

The Role of Investor Demographics in Moderating the Effect of ESG Risk Ratings on Stock Price Synchronicity Among Companies Listed on the Idx80 Index of The Indonesian Stock Exchange

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Keywords

ESG Risk Rating, Stock Price Synchronicity, Investor Demographics, Green Industry, Brown Industry, IDX80.

ABSTRACT

This research aims to analyze the effect of ESG Risk Rating on stock price synchronicity as a proxy for stock price informativeness among firms listed in the IDX80 Index of the Indonesia Stock Exchange during 2021–2025. The research also examines the role of stock price synchronicity as an information mechanism in stock price formation and the role of investor demographics as a moderating variable in the relationship. In addition, this study considers the differences between green industry and brown industry characteristics in market responses to ESG information. Using panel data regression, this quantitative study analyzes IDX80 companies with Morningstar Sustainalytics ESG ratings. It examines ESG Risk Ratings, stock prices, stock price synchronicity (logit-transformed adjusted R^2), investor demographics, industry types, and macroeconomic controls. The findings reveal that ESG Risk Ratings do not significantly affect stock price synchronicity, suggesting that ESG information is not yet fully internalized within the price formation mechanism of the Indonesian capital market. While investor demographics moderate this relationship, the effect is not consistently significant. Instead, industry characteristics, firm size, and macroeconomic factors exert a more dominant influence on synchronicity. By highlighting how non-financial information transmits through price synchronicity, this study provides valuable insights for investors, firms, and regulators regarding market efficiency and behavioral dynamics in an emerging market.

INTRODUCTION

In 2004, United Nations Secretary-General Kofi Annan, proposed the concept of Environmental, Social, and Governance (ESG) in the UN Global Compact, the initiative encouraged financial institutions to integrate ESG factors in long-term sustainability-oriented investments. In recent years, the ESG aspect has increasingly received attention from investors and ESG has become an evaluation standard to measure the Company's non-financial performance, so that it is used as one of the things that encourages investment decision-making in the capital market both at the global and domestic levels.

The application of ESG principles is increasingly gaining strategic attention and has become widely available in the Indonesian capital market. This is reflected in the strengthening of the regulatory framework, including through POJK number 51/POJK.03/2017 concerning sustainable finance, the participation of the Indonesia Stock Exchange (IDX) in the Sustainable Stock Exchange (SSE) in April 2019, the IDX's collaboration with Morningstar Sustainalytics in 2020 in providing ESG Risk Rating for IDX80 constituent companies, as well as significant

growth in ESG-based investment products in the last ten years where assets under management of investment products ESG increased sharply from IDR 36 billion in 2015 to IDR 7 trillion as of September 2025, or grew around 194 times.

The significant growth in ESG-based investment products reflects the positive response of market participants while showing the increasing interest or preference of investors in investment instruments that integrate the quality of governance, stability, long-term sustainability, and social responsibility of the Company. This encourages the intensification of the publication of Sustainability Reports by issuers, the adoption of ESG policies by institutional investors, and the development of capital market indices and regulations that integrate ESG aspects in market mechanisms. Furthermore, as a developing country with significant natural resource wealth, Indonesia faces complex challenges in balancing economic growth with environmental sustainability. Therefore, strengthening the implementation of ESG is not only a global demand, but also a domestic need to ensure inclusive and sustainable development.

The Company's ESG value has a clear purpose, which is to provide a standardized measure of the Company's performance in environmental, social and governance aspects so that it can be used by investors as non-financial information in the investment decision-making process. In addition, various studies show that ESG values function as an information transmission mechanism that complements the Financial Statements by revealing the quality of governance, operational sustainability, and long-term risks of the company, thereby helping investors differentiate the fundamental performance between issuers (Hu et al., 2023; Li et al., 2023). ESG value is also designed to increase the content of company-specific information in stock prices, either directly through increased transparency and indirectly through increased analyst attention and reduced funding constraints (Wu, 2022; Li et al., 2023). In the context of emerging markets, assessments of ESG not only aim to encourage sustainable business practices, but also serve as a noise reduction tool and shape investor expectations, ultimately influencing how company information is reflected in stock price movements (Hu et al., 2023; Raghu Ram, 2023).

