

Sustainability Effects On Market Risk, Liquidity, And Expected Return

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Abstract—The expected return of manufacturing companies listed on the Indonesia Stock Exchange is examined in this study in relation to market risk, liquidity, and environmental, social, and governance (ESG) aspects. Inspired by conflicting empirical results and the growing importance of sustainability issues, the study employs a quantitative approach with balanced panel data from 100 businesses between 2022 and 2024. EViews 12 was used for panel regression, and model specification tests such as the Chow, Hausman, and Lagrange Multiplier tests confirmed that the Fixed Effect Model (FEM) was the best estimator. The empirical findings show that, at the 5% significance level, market risk, ESG performance, and liquidity all have favorable and statistically significant effects on predicted return. These results are consistent with the Capital Asset Pricing Model (CAPM), Signaling Theory, and Liquidity Preference Theory, indicating that both sustainability and liquidity disclosures function as reliable market signals. The results provide useful information for investors and financial professionals looking to incorporate risk, sustainability, and liquidity into investment choices. They also add to the body of knowledge on asset pricing in emerging markets.

Keywords: Expected Return; Market Risk; ESG; Liquidity; CAPM

1. INTRODUCTION

Environmental, social, and governance (ESG) issues have increasingly captured corporate attention both in Indonesia and globally in recent years. Despite this growing focus, ESG adoption among Indonesian publicly listed companies remains uneven; many firms have yet to fully comply with the Global Reporting Initiative (GRI) 2021 standards, and only about 40% of issuers on the Indonesia Stock Exchange (IDX) currently publish sustainability reports (OJK, 2021). According to the IDX ESG Leaders Index (2024), the manufacturing sector is a major contributor to national carbon emissions. With the Financial Services Authority (OJK) implementing mandatory ESG disclosures beginning in 2025, sustainability considerations are expected to play a more central role in shaping investor decisions within the domestic capital market.

Globally, investment flows into ESG-related instruments have risen sharply since 2020, and ESG indexes have demonstrated relative resilience during periods of market turbulence signaling a shift in investor preferences toward sustainability-oriented assets (BEI Quarterly Report, 2023). In Indonesia, the manufacturing sector holds strategic economic importance, significantly contributing to GDP, exports, and employment. At the same time, the sector is highly sensitive to macroeconomic fluctuations such as inflation, interest rate changes, commodity price movements, and exchange rate volatility, all of which heighten exposure to market risk (Defiantoro & Mayasari, 2024; Kristanti et al., 2022). Given its diverse levels of stock liquidity and its considerable environmental footprint, the manufacturing industry provides an ideal setting to examine how market risk, ESG performance, and liquidity jointly influence expected return.

Empirical findings regarding the determinants of expected return remain inconsistent. Several studies document a positive and significant relationship between market risk (beta) and expected return across different contexts (Geyer-Klingeberg et al., 2020; Hoang & Mateus, 2024; Kyei et al., 2024). However, other evidence suggests that the influence of market risk weakens during periods of heightened volatility (Business et al., 2024; Syahnar & Wikartika, 2024). Similar inconsistencies appear in ESG-related research. Some scholars emphasize that the impact of ESG depends on disclosure quality and how the market perceives sustainability information (Reber et al., 2022), while others find that strong ESG performance enhances return stability and reduces idiosyncratic risk (Chou & Tang, 2023; Ellili, 2022; Reber et al., 2022; Utami & Dirman, 2022). Evidence on liquidity and return also varies: certain studies suggest that greater liquidity boosts expected return by improving price efficiency and strengthening investor confidence (Manurung et al., 2024; Messaoud et al., 2023; Nugraha et al., 2023), whereas others highlight structural limitations in emerging markets that may complicate this relationship (Manurung et al., 2024; Musneh et al., 2021).

The mixed and sometimes contradictory findings in prior research highlight an existing gap: most studies evaluate market risk, ESG, and liquidity separately, leaving their combined and comparative effects on expected return within an integrated Capital Asset Pricing Model (CAPM) framework largely underexplored, especially in the context of Indonesia's manufacturing sector and the post-COVID-19 environment (Massa & Zhang, 2021; Messaoud et al., 2023; Pástor & Stambaugh, 2003). Incorporating ESG and liquidity into CAPM-based asset pricing models aligns with recent theoretical developments (such as ESG-enhanced CAPM and liquidity-adjusted CAPM) and reflects evolving investor preferences for sustainability and market efficiency (Du & Heo, 2022; Massa & Zhang, 2021; Pástor & Stambaugh, 2003).

