t-1} , $1/PER_{t-1}$, RoE_{t-1} , RoA_{t-1} , DPR_{t-1} , PS_{t-1} and $PFCF_{t-1}$ have positive mean values in both countries. Those numbers suggest that the average fundamental conditions of companies in Indonesia and Japan are in good condition, as reflected by profitability ratios.

Table 4. Market-to-book prediction to estimate stock mispricing

Variables	Indonesia		Japan	
	Coefficients	t-test	Coefficients	t-test
Constant	-1.230***	-3.402	-0.241***	-6.594
EPS_{t-1}	0.003*	1.792	-0.001***	-7.374
$1/PER_{t-1}$	0.014*	1.558	-0.648***	-5.341
RoE_{t-1}	0.305***	16.299	0.095***	14.767
RoA_{t-1}	-0.118**	-2.191	0.103***	9.705
DPR_{t-1}	0.014*	-1.648	0.000	1.439
PS_{t-1}	0.235***	2.640	0.381***	33.786
$PFCF_{t-1}$	0.017***	3.067	-0.000	-0.123
N Indonesia	= 486 observations			
N Japan	= 5,628 observations			
R^2 Indonesia	= 0.66			
R^2 Japan	= 0.44			

Note: *** Significance level $\alpha = 1\%$. ** Significance level $\alpha = 5\%$. * Significance level $\alpha = 10\%$.

Table 4 shows the result of mispricing estimation using market-to-book prediction.

The market-to-book prediction equation for estimating a company's stock mispricing in Indonesia is

$$\begin{aligned} M/B_{Pre} = & -1.230 + 0.003 \cdot EPS_{t-1} \\ & + 0.014 \cdot 1/PER_{t-1} + 0.305 \cdot RoE_{t-1} \\ & - 0.118 \cdot RoA_{t-1} + 0.014 \cdot DPR_{t-1} \\ & + 0.235 \cdot PS_{t-1} + 0.017 \cdot PFCF_{t-1}. \end{aligned} \quad (5)$$

The market-to-book prediction equation for estimating a company's stock mispricing in Japan is

$$\begin{aligned} M/B_{Pre} = & -0.241 - 0.001 \cdot EPS_{t-1} \\ & - 0.648 \cdot 1/PER_{t-1} + 0.095 \cdot RoE_{t-1} \\ & + 0.103 \cdot RoA_{t-1} + 0.000 \cdot DPR_{t-1} \\ & + 0.381 \cdot PS_{t-1} - 0.000 \cdot PFCF_{t-1}. \end{aligned} \quad (6)$$

Table 5 is the descriptive statistics for all observation variables in Indonesia and Japan. The total number of samples is 77 companies, with a total of 154 observations. The test was conducted for two years, from 2019 to 2020. The mean value of the ESG score as a dependent variable in Indonesia is 44.35%, which is lower than the mean value of the ESG score in Japan of 48.93%. This figure implies that the application of ESG principles in Japan is better than in Indonesia. The mean of GRWT as an independent variable in Indonesia and Japan is

0.124 and 0.050, respectively. These indicate that companies in Indonesia experience higher growth than those in Japan. However, the MISP as a moderating variable shows a mean result of 1.540 in Indonesia and 0.272 in Japan. The average MISP of companies listed in Indonesia experiences higher stock mispricing compared to those listed in Japan. Meanwhile, the mean of Size of Indonesia and Japan, is 24.415 and 18.340, respectively. When viewed from Return on Assets (*RoA*) as a control variable, it suggests a mean of 7.274 and 4.884 in Indonesia and Japan, respectively. This means that in Indonesia, the percentage of net profit earned by a company compared to the average amount of assets is higher than that in Japan. At last, the mean of the DER as a control variable in Indonesia and Japan is 1.383 and 63.422, respectively. There is a big difference in DER in Indonesia and Japan. The relative proportion of debt and equity used to finance company assets in Indonesia is much lower than that in Japan. Some companies in Japan have very high levels of debt, such as Japan Tobacco Inc and Kandenko Co Ltd, and many companies have DER above 100.

Table 6 depicts the result of panel data regression of companies in Indonesia with a sample size of 21 companies. The hypothesis test was carried out for two years (2019–2020), so 42 observations were obtained. The test was conducted using three methods, namely CEM, FEM, and REM.

