

THE INFLUENCE OF FINANCIAL PERFORMANCE ON STOCK RETURNS WITH ESG AS AN INTERVENING VARIABLE

Iqbal Arraniri¹, Yasir Maulana^{2*}, Munir Nur Komarudin³, Wely Hadi Gunawan⁴

Universitas Kuningan^{1,2,3}

E-mail: yasir@uniku.ac.id

Abstract: The purpose of this study is to examine the effect of financial performance on stock returns by considering sustainability as an intermediate variable. This study uses Structural Equation Model analysis to assess the relationship between ROI, PER, PBV, and OPM variables as a representation of economic fundamentals, ESG variables as a representation of sustainability, and the relationship between Stock Return. The data used in this study are secondary data in the form of financial reports and accountability reports of public companies. The research sample consists of eight companies that meet the criteria set out in this study. The results of SEM analysis show that there is a significant direct influence between financial performance (ROI, PER, PBV, and OPM) and stock returns and there is a significant direct influence between ROI, PER, PBV, and OPM and sustainability (ESG). In addition, this study also found that ESG acts as a mediator between economic fundamentals (ROI, PER, PBV, and OPM) and stock returns. The results of this study have important implications for understanding the relationship between economic fundamentals, sustainability and stock performance. This study provides empirical evidence that companies with good financial performance tend to adopt better sustainability practices, which in turn can affect stock returns. Business stakeholders, regulators and investors can use this impact to make more informed and sustainable decisions.

Keywords: *Financial Performance, Stock return, ESG*

Submitted: 2024-04-28; Revised: 2024-06-15; Accepted: 2024-06-20

1. Introduction

Fundamental analysis is a method used to assess the intrinsic value of a company by analyzing fundamental factors that affect financial performance, such as financial statements, operational performance, and market conditions. Fundamental analysis helps investors and financial analysts make more informed investment decisions and gain a deeper understanding of a company's financial prospects. By analyzing financial statements, such as balance sheets, income statements, and cash flows, investors can assess a company's financial health, such as profitability, liquidity, and leverage levels. In addition, fundamental analysis also involves evaluating external factors that may affect a company's performance, such as macroeconomic factors, industry competition, and government regulations. Fundamental analysis involves evaluating various fundamental indicators that provide an overview of the company's financial condition and its future prospects (Tazar, 2020).

Here is a brief explanation of some common fundamental indicators that are often used such as Net Profit which is the amount of profit earned by a company after deducting all costs, taxes, and expenses. Net profit reflects the company's profitability performance. A company with a consistent net profit shows the company's ability to generate stable profits from its operations; Revenue which refers to the total revenue or sales proceeds obtained by the company from its business activities. Stable revenue growth indicates the company's ability to increase sales of products or services in a sustainable manner. Strong revenues can reflect good demand and a strong position in the market; Assets include all resources owned by the company, both in the form of tangible and intangible assets. Tangible assets may include land, buildings, equipment, and inventory, while intangible assets include trademarks, patents, and goodwill. Asset evaluation helps investors understand a company's capital structure and potential value (Mayer, 1988).

Another measure used to assess the relationship between parts of a company's financial statements is ratios. One of the basic elements often considered is return on equity, which describes the income shareholders receive from their investment in a particular company. One of the most commonly used basic tools is Return on Investment (ROI) which is a ratio value that shows the ability of a company to generate operating net income against total investment. The ROI variable value is obtained by dividing net profit after tax (EAT) by total investment. The total investment used in the calculation is the company's total assets. The greater the ratio value, the better the quality of a company in generating profits. (Kohar Mudzakar & Wardanny, 2021). In addition, the calculation of the Price Earning Ratio (PER) is a ratio value showing the value of a stock in the capital market with its actual value, whether it is over value (expensive) or under value (cheap). The variable value of PER is obtained from the price per share divided by the earnings per share. (Bustani et al., 2021). Furthermore, the Price to Book Value (PBV) assessment is a ratio that shows the book value per share with the actual price of shares in the capital market. The higher the PBV value, the higher the investor assesses the company (Kusmayadi et al., 2021). (Kusmayadi et al., 2018).. Price to Book Value shows how much public trust, especially investors in the company so that they value the company's shares higher than their real value (Dita & Murtaqi, 2018). (Dita & Murtaqi, 2014).. Furthermore, Operating Profit Margin (OPM) is a ratio that shows the percentage of each sale after all costs and expenses which will also show the operating profit earned from each sale of a company. (Mahdi & Khaddafi, 2020).. A high OPM value means that the company's operating profit is also high. In addition, the concept of sustainable development is becoming an increasingly important factor in corporate financial decision making. Sustainable development includes social, ecological and corporate governance (ESG) aspects. Companies that apply sustainable development principles are considered more sustainable in the long term because they manage risks related to environmental and social issues and maintain good relations with stakeholders (Huang, 2021).