This study contributes to the literature by employing balanced panel data from the post-pandemic period, capturing contemporary shifts in market dynamics and corporate disclosure behavior while simultaneously analyzing market risk, ESG performance, and stock liquidity as joint determinants of expected return for manufacturing firms listed on the IDX. By integrating ESG and liquidity into a CAPM-based empirical framework, this research provides a more comprehensive

understanding of how financial and non-financial factors collectively influence expected returns in an emerging market setting.

Accordingly, the goals of this research are to: (1) apply the CAPM framework to assess the effect of market risk on expected return among manufacturing firms listed on the IDX; (2) examine how ESG performance influences expected return as a non-financial signal that shapes investor perceptions; and (3) analyze the impact of stock liquidity measured using the Amihud Illiquidity Ratio on expected return. Beyond offering practical insights for investors, portfolio managers, and regulators working to integrate risk, sustainability, and liquidity into decision-making, the study also contributes empirical evidence to asset pricing research within emerging markets (Richardson, 2023; Rizwan et al., 2020; Shael et al., 2020).

From a signaling theory perspective, market risk captured by beta provides investors with information about a firm's sensitivity to macroeconomic fluctuations. As noted by Eldomiati et al. (2024), a higher beta reflects stronger responsiveness to market volatility and greater exposure to systematic risk. Because beta is derived from the covariance of a firm's returns with market returns, it serves as an observable indicator of non-diversifiable risk, even in the absence of explicit risk communication by firms. Investors naturally demand higher expected returns as compensation when beta signals greater systematic risk (Ellahie et al., 2022).

This process is fully consistent with the core principles of the Capital Asset Pricing Model (CAPM), originally developed by Sharpe and Lintner, which establishes a linear link between systematic risk and expected return. As market risk increases, rational and risk-averse investors require higher returns to offset the additional level of exposure (Banafsyah Imanda Safa et al., 2025).

Additional empirical evidence reinforces this positive relationship. Geyer-Klingeberg et al. (2020) report that increases in systematic risk are associated with higher expected returns in developing markets, including those in Southeast Asia. Similar findings appear in broader Asian markets, where Hoang and Mateus (2024) show that improvements in information efficiency and trading liquidity resulting from capital market liberalization strengthen the positive association between market risk and expected return. Likewise, Kyei and Collins (2024) find a significant positive impact of beta on expected return in West African markets, indicating that investors consistently demand higher premiums for assuming greater levels of systematic risk (Geyer-Klingeberg et al., 2020; Hoang & Mateus, 2024; Kyei et al., 2024). Based on this theoretical rationale and the supporting empirical evidence, the first hypothesis is formulated as follows:
H1: Market risk has a positive effect on expected return.

Environmental, Social, and Governance (ESG) performance represents a company's dedication to sustainability and ethical business practices. From the perspective of signaling theory (Spence), firms that demonstrate strong ESG performance send positive signals to investors regarding their transparency, credibility, and long-term resilience. Robust ESG implementation helps reduce information asymmetry by indicating that the company is capable of managing long-term non-financial risks, thereby strengthening investor confidence and potentially increasing demand for the firm's shares (Wu et al., 2022).

Empirical evidence further supports the beneficial influence of ESG on expected return. Reber, Gold, and Gold (2022) find that transparent ESG disclosure decreases idiosyncratic risk and enhances return stability in European markets. Similarly, Ellili (2022) reports that high-quality ESG reporting improves investment efficiency and leads to higher expected returns. In the Indonesian manufacturing sector, Utami and Dirman (2022) show that ESG performance significantly enhances stock return stability, indicating that firms with strong sustainability practices attract long-term investors. Additionally, Chou and Tang (2023) find that firms with higher ESG scores on the Indonesia Stock Exchange exhibit lower market betas, suggesting that improved ESG performance reduces systematic risk and increases investor confidence (Chou & Tang, 2023; Ellili, 2022; Reber et al., 2022; Utami & Dirman, 2022). Grounded in these theoretical insights and empirical findings, the following hypothesis is proposed:

H2: Environmental, Social, and Governance (ESG) performance has a positive effect on expected return.