Table 5. Descriptive statistics of Indonesia and Japan

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Indonesia					
ESG	42	15.114	77.010	44.354	17.613
GRWT	42	-0.127	1.676	0.124	0.285
MISP	42	-14.425	52.171	1.540	9.374
GRWT×MISP	42	-3.885	16.069	0.240	2.588
Size	42	22.299	26.587	24.415	1.017
RoA	42	-13.82	35.800	7.274	9.102
DER	42	0.101	4.694	1.383	1.166
Japan					
ESG	112	5.916	88.437	48.932	21.028
GRWT	112	-0.173	0.413	0.050	0.084
MISP	112	-2.937	5.609	0.272	0.895
GRWT×MISP	112	-0.197	0.903	0.021	0.109
Size	112	15.142	22.214	18.340	1.611
RoA	112	0.210	17.380	4.884	3.554
DER	112	0.339	1,518.744	63.422	198.429

Table 6. Regression test results – Statistical model 1 in Indonesia

Variables	Common Effect (CEM)		Fixed Effect (FEM)		Random Effect (REM)	
	Coefficients	t-test	Coefficients	t-test	Coefficients	t-test
Constant	-16.562	-0.232	-237.146	-0.587	-6.415	-0.067
GRWT	-10.460	-1.088	-13.727	-1.332	-8.255*	-1.773
Size	2.671	0.930	11.816	0.714	2.333	0.598
ROA	0.463	1.486	0.059	0.324	0.092	0.549
DER	-4.600*	-1.912	-4.134*	-1.911	-4.221**	-2.263

Dependent Variable	ESG	
N	21 companies × 2 years = 42 observations	
	P value	Goodness of fit
Chow test	0.0000	< 0.05 H1: FEM
Hausman test	0.7882	> 0.05 H0: REM
Lagrange Multiplier test	0.0001	< 0.05 H1: REM
Conclusion: REM is the best model		

Note: *** Significance level $\alpha = 1\%$. ** Significance level $\alpha = 5\%$. * Significance level $\alpha = 10\%$.

The selected model is REM because in the final test of the LaGrange Multiplier (LM test), the probability value is 0.0001 smaller than the $\alpha = 5\%$ level. The variable tested is a company's growth (GRWT) with a coefficient of -8.255 and significant at $\alpha = 10\%$. This result indicates that the higher the company's growth, the lower the ESG scores. It implies that in Indonesia, company growth causes low sustainable performance. This may be because, in the growth stage, companies tend to concentrate on their internal growth to expand their market share and increase profits to achieve stability in their business. Thus, hypothesis 1 is supported. The control variables used in model 1 are Size, RoA, and DER. The coefficient regression of DER

has a significant effect at $\alpha = 5\%$ on ESG with a coefficient value of -4.221. This means that the higher the debt, the lower the ESG score. The coefficient regressions of Size and RoA are not significant, which means that the size of a company and the return on the use of assets do not affect the ESG score of companies in Indonesia.

Table 7 illustrates the results of panel data regression in Japan with a sample size of 56 companies with a 2-year testing period from 2019 to 2020, so there are 112 observations. The hypothesis test was carried out with three models, namely CEM, FEM, and REM. The selected model is the REM. The result suggests that com-

Table 7. Regression test results – Statistical model 1 in Japan

Variables	Common Effect (CEM)		Fixed Effect (FEM)		Random Effect (REM)	
	Coefficients	t-test	Coefficients	t-test	Coefficients	t-test
Constant	-46.256**	-2.020	-177.655	-0.865	-35.395	-1.118
GRWT	10.004	0.459	-1.657	-0.180	6.054	1.109
Size	4.878***	4.005	12.485	1.116	4.562***	2.677
RoA	0.527	1.025	-0.398	-1.454	-0.343	-1.356
DER	0.042***	4.232	-0.006	-0.207	0.032***	2.530

Dependent Variable	ESG	
N	56 companies × 2 years = 112 observations	
	P value	Goodness of fit
Chow test	0.0000	< 0.05 H1: FEM
Hausman test	0.2937	> 0.05 H0: REM
Lagrange Multiplier test	0.0000	< 0.05 H1: REM
Conclusion: REM is the best model		

Note: *** Significance level $\alpha = 1\%$. ** Significance level $\alpha = 5\%$. * Significance level $\alpha = 10\%$.