The concept of sustainability refers to an approach that considers environmental, social and governance (ESG) factors when making sustainable decisions. To measure the sustainability of a company, this measurement tool is known as the ESG Score Index which shows the impact of a company's operations on the environment, society, and governance. In this study, the ESG score is taken from S&P Global data, given that the organization provides ESG scores for all research samples. The higher the ESG score, the better the company's performance in activities related to the environment, society, and governance (Gyönyöróvá et al., 2021). ESG score is an index that shows the impact of a company's business activities on the environment, social society, and corporate governance (Sahut & Pasquini-Descomps,

2015). In this study, the ESG score is taken from S&P Global data with the consideration that the institution provides ESG score data for all research samples. The higher the ESG score, the better a company's performance in activities related to the environment, social community, and corporate governance. The importance of sustainability concepts in corporate finance decision-making can be connected to the example data presented. The Global Sustainable Investment Alliance (GSIA) report for 2022 shows that assets under professional management with a focus on sustainability will reach USD 35.3 trillion (Morawakage et al., 2023). This reflects increased investor awareness and interest in the integration of sustainability factors in their investment portfolios. In this context, investors increasingly recognize that sustainability factors can have a significant impact on a company's financial performance. For example, responsible environmental practices can reduce reputational risk, improve operational efficiency and give companies access to sustainable business opportunities. Social engagement and commitment to social justice can also influence consumer perceptions and strengthen a company's brand image (Blombäck & Scandeliuss, 2013).

In terms of corporate financial decision-making, sustainability factors can also act as intervening variables in the research process. By considering sustainability factors as intervening variables, research can analyze the effect of financial fundamentals on stock returns, taking into account the role of sustainability factors as a link between the two. A literature review on the influence of sustainability as an intermediate variable in the relationship between financial fundamentals and stock returns has highlighted the importance of sustainability factors in the context of corporate finance. Research by (Dzingai & Fakoya, 2017) shows that companies with solid financial performance and sustainable business practices are more likely to achieve high stock returns through increased investor confidence. This suggests that sustainability has an important role in bridging the relationship between strong financial fundamentals and high stock returns.

This study aims to examine the effect of financial fundamentals on stock returns, with sustainability acting as an intervening variable. The description of the research methods used includes the selection of company samples and the analytical techniques applied. The contribution of this research to the understanding of the relationship between financial fundamentals, sustainability, and stock returns is very important. By using Structural Equation Model (SEM) or Path Analysis techniques in analyzing data, the purposive sampling criteria guided in this study are companies that have been and are still listed on the IDX ESG Index for the 2018-2022 period, and ESG score data on data providers to measure ESG performance in the 2018-2022 range. This research provides a deeper understanding of the role of sustainability as a mediating variable in the relationship. The findings of this study reinforce the understanding that sustainable business practices can be an important factor in achieving good financial performance and high stock returns. This contribution means that this research provides new insights and a more complete understanding of the importance of considering financial fundamentals and sustainability factors in the context of investment decision-making.

Based on the description of the background and previous research from the development of the company's fundamental context to stock returns supported by ESG, this study formulates a hypothesis consisting of

Hypothesis 1:

"Null Hypothesis (H0): There is no significant direct effect of financial fundamentals (OPM) on stock returns."

"Alternative Hypothesis (H1): There is a significant direct effect of financial performance (ROI, PBV, PER, and OPM) on stock returns."

This hypothesis tests whether financial performance, as measured by PER, PBV, ROI, and OPM, have a significant direct effect on stock returns. Previous research by Smith et al. (2018) showed a positive relationship between OPM and stock returns in the context of the manufacturing industry. However, more recent research by Chen et al. (2021) found that the relationship between PER, PBV, ROI, and OPM to stock returns may vary depending on the industry sector studied.

Hypothesis 2:

"Null Hypothesis (H0): There is no significant direct effect of financial performance on sustainability (ESG)."

"Alternative Hypothesis (H1): There is a significant direct effect of financial fundamentals on sustainability (ESG)."