Liquidity refers to the extent to which a stock can be bought or sold quickly without causing significant price changes. According to Keynes' Liquidity Preference Theory, investors favor liquid assets because they entail lower risk and provide greater flexibility, especially during periods of economic uncertainty. From a signaling standpoint, liquidity also communicates meaningful information about firm quality and market confidence. Stocks with high liquidity indicate active trading, strong investor interest, and reduced information asymmetry, all of which imply lower transaction risk (Paulus et al., n.d.). In contrast, illiquid stocks tend to signal uncertainty, heightened price volatility, and potentially high transaction costs, making them less appealing to investors.

Empirical research consistently highlights the crucial role of liquidity in influencing expected returns. Manurung et al. (2024) report that in emerging Southeast Asian markets, highly liquid stocks tend to yield higher returns because of stronger investor confidence. Messaoud and Ben Amar (2023) find that enhanced liquidity reduces bid-ask spreads and improves price efficiency, which contributes to increased expected returns. Musneh and Abdul Karim (2021) also show that liquidity risk significantly affects expected return in Malaysia, with higher trading volumes corresponding to greater return premiums (Manurung et al., 2024; Messaoud et al., 2023; Musneh et al., 2021). Comparable evidence from Indonesia indicates that improvements in liquidity for manufacturing stocks after the pandemic have strengthened investor confidence and positively impacted expected returns (Nugraha et al., 2023). Grounded in these theoretical insights and empirical findings, the following hypothesis is proposed:

H3: Liquidity has a positive effect on expected return.

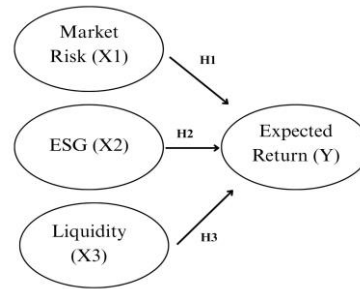


Figure 1. Research Framework

2. RESEARCH METHODS

2.1 Population and Sample

The population of this research comprises all manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the study period. The manufacturing sector was chosen due to its significant role in the national economy and its capacity to represent core dynamics of Indonesia’s capital market. Additionally, manufacturing firms are generally more proactive in reporting sustainability information through Environmental, Social, and Governance (ESG) disclosures aligned with Global Reporting Initiative (GRI) standards. This makes the sector especially suitable for analyzing the interplay among ESG performance, market risk, liquidity, and expected return within the Capital Asset Pricing Model (CAPM) framework.

A purposive sampling technique was applied, selecting firms that met specific criteria consistent with the study’s objectives. Eligible companies were those categorized as manufacturing and continuously listed on the IDX throughout the research period; those that issued annual and sustainability reports adhering to GRI standards; those with complete monthly stock price data, market index (IHSG) information, and trading volume records; and those that did not undergo delisting, trading suspensions, or major corporate restructurings that could interfere with data continuity. Only firms with complete data necessary for calculating market risk (β), ESG scores, and liquidity measured using the Amihud Illiquidity Ratio were included.

Using these criteria, a final sample of 100 manufacturing firms was deemed suitable for inclusion in the study. This sample size is considered sufficient to represent the broader population and to yield reliable estimation results. The research relies on secondary data collected from annual reports and sustainability reports available on the official IDX website, along with market data sourced from Yahoo Finance and Refinitiv Eikon for computing market risk and liquidity measures. The dataset constitutes balanced panel data, integrating both time-series and cross-sectional elements. Each company in the sample provides complete observations for the entire study period, ensuring uniformity across firms and minimizing potential biases often associated with unbalanced data.

Employing balanced panel data enhances the precision of the analysis by allowing a more robust assessment of how market risk, ESG performance, and liquidity influence expected return, while adequately accounting for differences across firms and over time. Moreover, the balanced structure enables the application of an extended CAPM-based regression model, resulting in more stable and efficient parameter estimates.