In investment practice, investor decision-making is generally based on two main approaches, namely fundamental analysis and technical analysis. Fundamental analysis is used to assess a company's intrinsic value through financial performance indicators such as profitability and leverage, while technical analysis focuses on price movements as well as trading volumes to identify patterns and predict short-term market trends (Bodie, Kane, & Marcus, 2014). The development of sustainability issues in the global financial market then encourages the emergence of ESG as an additional source of information in the investment process. ESG is seen as the third dimension in investment analysis because it provides information on the quality of corporate governance as well as long-term non-financial risks that have not been fully reflected in conventional financial statements (Gillan, Koch, & Starks, 2021).

In practice, investors in the Indonesian capital market tend to still be dominated by a combination of these two approaches. Institutional investors generally rely more on fundamental analysis, while retail investors tend to be more active in using technical analysis and following market trends. This condition creates stock price dynamics that not only reflect fundamental information, but are also influenced by the collective behavior of investors.

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Empirical evidence also shows that not all investors process ESG information in the same way. Institutional investors, such as pension funds, mutual funds, and investment managers, generally have better ESG analysis capacity, broader access to non-financial information, and a long-term investment horizon, so they are more active in integrating ESG information into their investment decisions (Starks, 2023). In contrast, retail investors do not always respond directly to ESG information. Limited ESG literacy, access to complex non-financial reports, and a tendency to follow short-term market sentiment cause retail investors to react more often to market movements than to analyze non-financial signals of companies (Barber & Odean, 2008; Kumar & Lee, 2006). The difference in information processing capacity causes the level of information asymmetry between groups of investors to also differ. This condition shows that the effectiveness of ESG information in influencing stock prices is highly dependent on the demographic composition of investors that dominate the company's stock ownership structure.

The availability of information does not automatically guarantee that the information will be used effectively by investors. From this point this research departed, namely to understand whether investors are really using the ESG information that is already available, as well as through what mechanism the information is transmitted into the stock price. In the development of modern financial markets, ESG is beginning to be positioned as the third layer of investment information because it provides non-financial information regarding the quality of corporate governance, environmental risk exposure, and long-term operational sustainability that has not been fully reflected in conventional financial statements (Gillan, Koch, & Starks, 2021). Thus, the main issue is no longer just whether ESG information is relevant, but who processes the information and through what channels it affects the formation of stock prices.

ESG is a firm-specific form of information that works as a non-financial signal for investors. As a signal, the influence of ESG on the market does not occur instantly, but through the process of transmitting information that has not been paid much attention in previous research. Most previous studies have still focused on testing the direct relationship between ESG and stock returns without explaining how ESG information is processed, interpreted, and internalized by the market. From the perspective of information asymmetry, this condition shows that the existence of ESG information does not necessarily directly reduce information disparities between companies and investors if the information has not been understood, trusted, or processed effectively by market participants.

One approach to understanding how information is processed in the market is through stock price synchronicity, which is the degree to which stock prices move in line with the market in general rather than reflecting company-specific information (Morck, Yeung, & Yu, 2000). The high level of price synchronicity indicates that stock price movements are more dominated by general market information than company-specific fundamental information, thus reflecting the low efficiency of information in stock price formation. Stock price synchronization refers to the extent to which the price movement of a stock moves in the direction of the market as a whole, where a high degree of synchronization indicates that macro and market information have a greater influence on the stock price than the Company's specific information.

Reducing stock price synchronization is an important outcome of ESG implementation within the Company. If the Company proactively discloses ESG information, the Company provides deeper insights into performance and idiosyncratic risks that will assist investors in

making informed decisions available. Thus, ESG disclosures improve market efficiency by allowing stock prices to reflect more of the Company's specific information. In other words, a lack of ESG disclosure can lead to investors' reliance on general market information, potentially resulting in losses for investors. A number of empirical studies show that price synchronicity is relevant for examining market efficiency and price formation structures, as changes in the rate of price synchronization reflect the extent to which the Company's information is successfully internalized by investors (Hu et al., 2023; Li et al., 2023; Wu, 2022). Thus, price synchronicity not only represents price movement patterns, but also serves as a proxy for the quality of the information transmission mechanism in the capital market.