Table 8. Regression results – Statistical model 2 in Indonesia

Variables	Common Effect (CEM)		Fixed Effect (FEM)		Random Effect (REM)	
	Coefficients	t-test	Coefficients	t-test	Coefficients	t-test
Constant	-16.291	-0.199	13.763	0.031	14.668	0.153
GRWT	-16.660*	-1.669	-14.723	-1.328	-13.941**	-2.322
MISP	1.187**	2.025	-0.311	-0.357	0.767*	1.561
GRWT×MISP	-3.245	-1.457	-1.433	-0.427	-3.601*	-1.503
Size	2.667	0.816	1.905	0.107	1.479	0.384
ROA	0.217	0.579	-0.968	-1.336	0.051	0.141
DER	-3.582	-1.477	-4.503*	-2.037	-3.949**	-2.199

Dependent Variable	ESG	
N	21 companies × 2 years = 42 observations	
	P value	Goodness of fit
Chow test	0.0000	< 0.05 H1: FEM
Hausman test	0.1535	> 0.05 H0: REM
Lagrange Multiplier test	0.0000	< 0.05 H1: REM
Conclusion: REM is the best model		

Note: *** Significance level $\alpha = 1\%$. ** Significance level $\alpha = 5\%$. * Significance level $\alpha = 10\%$.

pany growth has no effect on company performance in Japan. The test results of the control variables, the coefficients of Size and DER, have a significant positive effect on ESG scores at a level of 1%. These results indicate that big capitalization companies seem to pay more attention to ESG aspects as corporate investments to achieve sustainability. The use of targeted debt tends to improve the sustainable performance of companies. Meanwhile, the coefficient regression of the control variable of RoA is not significant. Thus, in Japan, hypothesis 1 is not supported.

Table 8 shows the result of three models, namely CEM, FEM and REM. The selected model is REM. The coefficient regression of GRWT×MISP is -3.601 and significant at $\alpha = 10\%$. The coefficient regression of GRWT and MISP is -13.941 and 0.767, and significant at the level of $\alpha = 5\%$ and 10% , respectively. These results indicate that the MISP as a moderating variable strengthens the negative effect of GRWT on ESG scores. These results verify that companies in the growth stage in Indonesia are unlikely to focus on the implementation of ESG, which causes the ESG score to be low. Stock mispricing could be the source of additional funds for

Table 9. Regression statistical model 2 results in Japan

Variables	Common Effect (CEM)		Fixed Effect (FEM)		Random Effect (REM)	
	Coefficients	t-test	Coefficients	t-test	Coefficients	t-test
Constant	-48.662**	-2.112	-200.842	-0.956	-35.252	-1.107
GRWT	15.252	0.645	-4.781	-0.468	4.572	0.735
MISP	-0.065	-0.044	-1.201	-0.731	5.152*	1.556
GRWT×MISP	-26.067	-0.910	7.730	0.889	3.988	0.473
Size	4.937***	4.046	13.805	1.206	4.558***	2.661
RoA	0.543	1.038	-0.545*	-1.587	-0.354	-1.174
DER	0.044***	4.427	-0.005	-0.188	0.032***	2.517

Dependent Variable	ESG	
N	56 companies × 2 years = 112 observations	
	P value	Goodness of fit
Chow test	0.0000	< 0.05 H1: FEM
Hausman test	0.3223	> 0.05 H0: REM
Lagrange Multiplier test	0.0000	< 0.05 H1: REM
Conclusion: REM is the best model		

Note: *** Significance level $\alpha = 1\%$. ** Significance level $\alpha = 5\%$. * Significance level $\alpha = 10\%$.

the companies that can be used either for growing or supporting ESG implementation. The empirical evidence in Indonesia shows that stock mispricing experienced in the growth stage is used more for growing since the MISP strengthens the negative effect of GRWT on ESG scores. The coefficient regressions of the control variables, namely size, and RoA, do not have a significant effect on ESG scores. Only coefficient regression of DER has a negative significant effect on ESG scores. This indicates that the use of debt can reduce the ESG score of companies in Indonesia. Hypothesis 2 is supported that MISP could strengthen the effect of GRWT on ESG scores in Indonesia.

Table 9 shows the results of CEM, FEM, and REM. Similar to the previous results, the selected model is REM. The coefficient regressions of GRWT*MISP and GRWT are not significant. Only MISP has a positive and significant effect on ESG scores. Since GRWT does not affect the ESG score, it implies that in Japan, the implementation of ESG is not affected by the stages of the business life cycle. However, the MISP as a source of additional funds can be used to support the implementation of ESG. MISP can improve the ESG of a company with additional funds obtained from the overvaluation of stock prices. The control variables, namely Size and DER, have a significant effect at $\alpha = 1\%$ with a coefficient of 4.558 and 0.032, respectively. This means that the larger the size of a company and the higher the debt, the higher the ESG performance. These results, in fact, are consistent with the previous analysis that companies in Japan implement ESG regardless of their stages in the business life cycle. Companies with bigger capitalization seem to have higher ESG scores, and vice versa. In addition, the higher the debt, the higher the ESG scores; it seems that debt is also the source of funds to implement ESG in Japan. Hypothesis 2 is not supported in which MISP does not strengthen the effect of GRWT on ESG in Japan.