Table 1. Measurement of Variables

Variabel	Kode	Rumus	Referensi
<i>Expected Return</i>	ER	$E(R_i) = R_f + \beta_i \times (E(R_m) - R_f)$	(Kilic et al., 2022; Vergara-Fernández et al., 2023)
<i>Market Risk</i>	MR	$E(R_m) - R_f$	(Alaoui Taib & Benfeddoul, 2023; Rutkowska – Ziarko et al., 2024)
<i>Environmental, Social, and Governance</i>	ESG	$\frac{E + S + G}{3}$	(Broadstock et al., 2021; Chou & Tang, 2023)
<i>Likuiditas</i>	LIQ	$\frac{1}{T} \sum_{t=1}^T \frac{R_{it}}{V_{it}}$	(Amihud & Noh, 2021; Manurung et al., 2024)

Source: Data Proceed

2.2 Data Research Methods

This research adopts a quantitative methodology, focusing on findings generated through regression analysis using balanced panel data. This approach is chosen because it permits the integration of information across multiple firms and time periods, thereby enabling the assessment of how the relationships among the study variables vary over time and across entities. The analytical framework is based on an extended Capital Asset Pricing Model (CAPM), which

incorporates Environmental, Social, and Governance (ESG) performance as well as stock liquidity as additional determinants of expected return. In line with this framework, the study aims to evaluate the extent to which market risk, ESG performance, and liquidity affect the expected returns of manufacturing companies listed on the Indonesia Stock Exchange (IDX).

For the data analysis process, this study employs EViews 12, which supports the estimation of panel regression models and the execution of statistical diagnostic tests. Before conducting the regression, descriptive statistics are generated to summarize the characteristics of each variable such as minimum, maximum, mean, and standard deviation values. Subsequently, the dataset undergoes classical assumption testing, including assessments for multicollinearity, heteroskedasticity, and autocorrelation, to ensure the robustness and validity of the regression model.

The selection of the appropriate model is carried out through a sequence of specification tests. First, the Chow test is conducted to determine whether the Pooled Least Squares (PLS) model or the Fixed Effect Model (FEM) provides a better fit. Next, the Hausman test is employed to distinguish between the Fixed Effect Model (FEM) and the Random Effect Model (REM). Additionally, the Lagrange Multiplier (LM) test is performed to assess the suitability of the Random Effect Model. After identifying the most appropriate model, it is then used to evaluate the effect of each independent variable on the dependent variable at the 5% significance level ($\alpha = 0.05$).

The regression results are interpreted by analyzing the direction and size of the coefficients, the corresponding p-values, and the coefficient of determination (R^2), which together indicate how effectively the model accounts for variations in expected return. The interpretation incorporates both statistical and economic perspectives to generate empirical insights into how market risk, ESG performance, and stock liquidity shape expected return within Indonesia's capital market, which continues to be classified as an emerging market.

3. RESULTS AND DISCUSSION

3.1 Results

Descriptive statistics were examined to summarize the characteristics of the dataset, which includes expected return (ER), market risk (MR), Environmental, Social, and Governance (ESG) performance, and stock liquidity (LIQ) for 100 Indonesian manufacturing companies from 2022 to 2024. The study uses balanced panel data consisting of 300 total observations (100 firms \times 3 years). Overall, the results show that the average expected return remained moderately positive throughout the period, signaling that the Indonesian stock market particularly the manufacturing sector experienced a stable upward trend despite global macroeconomic uncertainties.

Market risk (β) values display considerable dispersion across firms, reflecting heterogeneous exposures to systematic market fluctuations. Such variation is common in emerging markets, where differences in capital structure, operational scale, and sensitivity to external shocks tend to produce widely dispersed beta values. The descriptive results further reveal that several firms exhibit relatively high beta coefficients, which may be associated with higher leverage, cyclical business models, or greater vulnerability to global commodity prices. Conversely, companies with lower beta values appear to maintain more conservative financial policies or operate in less market-sensitive subsectors.