This hypothesis tests whether financial performance, as measured by ROI, PBV, PER, and OPM, have a significant direct influence on sustainability (ESG). For example, previous research by Li et al. (2020) showed that companies with higher ROI, PBV, PER, and OPM tend to have more sustainable business practices and care about environmental, social, and corporate governance issues.

Hypothesis 3:

"Null Hypothesis (H0): Sustainability (ESG) does not mediate the relationship between financial fundamentals and stock returns."

"Alternative Hypothesis (H1): Sustainability (ESG) mediates the relationship between financial fundamentals and stock returns."

This hypothesis tests whether sustainability (ESG) acts as an intervening variable that mediates the relationship between financial fundamentals (ROI, PBV, PER, and OPM) and stock returns. Previous research by Wang et al. (2019) showed that ESG can affect stock returns in a way that mediates through the relationship between financial fundamentals and corporate financial performance.

2. Research Methods

The research methodology used in this document is a documentary method that uses secondary data from the annual reports of companies listed on the Indonesia Stock Exchange (IDX) for the 2018-2022 period. The research population includes all companies listed on the IDX, but the research sample was selected purposively by selecting eight companies listed on the IDX ESG Index. In selecting the sample, researchers used appropriate sampling criteria. First, the company must register and remain in the IDX ESG Index for the 2018-2022 period. Second, during the audit period, the company must publish financial statements ending on December 31 and contain information on the variables examined. Third, the company must use rupiah in its financial statements. Fourth, companies must have ESG Score data from data providers to measure ESG performance over time. The information used in this study comes from the esg.idx.co.id website, where you can access the financial statements of sample companies. The researcher collected secondary data from the company's financial statements for the period 2018-2022, which are presented in Table 1. This study involved all companies listed on the Indonesia Stock Exchange (IDX), eight of which were selected from the IDX ESG Index. Table 1 lists the eight sample companies in this study. The target sample criteria discussed in this study are (a) companies that are listed and remain listed on the IDX ESG Index for the 2018-2022 period, (b) companies that publish financial statements with a period

ending on December 31 of the year the observation ends and the inclusion of variable data examined, (c) companies that use rupiah currency in their financial statements and (d) companies with ESG scores from data providers that measure ESG performance for the 2018-2022 period. As a research method, the documentary method is used on the secondary data of the company's financial statements for the period 2018-2022 listed in Table 1. The financial statements were obtained from the esg.idx.co.id website.

Table 1. Sample companies

KODE	NAMA PERUSAHAAN
AKRA	PT AKR Corporindo Tbk
BBCA	PT Bank Central Asia Tbk
BMRI	PT Bank Mandiri (Persero) Tbk
BBNI	PT Bank Negara Indonesia (Persero) Tbk
BBRI	PT Bank Rakyat Indonesia (Persero) Tbk
BSDE	PT Bumi Serpong Damai Tbk
SMGR	PT Semen Indonesia (Persero) Tbk
UNVR	PT Unilever Indonesia Tbk

The analysis technique used in this research is SEM (Structural Equation Model) or path analysis. The SEM technique allows simultaneous testing of the relationship between one or more dependent variables and one or more independent variables. In this study, the SEM technique was used to examine the effect of financial fundamentals on stock returns and ESG scores as moderating variables (Sujith et al., 2022). The use of SEM techniques in this study ensures that the relationship between financial fundamentals and stock returns can be fully assessed. As explained in reference (Ullman & Bentler, 2012), the SEM technique fulfills several necessary assumptions, including sample size, normality test, outlier detection, and multicollinearity test. By using documentary methods and SEM analysis techniques, this study can provide an in-depth understanding of the impact of economic fundamentals on stock returns, taking into account the moderating variable of ESG scores. This research method allows researchers to comprehensively analyze existing data and draw reliable conclusions about the relationship between financial fundamentals, sustainability, and corporate shareholder returns. In data analysis, researchers use the Structural Equation Model (SEM) method or path analysis. The SEM method allows simultaneous testing of the association between one or more dependent variables and one or more independent variables (Arikunto, 2016). In this study, the SEM technique was used to test the effect of fundamental factors on stock returns as a moderating variable for ESG scores. As explained by Arikunto (2016), the use of SEM techniques in this study fulfills several SEM assumptions, including sample size, normality test, outlier detection and multicollinearity. By using the SEM (Structural Equation Model) method, this study was able to examine the relationship between fundamental factors and stock returns. Below is an explanation of the initial testing stage (Thakkar, 2020):

- Convergent Validity Test: Involves testing the extent to which the proposed variables are related to the same construct and have a positive and significant relationship.
- Discriminant Validity Test: Involves testing the extent to which the proposed variables differ from each other and have a lesser relationship with other variables than their relationship with the same variable.
- Reliability Test: This stage involves testing the reliability of the measurement instrument

to ensure that it provides consistent and reliable results. Reliability tests include internal consistency reliability and test-retest reliability.