The research gap in this study lies in the inadequate explanation of the information transmission mechanism underlying the relationship between ESG and stock price formation. Various previous studies have tested the influence of ESG on returns and stock prices, but the empirical results obtained still show inconsistencies. A number of studies have found that ESG has a positive effect on stock returns because it is seen as able to increase company transparency, strengthen reputation, and reduce company risk (Friede, Busch, & Bassen, 2015; Gillan, Koch, & Starks, 2021). On the other hand, several other studies have shown that ESG implementation can actually incur additional costs that suppress company performance so that it negatively impacts stock returns, while some other studies have found an insignificant relationship (Hu et al., 2023; Li et al., 2023; Ruan et al., 2024). This study views that these inconsistencies are not solely due to differences in methodology or characteristics of the research sample, but also because there are still limited studies that explain how ESG information is processed by investors, transmitted into stock prices, and plays a role in reducing information asymmetry in the capital market. Most previous research has still focused on the direct relationship between ESG and stock returns without considering the mechanisms by how such non-financial information is internalized by the market. Therefore, this study offers a different approach by placing stock price synchronicity as a mechanism for information transmission, as well as investor demographics as factors that affect the effectiveness of ESG information processing in the capital market.

The urgency of this research is becoming increasingly relevant in the context of the Indonesian capital market which is currently in the spotlight of global investors, especially related to the evaluation of Morgan Stanley Capital International (MSCI). One of the main challenges of the Indonesian capital market is related to the quality of information disclosure and transparency of issuers, including in the aspect of ESG disclosure. The quality and consistency of ESG disclosures that have not been optimal cause non-financial information to be fully internalized into stock prices and have not been effective in reducing the level of information asymmetry in the market. This condition causes stock price movements to be more dominantly influenced by general market information than company-specific information, which is reflected in the high level of stock price synchronicity. In this context, improving the quality of ESG disclosure is not only part of the company's sustainability agenda, but also has strategic implications for improving the efficiency of market information, reducing information asymmetry, improving the quality of stock price formation, and strengthening the competitiveness of the Indonesian capital market in the eyes of global investors.

This research aims to analyze the influence of ESG Risk Ratings on stock price synchronicity as an informative proxy for IDX80 index companies for the 2021–2025 period.

The study also evaluates the role of investor demographic moderation and the differences in industry characteristics between the green and brown sectors, and assesses whether price synchronicity serves as an effective information transmission mechanism in the valuation of company values. Theoretically, this study contributes to filling a gap in the literature regarding the transmission of non-financial signals to stock prices by integrating the perspective of investor behavior and demographics in market efficiency theory. In practical terms, these findings provide insights for investors to refine valuation models, for regulators to strengthen ESG disclosure standards to improve market transparency, and for companies to optimize sustainability reporting and investor communication strategies.

METHOD

Research Design

This research was quantitative research with an empirical approach that aims to test the relationship between the ESG Risk Rating and the mechanism of stock price formation represented by stock price synchronicity. This study emphasizes the mechanism of information transmission to explain how ESG Risk Rating is processed by the market and influences the formation of stock prices. Using stock price synchronicity as an indicator of how efficiently information is reflected in stock prices, this study analyzes the effect of ESG Risk Rating on the quality of stock price information on an ongoing basis.

Population and sample

The population and sample in this study are companies listed on the Indonesia Stock Exchange that are included in the IDX80 Index during 2021 to 2025 and have an ESG Risk Rating, because the Indonesia Stock Exchange has only conducted ESG assessments on a number of listed companies in 2021 and the IDX has provided information on the ESG value on the IDX website. The population and sample of this study also exclude Listed Companies that do not have an ESG Risk Rating so that there are a total of 41 listed companies.