The ESG variable demonstrates a gradual improvement across the three years of observation. This upward shift indicates growing corporate commitment to sustainability reporting and adherence to environmental and social standards. The improved trend in ESG scores aligns with recent regulatory and investor-driven pressures, including the increasing implementation of sustainability disclosure frameworks in Indonesia. This pattern also reflects broader market awareness, where investors appear to reward companies that exhibit responsible business practices and transparent ESG communication.

Liquidity, measured using the Amihud Illiquidity Ratio, shows that most stocks in the sample were relatively liquid during the observation period. Lower values of the Amihud ratio suggest that price movements associated with trading volumes were generally minimal, signaling efficient price formation and a healthy level of market activity. Nonetheless, the results also reveal substantial variation in liquidity across firms, which may correspond to differences in market capitalization, free float, or investor base. While many firms exhibit strong trading activity, a notable subset remains relatively illiquid, reflecting the segmentation often observed in emerging equity markets.

The regression analysis uses a Fixed Effect Model (FEM), which was determined to be the most appropriate estimator based on model selection tests (including the Chow test and the Hausman test, performed previously). Table 2 presents the estimation results:

Table 2. Fixed Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.169392	0.086703	-1.953697	0.0522
MR	0.706438	0.134080	5.268781	0.0000
ESG	0.072620	0.029216	2.485571	0.0138
LIQ	0.078383	0.031753	2.468561	0.0144

The partial t-tests indicate that all independent variables significantly influence expected return at the 5% significance level. Market Risk (MR) records a coefficient of 0.7064, with a t-statistic of 5.2687 and a p-value below

0.05, confirming a positive and statistically significant relationship with expected return. This result supports the risk–return tradeoff predicted by the Capital Asset Pricing Model (CAPM), where higher systematic risk necessitates higher compensation for investors.

The ESG variable displays a coefficient of 0.0726, with a t-statistic of 2.4856 and a p-value of 0.0138, indicating that ESG performance significantly and positively affects expected return. Firms that demonstrate stronger sustainability practices appear to generate higher market confidence, potentially due to lower perceived non-financial risks and improved long-term growth prospects.

Liquidity (LIQ) also exerts a significant and positive effect, with a coefficient of 0.0784 and a p-value of 0.0144. These findings suggest that stocks with higher liquidity levels tend to yield higher expected returns, reflecting investor preference for assets with lower transaction costs and greater marketability.

Table 3. Coefficient of Determination

R-squared	0.964548	Mean dependent var	0.062100
Adjusted R-squared	0.946192	S.D. dependent var	0.017905
S.E. of regression	0.004153	Akaike info criterion	-7.863.665
Sum squared resid	0.003398	Schwarz criterion	-6.592.033
Log likelihood	1.282.550	Hannan-Quinn criter	-7.354.756
F-statistic	5.254.693	Durbin-Watson stat	2.274.401
Prob(F-statistic)	0.000000		

The R-squared value of 0.9645 and Adjusted R-squared of 0.9462 indicate that approximately 94.62% of the variation in expected return is explained by the independent variables market risk, ESG performance, and liquidity. Only 5.38% remains unexplained, which is reasonable given the complexity of financial markets.

The F-statistic (52.54693) with a p-value of 0.0000 confirms that the model is jointly significant, implying that all independent variables collectively have a meaningful influence on expected return. Because the calculated F-value far exceeds the critical threshold (2.70), the null hypothesis of no joint effect is strongly rejected.

Furthermore, the Durbin–Watson statistic (2.2744) indicates the absence of autocorrelation, while additional diagnostic tests performed earlier confirm that there is no multicollinearity (tolerance values < 0.85) and no heteroskedasticity (p-values > 0.05). These results satisfy the BLUE (Best Linear Unbiased Estimator) requirements, affirming the reliability and robustness of the FEM estimates.