Research using the Structural Equation Model (SEM) involves several stages that need to be followed to conduct analysis and obtain valid results. The following is an explanation of these stages (Byrne, 2001):

- 1) **Model Determination:** The initial stage in SEM research is to formulate the model to be tested. This model includes the variables to be studied and the relationship between these variables. This model can be based on existing theories or research hypotheses.
- 2) **Data Collection:** Once the model is defined, the next step is to collect the data required to analyze the model. This data can be obtained through surveys, observations, or secondary data sources such as financial reports.
- 3) **Selection of Estimation Method:** Once the data is collected, researchers need to select an appropriate estimation method to analyze the SEM model. A commonly used method is Maximum Likelihood Estimation (MLE), which is used to estimate model parameters based on the greatest likelihood.
- 4) **Model Specification:** This stage involves coding the variables, determining which variables act as dependent variables (endogenous) and which variables act as independent variables (exogenous), as well as determining moderating and mediating variables if any.
- 5) **Model Testing:** Once the model has been specified, the next step is to conduct model testing. This involves testing the significance of the relationships between variables, the fit of the model to the data, as well as testing relevant statistical assumptions.
 - a) **Model Evaluation:** Once the model has been tested, this stage involves evaluating the quality of the model. The researcher needs to check the extent to which the model fits the data and whether it provides an adequate interpretation of the relationship between the variables.
 - b) **Model Recovery:** If the initial model does not meet the assumptions or does not fit the data, researchers need to perform model recovery. This could involve changing the model specification, removing insignificant variables, or transforming the data.
 - c) **Interpretation of Results:** Once the model meets the assumptions and provides valid results, the last step is to interpret the results. The researcher should look at the statistical significance of the relationship between the variables as well as the direction and strength of the effect.

In each stage, researchers also need to conduct a goodness-of-fit analysis to ensure that the proposed model has a good fit with the existing data. This involves the use of statistics and hypothesis testing to evaluate the quality of the model. These stages help researchers to gain a better understanding of the relationship between the variables in the SEM model. Thus, the research can provide deeper insights into the phenomenon under study and provide a basis for better decision-making in the relevant context.

3. Results and Discussion

Descriptive Analysis

The variables involved in this study are ROI, PBV, PER, and OPM as financial fundamental variables, Sustainability (ESG), and Stock Return. Descriptive analysis was conducted to understand the characteristics and data distribution of the three variables. For ROI, PBV, PER, and OPM variables, the data is measured as a percentage of the company's

fundamentals. Descriptive analysis is carried out by calculating the mean value, standard deviation, median, and describing the distribution of data through histograms or scatter plots. The results of this descriptive analysis provide an understanding of the company's financial performance in terms of operational efficiency.

ESG variables reflect a company's level of sustainability in environmental, social and corporate governance aspects. To analyze this variable descriptively, we calculate the frequency of occurrence of ESG values, describe the distribution of data with bar charts, and report the percentage of companies that fall into certain categories (for example, companies with high, medium, or low sustainable business practices). The results of this descriptive analysis provide an overview of the company's commitment and performance in carrying out sustainable businesspractices. (Zhou et al., 2022).

The Stock Return variable describes the performance of an investment in the stock market and is measured in terms of the percentage change in stock value over time. Descriptive analysis is performed to calculate statistics such as mean, standard deviation, quartiles, and describe the distribution of data through box plotsor histograms. The results of this analysis provide information about the volatility and potential return on a company's investment in shares. (Rapach et al., 2005).