RESULT AND DISCUSSION

Descriptive Statistical Analysis

Descriptive Statistics of Research Variables

The sample in this study consists of 41 companies listed on the Indonesia Stock Exchange that are included in the IDX80 index during the period of 2021 – 2025. Using a balanced panel, 410 observations were obtained that will be made for modeling. The list of samples is presented in Appendix 1, with a statistical description of the variables used as follows:

Table 1. Descriptive Statistical Test Results

Variable	obs	Mean	Var	Sd	Min	Max	Skewness
SYN	410	-2.377036	3.968221	1.992039	-20.01401	0.5825327	-2.439555
ESG	410	29.12251	83.54535	9.140315	10.96	62.02	0.4493239
PRC	410	7.715774	1.327541	1.15219	4.631909	10.25906	0.0371655
INVL	410	0.5054356	0.0484348	0.2200791	0.1124437	0.9658151	-0.0619869
INVI	410	0.8673397	0.0124793	0.1117107	0.5134709	0.9959149	-1.255504
GBN	410	0.5853659	0.2433061	0.4932607	0	1	-.3465516
SIZ	410	31.82299	2.099887	1.449099	28.90262	35.46092	0.6078746

LEV	410	0.4583299	0.0495329	0.2225599	0.0729703	0.890757	0.2936064
ACT	410	0.7053818	0.4225337	0.6500259	0.0004836	3.987098	1.917551
INF	410	0.02738	0.0002257	0.0150228	0.0103	0.0595	1.019815
SUB	410	0.04875	0.0001093	0.0104561	0.035	0.06	-0.2798575
IHS	410	0.0043574	0.0003819	0.0195424	0.0176859	0.0431567	0.6385699

Source: Processed Secondary Data, 2025

Based on the research data presented in the file, descriptive information was obtained regarding 410 company observations during the period from 2021 to 2025. The main variable observed is Stock Price Synchronicity (SYN) with a mean of -2.3770 and a standard deviation of 3.9682, indicating that stock price movements are more influenced by firm-specific information than general market information. The minimum SYN value reaches -20.0140 and the maximum 0.5825, with a negative distribution (skewness -2.4396). ESG Risk Rating (ESG) has a mean of 29.1225 and a standard deviation of 9.1403, with minimum and maximum values of 10.96 and 62.02 respectively, and a relatively normal distribution although slightly right-skewed (0.4493). Stock Value (PRC) has a mean of 7.7158 with a standard deviation of 1.1522, and its distribution is nearly symmetrical and normal. Regarding investor demographics, local investors (INVL) have an average ownership of 50.54% with a symmetrical distribution, while institutional investors (INVI) average 86.73% with left-skewed distribution indicating institutional ownership dominance. For industry classification, the majority of companies fall into the brown industry category with a mean dummy value of 0.5854.

Control variables such as company size (SIZ) have a mean of 31.8230 with mild right skewness, leverage (LEV) averages 0.4583 with an approximately normal distribution, and total asset turnover (TAT) averages 0.7054 with high right skewness indicating that some companies have very large TAT ratios. Macroeconomic variables, including inflation (INF) with a mean of 2.74% and right skewness (1.0198), interest rate (SUB) averaging 4.88% with a symmetrical distribution, and IHSG return (IHS) averaging 0.44% with mild right skewness, are also recorded. Overall, the data show sufficient variation across companies and observation periods, most variables are approximately normally distributed, although some variables such as SYN and TAT exhibit high distribution volatility, making the data sufficiently representative and adequate for panel regression analysis in subsequent hypothesis testing.