3.2 Discussion

The positive and significant effect of market risk on expected return aligns closely with the core theoretical assumptions of the Capital Asset Pricing Model (CAPM) developed by Sharpe and Lintner. According to CAPM, investors require higher expected returns as compensation for taking on higher levels of systematic risk. The finding that β positively influences expected return indicates that Indonesian manufacturing stocks behave consistently with global risk pricing standards. This is particularly noteworthy given that emerging markets often display deviations from classical asset pricing models due to market inefficiencies or regulatory frictions. Empirically, the results are consistent with evidence from Geyer-Klingeberg et al. (2020), Hoang and Mateus (2024), and Kyei et al. (2024), who found similar positive relationships in both developed and emerging markets (Geyer-Klingeberg et al., 2020; Hoang & Mateus, 2024; Kyei et al., 2024). Their studies demonstrated that firms with higher exposure to market fluctuations experience correspondingly higher expected returns, reinforcing the universality of the risk–return tradeoff. The present findings therefore confirm that Indonesian investors, much like those in other global markets, demand additional compensation for bearing systematic risk.

This association reflects rational investor behavior, particularly in the context of heightened global uncertainty. For manufacturing firms that operate in environmentally sensitive or cyclically driven sectors, beta values often rise due to exposure to commodity price shocks, exchange rate volatility, and global supply chain disruptions. The positive beta–return relationship suggests that investors actively incorporate these risk components into their required return calculations, thereby reinforcing CAPM’s predictive validity in the Indonesian market. The analysis also reveals that ESG performance exerts a positive and statistically significant influence on expected return. This finding signals a shift in investor preferences toward firms that adopt sustainable and responsible business practices. As sustainability considerations increasingly become mainstream in investment decision-making, companies with strong ESG disclosures may attract a broader investor base, particularly those with long-term investment horizons.

The results align with the empirical evidence of Utami and Dirman (2022) and Ellili (2022), who demonstrated that firms engaging in transparent ESG initiatives tend to build stronger investor trust and achieve enhanced stock performance (Ellili, 2022; Utami & Dirman, 2022). In this study, the positive relationship suggests that ESG serves as an important non-financial indicator that investors factor into their valuation processes. Strong ESG performance may reduce perceived risk by signaling effective governance structures, environmental responsibility, and social accountability. From a theoretical perspective, the results also support signaling theory. High ESG performance can act as a credible signal of long-term stability, lower regulatory risk, and superior managerial quality. Investors may view firms with stronger ESG commitments as more resilient to external shocks such as environmental regulation changes, labor disputes, or reputational damage which ultimately enhances expected returns.

Moreover, as global supply chains increasingly place emphasis on sustainability compliance, Indonesian manufacturing firms with better ESG practices may benefit from improved market access and stronger competitive positioning. This dynamic further strengthens investor sentiment, contributing to higher expected returns. Liquidity, as measured by the Amihud Illiquidity Ratio, also significantly and positively influences expected return. This outcome suggests that firms with more actively traded stocks tend to generate higher levels of expected return. The finding supports the notion that liquidity reduces transaction costs and enhances marketability, making such stocks more attractive to investors. The results corroborate prior studies by Manurung et al. (2024) and Messaoud and Ben Amar (2023), who identified liquidity as a critical signal of market efficiency and investor confidence (Manurung et al., 2024; Messaoud et al., 2023). Highly liquid stocks are perceived as lower risk due to smoother execution of buy and sell orders, minimal price distortion, and reliable access to the market. Investors tend to reward such stocks, which may explain their higher expected returns.

The positive coefficient also reflects the structural nature of liquidity in emerging markets. In Indonesia, liquidity disparities across firms are often driven by differences in firm size, public float, analyst coverage, and investor familiarity. Firms with limited liquidity may experience price volatility and elevated transaction risk, deterring large institutional investors. Conversely, well-traded stocks benefit from deep market participation, thereby enhancing their expected return profile. This relationship underscores the importance of maintaining active trading environments, improving disclosure practices, and attracting diverse investor bases. Policy efforts aimed at enhancing liquidity such as encouraging broader public share ownership or increasing transparency may therefore contribute positively to market performance. The high adjusted R-squared value (0.9462) suggests that the combination of market risk, ESG performance, and liquidity provides a strong explanatory framework for expected return in the Indonesian manufacturing sector. This highlights the multifaceted nature of return generation in emerging markets, where both financial and non-financial factors play crucial roles.

