The Effect of Environment, Social and Governance (ESG) to Stock Price with the mediation of Deviden and Market Capitalization

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Abstract. Environment, social and governance issues will support for sustainable in business operation of firms. Environment, social and governance (ESG) become part of value for firms then ESG will the rise of price stock. ESG also determined by dividend and market capitalization to increase price stock. The purpose of the research is to empirically test the mediation of Devidend and market capitalization between Environment, Social and Governance (ESG) to stock prices. This research method used path analysis using Smartpls 3.0. The information comes from the annual financial reports listed in the Indonesian Stock Exchange for the years 2023. The sample of research are telecommunication, banking, Food and Beverage sectors. The results of the F-test show that ESG have a significant impact on stock prices. At the same time, the t-test shows that ESG have significant impact on market capitalization and dividend. Devidend does not have significant effect on stock prices and market capitalization does not have significant effect on stock price. Market capitalization and dividend have no mediate ESG on stock price. Market capitalization and dividend can not mediate the improving ESG on price stock because the market capitalization and dividend tend to fluctuative movement between ESG and price stock. The beneficial of research are to development of literature about ESG, Market capitalization, Devidend, Price stock.

Keywords : Devidend, ESG, Market capitalization, Price stock, IDX.

1 Introduction

Firms need concern to environment and social issues for sustainable in business operation. Environmental and social issues become part of profit firms activity and non profit firms because environment and social are part of appraisal from stakeholder to firms management. If firms concern about environment and social so firms have positive image , but vice versa if firms do not have concern about environment and social so firms will be

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adjustment have negative image to operational activities. Social and environment issues do not separate from governance so that established environmental , Social dan Governance (ESG). ESG become part of value for firms. If the value of ESG higher so that firms will improve the return. The final purpose of implementation in ESG is social return will have impact from activities of social and environment. ESG research has been supported by a number of findings, including the end of ESG is social return [1], how ESG can influence performance [2]. ESG is also part of sustainability development which is often called sustainability development, including corporate sustainability environment [3]. Increasing ESG implementation has had an impact on the growing market capitalization of companies in the capital market, such as findings about ESG and capitalization [4]. The research aims to find out empirical evidence whether there is an influence of the impact of Environment, Social and Governance (ESG) on share prices mediated by dividends and market capitalization in companies on the Indonesian Stock Exchange in 2023?

ESG is an abbreviation of Environmental, Social and Governance which is a term for observers of environmental, social and corporate governance issues [5]. The implementation of ESG is often related to how companies use cash for social environmental care purposes, so the research results show that there is a link between the amount of cash a firm has and increasing ESG implementation ESG and cash holding [6]. Business and economic activities trigger a sustainable supply of natural resources that support the production of products, so this triggers increased attention to Environmental, Social and Governance (ESG) factors in investment and firm management. ESG refers to three central criteria in measuring the sustainability and ethical impact of an investment in a firm. These criteria cover environmental factors such as carbon emissions and energy use, social factors such as labor relations and corporate social responsibility, as well as governance which includes firm management practices, transparency and shareholder rights. Sustainalytics carries out ESG risk assessments using the risk decomposition concept where companies are faced with two dimensions of ESG issues, namely exposure and management. Exposure is a material ESG risk faced by a firm and influences ESG risk assessment. Management is the firm's commitment and real action in dealing with ESG issues through various firm policies and work programs. The theory that can support ESG is related to the Contingency theory of corporate governance [7]. The definition of Dividend Policy is an amount of funds from the Firm's operational returns announced to a number of shareholders. Dividend policy contains several theories, including the Bird in the Hand Theory, where investors want a share of profits which are called dividends. Dividend policy is the amount of profit minus retained earnings [8]. Dividends are closely related to the amount of cash held, so ESG has an impact on dividend policy, meaning that if dividends are distributed to shareholders, cash holdings will decrease so that ESG implementation can increase or decrease. If ESG increases, dividends can be divided or reduced. Research that is in line with dividend policy is dividend payout cash holding [9]. The definition of market capitalization is the amount of market capitalization of the firm in the capital market which is calculated by the number of shares in the capital market circulating in the capital market multiplied by the firm's share price. ESG implementation is related to market capitalization where an increase in ESG increases market capitalization. Environmental, social and governance governance is able to increase the Firm's market capitalization. Research that is in line with ESG includes the topic of market capitalization, producing findings on corporate governance and market capitalization [10].