Data Distribution: Histogram

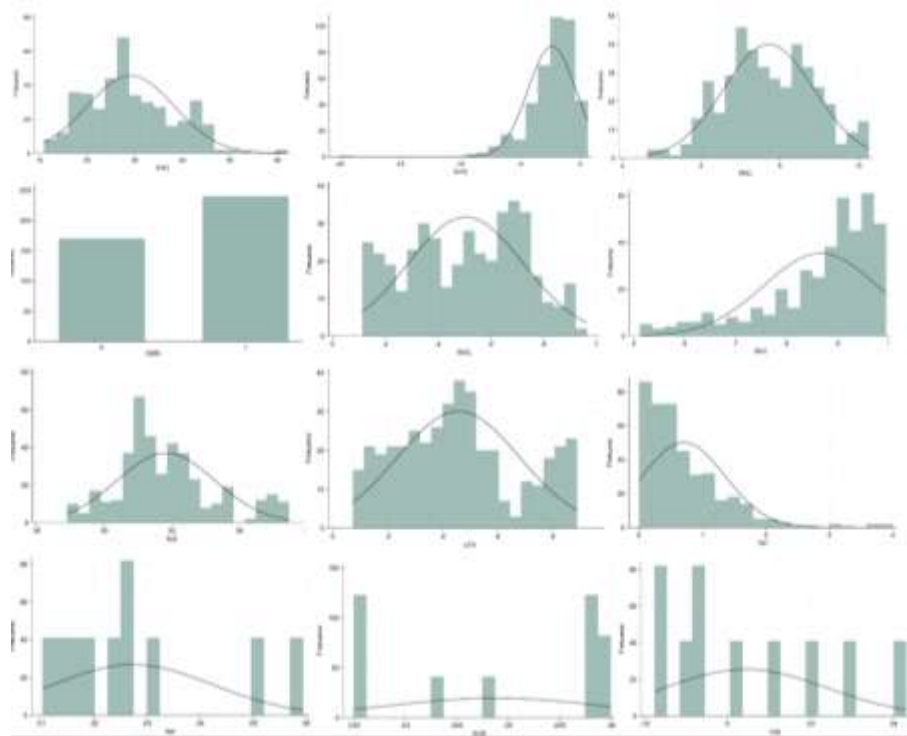


Figure 1. Histogram of all variables

Source: Processed secondary data (2025)

The histogram analysis shows that the ESG Risk Rating (ESG) is roughly normally distributed, slightly positively skewed, with most observations between 20 and 35. Stock price synchronicity (SYN) is negatively skewed, concentrated between -5 and 0, with extreme low values near -20, indicating company-specific information dominates stock price movements. Stock value (PRC) is symmetrically distributed around 6–9, reflecting relatively concentrated share prices among large, liquid companies. The green-brown industry (GBN) dummy shows dominance of brown industry companies. Local investor proportion (INV_L) is fairly normally distributed around 0.4–0.7, while institutional investor proportion (INV_I) is left-skewed near 1, indicating high institutional ownership. Firm size (SIZ) and leverage (LEV) are near-normal, with LEV slightly right-skewed. Total asset turnover (TAT) is positively skewed, showing variation in asset efficiency. Inflation (INF) is stable, interest rates (SUB) show minimal variation, and JCI returns (IHS) cluster around zero with slight right skew. Overall, distributions are adequate for panel regression, though extreme values in some variables require attention in model testing.