The significance of the F-statistic further validates that the variables jointly influence expected return. This implies that investors do not consider these factors in isolation; instead, they evaluate risk, sustainability, and liquidity collectively when forming expectations about stock performance. The results also reinforce risk–return theory within an emerging market context. Although emerging markets often exhibit higher volatility and structural inefficiencies, the consistency of the findings with classical asset pricing models suggests that the Indonesian market demonstrates growing maturity and rational pricing behavior. Additionally, the acceptance of all research hypotheses indicates strong support for the argument that market risk, ESG factors, and liquidity are essential components of expected return determination. The study contributes to the literature by providing empirical evidence on the combined role of systematic risk, sustainability indicators, and liquidity in shaping expected return in an emerging market. While prior research often examines these variables individually, the present analysis integrates all three within a unified panel data framework, offering a more comprehensive understanding of market behavior.

For policymakers, the findings highlight the importance of strengthening sustainability disclosure standards and improving market liquidity. Regulators may consider promoting ESG reporting practices and enhancing trading infrastructures to foster a more transparent, efficient, and resilient market. For investors, the results provide valuable insights into the key drivers of expected return. Investors seeking higher returns should consider firms with higher beta values, stronger ESG performance, and greater liquidity. For corporate managers, the findings underscore the importance of managing market exposure, enhancing sustainability practices, and ensuring adequate stock liquidity to appeal to investors.

4. CONCLUSION

Drawing on balanced panel data analyzed through the Fixed Effect Model for 100 Indonesian manufacturing firms, this study provides empirical evidence that market risk, Environmental, Social, and Governance (ESG) performance, and stock liquidity each exert positive and significant influences on expected return. These results reinforce the core risk–return principle embedded in the Capital Asset Pricing Model (CAPM), demonstrating that this trade-off remains highly applicable in emerging markets like Indonesia, where rational investors seek higher returns to compensate for elevated systematic risk. Moreover, the findings strengthen Signaling Theory by illustrating that ESG disclosures function as credible signals that enhance investor confidence and shape favorable market perceptions of a firm’s long-term prospects. The liquidity results further validate Liquidity Preference Theory, which argues that more readily tradable stocks offer higher return compensation because they foster stronger investor trust in market efficiency. For investors, the results provide actionable insights by emphasizing the importance of evaluating three core dimensions market risk, ESG performance, and liquidity when analyzing stock potential and constructing portfolios in the Indonesian capital market. For regulators such as the Financial Services Authority (OJK) and the Indonesia Stock Exchange (IDX), the findings underscore the need to promote greater ESG transparency and improved trading efficiency to enhance the resilience and attractiveness of the national capital market. From an academic perspective, this study contributes to financial scholarship by integrating CAPM, Signaling Theory, and Liquidity Preference Theory into a cohesive empirical framework suited to emerging-market conditions. From a theoretical standpoint, this study enriches the literature by integrating risk, sustainability, and liquidity dimensions into a unified CAPM-based framework tailored to the characteristics of emerging markets. From a practical perspective, the results highlight the importance for investors and financial managers to

incorporate systematic risk, ESG initiatives, and liquidity conditions as key considerations in investment analysis and portfolio construction. For future research, extending the study period and incorporating macroeconomic indicators or behavioral investor factors would provide a more comprehensive understanding of the determinants influencing expected return in Indonesia's capital market. However, the study is constrained by its relatively short observation period and its exclusive focus on the manufacturing industry. Future research is therefore encouraged to expand the timeframe, include additional sectors such as finance or infrastructure and incorporate macroeconomic indicators such as inflation, interest rates, and global market volatility to develop a more comprehensive understanding of the determinants of expected return in Indonesia's capital market. This study offers meaningful implications for market practitioners, investment managers, and policymakers aiming to better understand the factors that shape expected return within Indonesia's manufacturing sector. From a managerial standpoint, the findings indicate that effectively managing market risk can serve as a strategic approach to improving expected return, particularly for portfolios that emphasize risk-based decision-making. Firms are also encouraged to enhance their ESG initiatives as a means of strengthening corporate reputation, improving transparency, and attracting long-term investors who prioritize sustainability. Additionally, increasing stock liquidity through clearer corporate disclosures, higher trading activity, and more efficient information processes can reinforce investor confidence in the stability of firm value.

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