4. DISCUSSION

The results of this study indicate that company growth has a negative effect on sustainable performance in Indonesia. Business practices that are concerned with environmental, social, and gover-

nance issues, known as ESG criteria, in Indonesia are still very concerning. Companies in Indonesia tend to emphasize short-term growth in revenue and market share without considering the long-term implications for the environment, society, or corporate governance.

On the contrary, a company's growth in Japan has no effect on ESG implementation. Japanese society had recognized the term "mottainai," which means "waste not" or "do not waste," since the Edo period when resources became scarce. The concept of sustainability has been embedded in the cultural ethos of daily life in Japan. This has led Japanese people to live a lifestyle that benefits people, the economy, and the environment without waste in the long run. Japanese people have a high awareness of the importance of practicing a good lifestyle to preserve the environment. Therefore, it seems that either a company's growth or any stages of the business life cycle will not affect ESG implementation.

These two results contradict previous research. The results of Lo and Sheu (2007) support how the implementation of sustainability has a strong effect on company growth in the United States. A study by Barthelot et al. (2012) covering companies listed on the Toronto Stock Exchange in Canada also provided similar results. This could be due to differences in economic, social, political, and cultural factors in these countries.

This study found that in Indonesia, a company's stock mispricing strengthens the negative effect of the company's growth on sustainable performance. This further strengthens the result that in the growth stage, companies in Indonesia are focused on improving financial performance, so sustainable performance is neglected. Companies use funding from stock mispricing more for the company's growth than for improving ESG performance.

In Japan, a company's stock mispricing does not strengthen or weaken the effect of growth on sustainable performance. However, the mispricing itself has a positive effect on sustainable performance. The result suggests that the company is concerned about sustainable performance when it has any additional funds. This happens because

Japanese culture has been instilled since the time of imperial restoration. Japan has even implemented laws on recycling to balance its image as an industrialized country. In the global economy, Japan is known as a country that prioritizes environmental, social, and governance practices to meet the needs of the present and future generations.

The implication of this study is that the application of ESG from the comparison of two countries, namely Indonesia and Japan, shows different dynamics. For the government/regulators in Indonesia, it is necessary to evaluate the regulations governing sustainable financial performance

reporting in order to further encourage the improvement of ESG performance. Meanwhile, in Japan, although sustainable business practices have become part of the cultural ethos and daily habits, it is still necessary to continue to encourage and strengthen awareness of the importance of sustainable performance in the context of corporate growth. Overall, this study indicates that the integration of sustainable business practices in corporate growth strategies is potentially key to reaching sustainable performance in the future, as well as strengthening corporate competitiveness and resilience to challenging and increasingly complex global risks.

CONCLUSIONS

The purpose of this study is to examine the relationship between a company's growth and sustainable performance moderated by corporate stock mispricing in two different countries. Based on empirical testing, the results of this study are as follows: Company growth has a negative effect on sustainable performance in Indonesia, while in Japan it has no effect; a company's stock mispricing strengthens the negative effect of the company's growth on sustainable performance in Indonesia but has no effect in Japan. A company's stock mispricing has a positive effect on sustainable performance in Japan. The results of this study show a contradiction between the two countries. In Indonesia, internal corporate growth is prioritized over ESG implementation, indicating that companies use funding from stock mispricing more for corporate growth than for improving ESG performance. However, in Japan, this is not the case, as sustainable business practices have become part of the cultural ethos and daily habits. Overall, this study suggests that incorporating sustainable business practices into a company's growth strategy could be a key factor in achieving sustainable performance in the future. Furthermore, it can strengthen a company's competitiveness and resilience in the face of increasingly complex global challenges and risks.

This study only involves a comparison of two Asian countries, such as Indonesia and Japan, which represent an emerging market and a developed market, respectively. This study can be expanded to include more than two countries in order to get more variety in the dynamic analysis of increasing the number of socially responsible companies in many countries. Future studies are expected to shed more light on the way companies, investors, and regulators should accelerate ESG implementations in a different context across socioeconomic backgrounds, cultures, and countries' developments. Additionally, related to the measurement of ESG performance issued by other rating agencies such as Morgan Stanley Capital International (MSCI) ESG Ratings, Sustainalytics, Corporate Knights, and other ESG rating agencies, they are likely to provide different empirical evidence.

AUTHOR CONTRIBUTIONS

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