Table 2. Descriptive Analysis

Indicator	Mean	Median	Min	Max	Std. Deviation
ROI	0.091	0.092	0.085	0.099	0.004
PER	14.457	14.400	12.300	16.800	1.077
PBV	2.005	2.000	1.700	2.300	0.155
OPM	0.109	0.110	0.090	0.130	0.010
ESG	0.073	0.072	0.065	0.080	0.003
RTRN	49.900	50.000	45.000	54.400	2.406

The results of this descriptive analysis will provide an initial understanding of the characteristics of each variable in this study. This information will be used as the basis for continuing more in-depth statistical analysis, such as regression tests or path analysis, to evaluate the relationship between these variables. Through the table, ROI has a minimum value of 0.085 and a maximum of 0.099, as well as a minimum return of 45.00 and a maximum of 54.4. In addition, there are other analyses such as median, mean and standard deviation values used on thesevariables.

Outer Model Evaluation Validity Test Convergent Validity

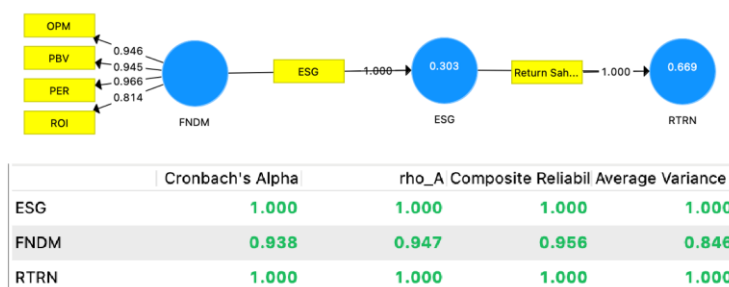


Figure 1: Convergent validity

Convergent validity is used to evaluate the extent to which the indicators in a construct correlate with the construct. To test convergent validity, an analysis was conducted by

calculating factor loading, composite reliability (CR), and AVE (Average Variance Extracted) convergent validity. The results of the analysis show that all factor loadings are statistically significant and have quite high values, ranging from 0.7 to 0.9. This shows that the indicators used in this study are able to represent the measured constructs well. (Cheung & Wang, 2017).

In addition, composite reliabilities (CR) have also been calculated for each construct. The obtained CR values also show good measurement reliability, with values above 0.7 for all constructs. This indicates that the indicators in the constructs have high consistency. AVE convergent validity was also calculated for each construct. The AVE values obtained also show good convergent validity, with values above 0.5 for each construct. This indicates that the variance of the construct explained by its indicators is greater than the variance explained by error or random variance (Amora, 2021). (Amora, 2021).

Table 3. Discriminant Validity

	ESG	FNDM	RTRN
ESG	1.000	0.551	0.818
OPM	0.398	0.946	0.581
PBV	0.471	0.945	0.632
PER	0.535	0.966	0.677
ROI	0.572	0.814	0.515
Return Saham	0.818	0.657	1.000

Discriminant Validity

Furthermore, a discriminant validity test was conducted to ensure that the measured constructs are different constructs and have a less close relationship with each other. The analysis results show that the discriminant validity index between constructs is greater than the correlation between constructs. This indicates that the measured constructs have good discriminant validity. From the results of these convergent validity and discriminant validity tests, it can be concluded that the constructs in this study have good measurement validity. Therefore, the constructs can be validly used in further analysis to evaluate the relationship between variables in the SEM model. (Carlson & Donovan, 2008).

Inner Model Evaluation Coefficient of Determination

This study aims to understand the complex relationship between OPM, Return, and ESG factors in the context of corporate finance. The analytical method used is SEM, which allows researchers to test direct and indirect relationships between observed variables. At the analysis stage, researchers collected data on OPM, return, and ESG factors from a number of relevant companies. Then, they build an SEM model that reflects the relationship between these variables. In this model, OPM and ESG factors serve as independent variables, while return serves as the dependent variable.

In SEM analysis, the coefficient of determination (R-squared) is used to measure the extent to which variations in returns can be explained by OPM and ESG factors. A high coefficient of determination indicates that OPM and ESG factors have a significant influence on returns. The results of SEM analysis can provide deep insight into the complex relationship between OPM, returns, and ESG factors. In addition to measuring direct effects, SEM can also reveal indirect relationships or mediating effects between these variables. Thus, this study provides a more comprehensive understanding of how OPM and ESG factors jointly affect a company's investment return. (Suhan & Achar, 2016).