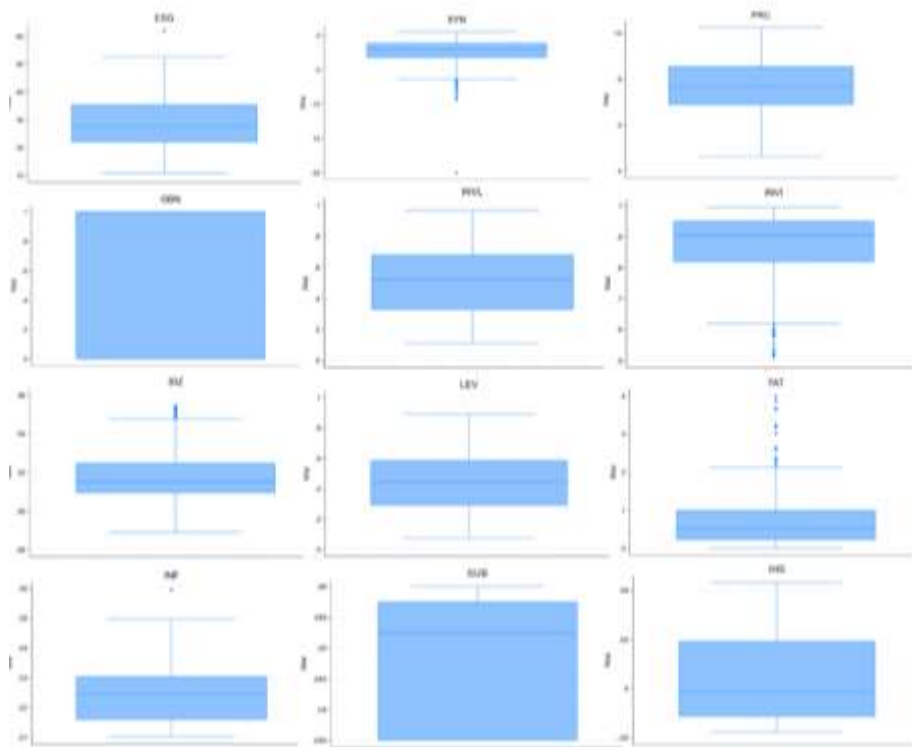


Figure 2. Boxplot of all variables

Source: Processed secondary data (2025)

The boxplot analysis of the research variables shows that the data distributions are generally stable, with medians and interquartile ranges indicating concentrated values for most variables. The ESG Risk Rating (ESG) shows a median around 27–28, with a few high outliers above 60, indicating companies with significantly higher ESG risks. Stock price synchronicity (SYN) has a median around -2 to -3, with extreme low values near -20, suggesting certain firms' stock prices reflect more company-specific than market information. Stock value (PRC) is relatively symmetrical, concentrated between 6 and 9, without significant outliers, showing stable share prices. The green-brown industry (GBN) dummy indicates a dominance of brown industry firms, reflecting higher emission intensity sectors.

Local investor proportion (INVL) is evenly distributed with a median near 0.5, while institutional investor proportion (INVI) is high with some low-value outliers, indicating dominance of institutional ownership overall. Firm size (SIZ) and leverage (LEV) show stable, concentrated distributions. Total asset turnover (TAT) exhibits positive skewness with high outliers near 4, highlighting differences in asset efficiency among firms. Inflation (INF) and interest rate (SUB) are narrowly distributed, while JCI returns (IHS) fluctuate moderately around zero. Outliers in SYN and TAT reflect real economic conditions and heterogeneous firm characteristics; therefore, they were retained. Robust standard errors were used in panel regression to ensure reliable estimates despite heteroscedasticity, autocorrelation, and extreme observations.

ESG Risk Rating affects Stock Price Synchronicity, with investor demographics moderating the relationship

The study tested Hypothesis Model 1 to examine the influence of ESG Risk Rating and Green-Brown Industry (GBN) on stock price synchronicity, considering investor demographics as a moderator. Using a Fixed Effect Model (FEM) with robust standard errors, the results indicate that the ESG Risk Rating has no significant effect on stock price synchronicity, as shown by a positive but statistically insignificant coefficient. This suggests that ESG information in IDX80 companies has not yet effectively increased the incorporation of company-specific information into stock prices, leaving stock movements largely influenced by general market information. While higher ESG risks may correlate with slightly higher synchronicity, the effect is not significant, implying that higher-risk firms' stock prices align more closely with market trends than individual company fundamentals. The GBN variable could not be estimated directly due to its time-invariant nature but is retained theoretically since brown industry firms face higher environmental and regulatory risks, potentially affecting market information efficiency. Moderation tests reveal that neither institutional nor local investor proportions significantly influence the relationship between ESG and stock price synchronicity, suggesting that the presence of certain investor types is insufficient to integrate ESG information effectively into stock prices.

Control variables show that firm size positively affects synchronicity, meaning larger companies' stock prices are more sensitive to market-wide information, while higher total asset turnover negatively impacts synchronicity, indicating more company-specific informational content. Inflation, interest rates, and JCI returns also significantly affect synchronicity, confirming macroeconomic and market conditions dominate stock price movements. Overall, ESG Risk Rating and investor demographics do not significantly explain variations in stock price synchronicity, highlighting that the Indonesian capital market is still transitioning in effectively integrating ESG information into stock price formation.