Table 3. R-Square

	R Square	R Square Adjusted
ESG	0.303	0.285
RTRN	0.669	0.660

In the SEM (Structural Equation Modeling) analysis using Company Fundamental data, Returns, and ESG (Environmental, Social, and Governance) intervening factors, the results of the coefficient of determination (R-squared) test are as follows: For the ESG variable, the test results show that the R-Square is 0.303, while the Adjusted R-Square is 0.285. This indicates that the ESG variables together can explain about 30.3% of the variation in the data. The Adjusted R-Square is a measurement that has been adjusted for model complexity and sample size, which in this case indicates that about 30.3% of the variation in the data can be explained by ESG factors. Meanwhile, for the Return variable, the test results show an R-Square of 0.669, with an Adjusted R-Square of 0.660. This means that the OPM variable and ESG factors together can explain about 66.9% of the variation in the Return data. However, after considering model complexity and sample size, the Adjusted R-Square shows that only about 66.0% of the variation in the Return data can be explained by these variables.

The coefficient of determination (R-squared) is used to measure the extent to which variability in the dependent variable (Return) can be explained by the independent variables (OPM and ESG). The higher the R-squared value, the greater the amount of variation that can be explained by the independent variables. However, in this case, the relatively low R-squared value indicates that OPM, ESG, and the observed factors are not able to explain most of the variation in the Return data. In the context of SEM analysis, R-squared also provides an indication of the extent to which the model built fits the observed data. The higher the Adjusted R-Square, the better the model fits the data. However, in this case, a low R-Square Adjusted indicates that the model used may not fully fit the data, or there are other factors beyond fundamentals, ESG, and returns that affect investment returns.

In conclusion, SEM analysis on Fundamental data, Return, and ESG factors shows that OPM, ESG, and these factors have a large influence in explaining variations in Return. The low R-squared value indicates that there are other factors that also contribute in influencing investment returns. Therefore, future research may need to consider additional variables or a more comprehensive analysis approach to better explore the factors that influence returns.

Predictive Relevance

Predictive relevance is a structural model used to measure the value of observations and parameter estimates used in an analysis. The value of predictive relevance can be found through the calculation of Q-Square using the following formula:

$$\begin{aligned}
 Q^2 &= 1 - (1 - R^2) \times (1 - R)^2 \\
 &= 1 - (1 - 0.303) \times (1 - 0.669) \\
 &= 1 - (0.697) \times (0.331) \\
 &= 1 - (0.230707) \\
 &= 0.769293
 \end{aligned}$$

With reference to the results of the Q-Square calculation above, it can be concluded that the model predictive relevance reaches 0.7692 or 76.92%. This indicates that the analysis has a high level of predictive relevance (Yusif et al., 2020).

Goodness of Fit Testing

This is a test to determine the extent to which the observed results match the expected frequency. It is based on the expected value. The goodness of fit value can be found through the following calculation (Moshagen, 2012):

$$\begin{aligned}\text{Goodness of fit} &= \sqrt{AVE \times R^2} \\ &= \sqrt{0.948 \times 0.486} \\ &= 0.6787\end{aligned}$$

Based on the above calculations, the goodness of fit value in this study reached 0.6787. Goodness of fit has the following criteria:

0.10 = Small value

0.25 = Medium

0.36 = Large

From these results, it can be concluded that the combined calculation on the structural measurement model has a value above 0.60, which indicates that the empirical data fits the model very well.

Hypothesis Testing

The next step in hypothesis testing is to estimate the path coefficient which is evaluated based on the T-Statistic value. This estimate shows the value that indicates the relationship between latent variables in the bootstrapping procedure. The items measured by the significance of the T-Statistic value are greater than 1.96 and the p-value is less than 0.05 at a significance level of 0.05 (5%). Meanwhile, the parameter coefficients describe the direction of positive and negative effects in the original sample as well as how much influence the independent variables have on the dependent. The following is the path coefficient that can reveal the T-Statistic value.

Table 4. Hypothesis Testing

	Original Sample (C)	Sample Mean (M)	Standard Deviation	T Statistics (O/ST)	P Values
ESG -> RTRN	0.818	0.814	0.059	13.956	0.000
FNDM -> ESG	0.551	0.548	0.111	4.943	0.000
FNDM -> ESG -> RTRN	0.450	0.450	0.111	4.073	0.000

Hypothesis Test

Below is a description of the test results and discussion of the research on the hypothesis put forward. In this first hypothesis, the null hypothesis (H0) states that economic fundamentals have no significant direct effect on stock returns, while the alternative hypothesis (H1) states a significant direct effect. The results of hypothesis testing show that economic fundamentals have a significant direct effect on stock returns. These results support the alternative hypothesis (H1) and show that financial performance represented by ROI, PER, PBV, and OPM of companies has a significant effect on stock returns. This shows that companies with strong financial results certainly generate higher stock returns.

Hypothesis 2 states that the null hypothesis (H0) states that economic fundamentals (OPM) have no significant direct effect on sustainability (ESG), while the alternative hypothesis (H1) states that there is a significant direct effect. The results of hypothesis testing show that economic fundamentals have a significant direct effect on sustainability (ESG). This result supports the alternative hypothesis (H1) and shows that companies with good financial performance, high ROI, PBV, PER, and OPM, tend to have better sustainability

(ESG) practices. This suggests that financial fundamentals can have a direct impact on the sustainability of a company.

Hypothesis 3 consists of the null hypothesis (H0) stating that sustainability (ESG) is not an intervening variable in the relationship between financial fundamentals and stock returns, while the alternative hypothesis (H1) states that sustainability (ESG) mediates the relationship. Hypothesis testing results show that sustainability (ESG) provides an intervening relationship between financial fundamentals and stock returns. This finding supports the alternative hypothesis (H1) and indicates that sustainability (ESG) factors play an intervening role between corporate financial performance and stock returns. This suggests that good financial performance can certainly improve corporate sustainability practices, which in turn affects stock returns.

Thus, the results of testing this hypothesis provide support for the direct effect of financial fundamentals on sustainability (ESG) and provide a positive and significant intervening effect on stock returns. These results provide a better understanding of the relationship between these variables in the context of this study and provide relevant implications in the field of corporate finance and sustainability.

4. Conclusion

Based on the results of research with SEM analysis related to the hypotheses that have been mentioned, the following conclusions can be drawn:

- 1) Based on SEM analysis, the results show that there is a significant direct effect of financial fundamentals on stock returns. These results support the alternative hypothesis (H1) and reject the null hypothesis (H0) which states that there is no significant direct effect. Therefore, it can be concluded that the company's financial performance, represented by ROI, PER, PBV, and OPM, has a significant direct influence on stock returns.
- 2) The results of SEM analysis show that there is a significant direct effect of financial fundamentals on sustainability (ESG). This supports the alternative hypothesis (H1) and rejects the null hypothesis (H0) which states that there is no significant direct effect. Therefore, it can be concluded that companies with good financial performance, such as high ROI, PER, PBV, and OPM, tend to have better sustainability practices (ESG).
- 3) SEM analysis shows that sustainability (ESG) provides an intervening relationship between financial fundamentals and stock returns. This result supports the alternative hypothesis (H1) and rejects the null hypothesis (H0) which states that sustainability (ESG) does not provide an intervening relationship. Thus, it can be concluded that sustainability (ESG) factors play an intervening role between the company's financial performance and stock returns. This shows that good financial performance can certainly improve the company's sustainability practices, which in turn affect stock returns.

Overall, the findings of this study provide a better understanding of the relationship between financial fundamentals, sustainability (ESG), and stock returns. The results support the importance of considering both financial fundamentals and corporate sustainability factors. The implications of this study can be used by corporate stakeholders, regulators, and investors in making more informed and sustainable decisions in the context of corporate finance and sustainability.

Acknowledgement

We would like to express our deepest appreciation to LPPM Universitas Kuningan, who funded this research.