The Effect of ESG Risk Rating on Stock Value through Stock Price Synchronicity with Investor Demographic Moderation

Hypothesis testing in Model 2 was conducted to analyze the influence of ESG Risk Rating and Green-Brown Industry (GBN) on stock value (PRC) by considering the role of stock price synchronicity and moderation of investor demographics. Estimation was carried out using a Fixed Effect Model (FEM) with robust standard errors to overcome heteroscedasticity and autocorrelation problems in the panel data. Based on the estimated results, the ESG Risk Rating variable has a positive coefficient of 0.0680 with a probability value of 0.2186. A probability value greater than the significance level of 5% indicates that the ESG Risk Rating has no significant effect on the value of the company's shares. Thus, the hypothesis that ESG Risk Rating affects the value of stocks is unacceptable.

These results show that ESG information has not been the main factor that investors consider in determining the stock valuation of IDX80 companies during the research period. From a market efficiency perspective, an efficient stock price should be able to reflect all relevant information, including the company's sustainability information. However, the results of this study indicate that the Indonesian capital market still responds more to traditional fundamental factors and macroeconomic conditions than to ESG information. Additionally, it

should be noted that ESG in this study was measured using ESG Risk Rating Sustainalytics, where higher ESG values indicate worse ESG risk, while lower values indicate better ESG management. The positive coefficient obtained indicates that increased ESG risk is likely to be followed by an increase in the value of stocks, although the relationship is not statistically significant. This condition indicates that the market has not fully penalized companies with higher ESG risks.

The results of this study are different from the research of Friede et al. (2015), Albuquerque et al. (2020), and Fatemi et al. (2018) which found that companies with better ESG performance tend to obtain higher market valuations because they are perceived to have lower long-term risks and better business sustainability. Velte's (2017) research also shows that ESG disclosures can increase investor confidence and strengthen company value. However, the results of this study are in line with Krüger's (2015) research which shows that markets do not always respond consistently to ESG information, especially in emerging markets where the level of integration of sustainability information is still low. In addition, Starks et al. (2023) explain that investors have heterogeneous ESG preferences so that the market's response to ESG information becomes non-uniform.

Variable stock price synchronicity (SYN) has a negative coefficient of -0.0171 with a probability value of 0.1091. These results show that synchronicity does not have a significant effect on the value of the company's shares. Nonetheless, the direction of the negative relationship indicates that the lower the rate synchronicity, then the value of the stock tends to increase. In the perspective of market information, low synchronicity indicates that stock prices reflect more company-specific information than general market information (Morck et al., 2000). Thus, the direction of the negative relationship indicates that companies with more informative stock prices tend to obtain better valuations in the market. However, because the results are not significant, the mechanism of information transmission through stock price synchronicity has not been empirically proven in this study.

These results are different from the research of Durnev et al. (2003) and Jin and Myers (2006) which stated that companies with higher content of specific information in stock prices tend to have better governance and market valuation. However, in emerging markets such as Indonesia, stock prices are still relatively influenced by market sentiment, macroeconomic factors, and investor herding behavior, so company-specific information has not been fully reflected in the formation of stock prices.

Variable Green-Brown Industry (GBN) is again omitted in the model because it is time-invariant in the fixed effect approach. This shows that the classification of the industry did not change during the observation period so that its direct influence was absorbed into the individual securities of the company. However, theoretically, brown industry companies have higher environmental risks than green industries, so they have the potential to affect risk perception and the formation of company value.

The results of the moderation test showed that ESG interaction with institutional investors (ESG_INVI) had a probability of 0.1275, while ESG interaction with local investors (ESG_INVL) had a probability of 0.9228. Both values are greater than the 5% significance level, so it can be concluded that investor demographics do not moderate the influence of ESG Risk Rating on the value of company stocks. These findings show that the existence of institutional investors and local investors has not been able to strengthen the influence of ESG

information on the company's market valuation. From the perspective of information efficiency, this condition indicates that investors in the Indonesian capital market have not made ESG information the main basis for investment decision-making and stock price formation.

This result is different from the research of Ferreira and Matos (2008), Dyck et al. (2019), and Kim et al. (2019) which stated that institutional investors are able to improve company monitoring and encourage the market to be more responsive to ESG information. Institutional investors are generally considered to have better analytical skills so that they can improve the efficiency of stock prices through more in-depth processing of company information. However, the results of this study support the research of Chan and Hameed (2006) who found that in emerging markets, stock prices still tend to be influenced by aggregate market information and investor sentiment rather than company-specific fundamental information. Thus, the existence of institutional investors does not necessarily directly increase the efficiency of market information.