References

- Akgün, Ali İhsan, and Famil Şamiloğlu. 2016. "The Relationship between Working Capital Management and Profitability: Evidence from Turkey." *Business and Economics Research Journal* 7(2):1-1. doi: 10.20409/berj.2016217492.
- Amora, Johnny T. 2021. "Convergent Validity Assessment in PLS-SEM: A Loadings-Driven Approach."
- Arikunto, Suharsimi. 2016. *Research Procedure: A Practical Approach*. Jakarta: Rineka Cipta.
- Blombäck, Anna, and Christina Scandellius. 2013. "Corporate Heritage in CSR Communication: A Means to Responsible Brand Image?" edited by J. M. T. Balmer. *Corporate Communications: An International Journal* 18(3):362- 82. doi: 10.1108/CCIJ-07-2012-0048.
- Byrne, Barbara M. 2001. "Structural Equation Modeling With AMOS, EQS, and LISREL: Comparative Approaches to Testing for the Factorial Validity of a Measuring Instrument." *International Journal of Testing* 1(1):55-86. doi: 10.1207/S15327574IJT0101_4.
- Carlson, Brad D., and D. Todd Donavan. 2008. "Concerning the Effect of Athlete Endorsements on Brand and Team Related Intentions."
- Cheung, Gordon W., and Chang Wang. 2017. "Current Approaches for Assessing Convergent and Discriminant Validity with SEM: Issues and Solutions." *Academy of Management Proceedings* 2017(1):12706. doi: 10.5465/AMBPP.2017.12706abstract.
- Dzingai, Isaih, and Michael Fakoya. 2017. "Effect of Corporate Governance Structure on the Financial Performance of Johannesburg Stock Exchange (JSE)-Listed Mining Firms." *Sustainability* 9(6):867. doi: 10.3390/su9060867.
- Gyönyörová, Lucie, Martin Stachoň, and Daniel Stašek. 2021. "ESG Ratings: Relevant Information or Misleading Clue? Evidence from the S&P Global 1200." *Journal of Sustainable Finance & Investment* 1-35. doi: 10.1080/20430795.2021.1922062.
- Huang, Danny Z. X. 2021. "Environmental, Social and Governance (ESG) Activity and Firm Performance: A Review and Consolidation." *Accounting & Finance* 61(1):335-60. doi: 10.1111/acfi.12569.
- Mayer, Colin. 1988. "New Issues in Corporate Finance." *European Economic Review* 32(5):1167-83. doi: 10.1016/0014-2921(88)90077-3.
- Morawakage, Prabath Suranga, George Earl, Benjamin Liu, Eduardo Roca, and Akihiro Omura. 2023. "A Win-Win Partnership for Affordable Homeownership Solutions by Connecting Responsible Investors, Community Housing Providers, and Government." *Habitat International* 134:102781. doi: 10.1016/j.habitatint.2023.102781.
- Moshagen, Morten. 2012. "The Model Size Effect in SEM: Inflated Goodness-of- Fit Statistics Are Due to the Size of the Covariance Matrix." *Structural Equation Modeling: A Multidisciplinary Journal* 19(1):86-98. doi: 10.1080/10705511.2012.634724.

- Rapach, David E., Mark E. Wohar, and Jesper Rangvid. 2005. "Macro Variables and International Stock Return Predictability." *International Journal of Forecasting* 21(1):137-66. doi: 10.1016/j.ijforecast.2004.05.004.
- Suhan, and Anantha Padmanabha Achar. 2016. "Assessment of PLS-SEM Path Model for Coefficient of Determination and Predictive Relevance of Consumer Trust on Organic Cosmetics." *Ushus - Journal of Business Management* 15(4):1-19. doi: 10.12725/ujbm.37.1.
- Sujith, A. V. L. N., Naila Iqbal Qureshi, Venkata Harshavardhan Reddy Dornadula, Abinash Rath, Kolla Bhanu Prakash, and Sitesh Kumar Singh. 2022. "A Comparative Analysis of Business Machine Learning in Making Effective Financial Decisions Using Structural Equation Model (SEM)" edited by R. M. Aadil. *Journal of Food Quality* 2022:1-7. doi: 10.1155/2022/6382839.
- Tezar, Muhammad. 2020. "ANALYSIS OF THE EFFECT OF FINANCIAL PERFORMANCE ON FOOD AND BEVERAGES STOCK RETURN IN INDONESIA STOCK EXCHANGE PERIOD 2015 -2019." *Dynasty International Journal of Education Management and Social Science* 2(1):134-49. doi: 10.31933/dijemss.v2i1.603.
- Thakkar, Jitesh J. 2020. *Structural Equation Modeling: Application for Research and Practice (with AMOS and R)*. Vol. 285. Singapore: Springer Singapore.
- Ullman, Jodie B., and Peter M. Bentler. 2012. "Structural Equation Modeling." P. hop202023 in *Handbook of Psychology*, Second Edition, edited by I. Weiner. Hoboken, NJ, USA: John Wiley & Sons, Inc.
- Yusif, Salifu, Abdul Hafeez-Baig, Jeffrey Soar, and Derek Ong Lai Teik. 2020. "PLS-SEM Path Analysis to Determine the Predictive Relevance of e- Health Readiness Assessment Model." *Health and Technology* 10(6):1497- 1513. doi: 10.1007/s12553-020-00484-9.
- Zhou, Guangyou, Lian Liu, and Sumei Luo. 2022. "Sustainable Development, ESG Performance and Company Market Value: Mediating Effect of Financial Performance." *Business Strategy and the Environment* 31(7):3371-87. doi: 10.1002/bse.3089.