Simultaneously, the results of the F test show a probability value of 0.0000. This value shows that together the variables ESG Risk Rating, stock price synchronicity, investor demographics, moderation interaction variables, and control variables have a significant effect on the value of the company's shares.

In addition, several control variables show a significant influence on the value of the stock. Institutional investors (INVI) have a significant positive effect on stock values, which suggests that companies with a higher proportion of institutional investors tend to have better market valuations. These results are in line with the research of Bushee (1998) and Ferreira and Matos (2008) who stated that institutional investors can increase the credibility of companies in the eyes of the market. JCI (IHS) also has a significant negative effect on stock value. These results suggest that increased market pressures or certain macro conditions can lower the company's valuation. These findings support the theory of asset valuation which states that changes in macroeconomic and capital market conditions affect investors' expectations of cash flow and corporate risk.

Overall, the results of the study show that ESG Risk Rating and stock price synchronicity has not been able to explain the value of the company's shares significantly. In addition, investor demographics have also not been proven to moderate the relationship. These findings indicate that the integration of ESG information in the stock price formation mechanism in the Indonesian capital market is still relatively limited, so the market is not fully efficient in processing company sustainability information into stock valuations.

CONCLUSION

This study aims to analyze the role of ESG Risk Rating on stock price synchronicity as a proxy for the efficiency of stock price information, as well as to examine the role of investor demographics in moderating this relationship in companies listed in the IDX80 index of the Indonesia Stock Exchange for the 2021–2025 period. Based on the results of the panel data regression analysis using the Fixed Effect Model (FEM) with robust standard errors on 410 observations from 41 companies, the following conclusions were obtained: ESG Risk Rating has no significant effect on stock price synchronicity in IDX80 companies (H1 rejected). The ESG Risk Rating variable has a positive coefficient of 0.0077 with a probability value of

0.9639, well above the significance level of 5%. These results indicate that ESG information has not been fully internalized by the market in the mechanism of stock price formation. Indonesia's capital market is still in the transition stage in integrating sustainability non-financial information into the efficiency of stock price information. The more dominant factors affecting stock price synchronicity are firm size, asset utilization efficiency (total asset turnover), and macroeconomic conditions such as inflation, interest rates, and JCI returns. Stock price synchronicity has no significant effect on the company's share value (H2 is rejected). The SYN variable has a negative coefficient of -0.0171 with a probability value of 0.1091. Although the direction of the relationship suggests that the lower the synchronicity, the stock value tends to increase in line with the theoretical expectation that a more informative stock price reflects better company fundamentals this effect has not been statistically proven. Thus, the mechanism of transmitting ESG information through stock price synchronicity to stock value has not been empirically proven in this research sample.

Investor demographics have not been proven to moderate the relationship between ESG Risk Rating and stock price synchronicity or stock value. The variables of ESG interaction with institutional investors (ESG_INVI) and local investors (ESG_INVL) were both insignificant in both models, with probability values well above 5%. These findings show that the proportion of institutional investors and local investors in Indonesia has not been able to strengthen or weaken the influence of ESG information on the efficiency of stock price information. This condition is consistent with the characteristics of emerging markets where trading behavior is still more influenced by market sentiment and aggregate information than company-specific information, including ESG information. Overall, the results of this study provide empirical evidence that the integration of ESG information in the stock price formation mechanism in the Indonesian capital market is still limited. The market has not treated ESG Risk Rating as an information signal that consistently affects the efficiency of stock price information, either directly through stock price synchronicity or indirectly through investor demographic moderation. Structural and macroeconomic factors were the main determinants in the stock price dynamics of IDX80 companies during the study period. Furthermore, institutional and retail investors are advised to enhance their ESG literacy and analytical capabilities to evaluate how long-term non-financial risks impact corporate valuation beyond short-term market fluctuations. Finally, future researchers are encouraged to expand the observational timeframe, analyze individual Environmental, Social, and Governance sub-scores separately, or include broader market indices to capture the evolving transmission mechanisms of ESG information in emerging capital markets.

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