Share Price is the price of the shares owned by the Firm in the capital market. Share prices can be used for buying and selling transactions by investors/share traders in the capital market. Share prices reflect the value of the Firm. If ESG implementation increases, share prices will rise. ESG have positif significant on firm value with moderating sustainable [11]. Implementation of environmental, social and governance (ESG) activities can influence share prices. Research that supports ESG is that there is an impact of ESG and returns [12], there is a relationship between ESG and performance [13]. Based on the theory and findings above, the hypothesis that can be made is: H1: ESG has a significant positive effect on stock prices. Implementation of environmental, social and governance (ESG) activities can influence market capitalization. Research that supports ESG is that there is an impact of ESG and the efficient frontier [14], there is a relationship between ESG and market capitalization [15]. Based on the theory and findings above, the hypothesis that can be made is H2: ESG has a significant positive effect on market capitalization.

Implementation of environmental, social and governance (ESG) activities can influence dividend policy. Research that supports ESG and dividends is that there is an impact of ESG and dividend policy where ESG has an impact on real investment and debt [16], and there is a relationship between dividends and ESG [8]. Supporting research is ESG and cash holding [6]. Based on the theory and findings above, the hypothesis that can be made is H3: ESG has a significant positive effect on dividend policy. Market capitalization can mediate ESG on price stock. Implementation of environmental, social and governance (ESG) activities can influence market capitalization. Research that supports ESG is that there is an impact of ESG and the efficient frontier [14], there is a relationship between ESG and market capitalization [15]. Based on the theory and findings above, the hypothesis that can be made is H4: Market capitalization mediate ESG on price stock. Dividend policy can mediate ESG on price stock. Implementation of environmental, social and governance (ESG) activities can influence dividend policy. Research that supports ESG and dividends is that there is an impact of ESG and dividend policy where ESG has an impact on real investment and debt [16], and there is a relationship between dividends and ESG [8]. Supporting research is ESG and cash holding [6]. Based on the theory and findings above, the hypothesis that can be made is H5: Dividend policy mediate ESG on price stock.

2 Method

Research is a managed, systematic, data-based, critical, objective and scientific inquiry or investigation into a specific problem, which is carried out with the aim of finding related answers or solutions. This research is quantitative research, because it uses data in the form of numbers and can be calculated using arithmetic units [17]. This research can be stated as quantitative research based on the form of data used, namely annual report numerical data.

The population in this study are banking, telecommunications, marketplace, food and beverage companies listed on the indonesia stock exchange (IDX) in 2023. The samples used are banking, telecommunications, marketplace, food and beverage companies that have been listed on the indonesia stock exchange (IDX) in 2023. 2023 which has been selected.

Sampling was carried out using a purposive sampling method. The data used from this sample is quantitative data, namely data measured on a numerical scale. The sampling technique used in this research is the purposive sampling method, namely the sampling technique used by researchers using criteria and considerations in taking samples or determining samples for certain purposes. The criteria for determining the sample are banking, telecommunications, marketplace, food and beverage companies registered on the IDX in 2023.

The data collection method used in this research was carried out with historical documentation from firm performance reports over a certain period of time. The data sources used in this research were obtained through searches from; Indonesia Capital Market Directory (ICMD), website www.idx.co.id. Data from the Indonesian stock exchange regarding ESG [18].

The operational definition of variables includes Environment, Social and Governance (ESG) as independent variables, dividend policy and market capitalization as mediator variables and share price as the dependent variable. ESG is calculated and measured using scores from the ESG index assessment. ESG score assessment from firms listed in IDX. Dividend policy is calculated using the dividend payout ratio (DPR) [6]. The dividend payout ratio uses the price to dividend formula. Market capitalization is measured by the natural log (shares times share price).

Table. 1 ESG Score

Score of Risk	**Category**	**Descriptive**
0-10	Negligible	Considered to have negligible ESG risk
10-20	Low	Considered to have low ESG risk
20-30	Medium	Considered to have moderate ESG risk
30-40	High	Considered to have high ESG risk
>40	Severe	Considered to have severe ESG risks

Sustainalytics controversy research identifies companies involved in incidents that could negatively impact stakeholders, the environment, or firm operations. Listed companies are grouped into 5 categories, as follows:

Tabel 2 ESG index

Kategori	Deskripsi
No Evidence	There is no evidence of relevant controversy
Category 1	Low impact on the environment and society. Negligible risk to the firm.
Category 2	Moderate impact on the environment and society with minimal risk to the firm, Low frequency of incidents. The firm has a strong management system and/or measures in place to mitigate risks.
Category 3	Significant impact on the environment and society with significant business risks. Evidence of structural problems in the firm and/or the firm has an inadequate management system.
Category 4	High impact on the environment and society with high business risks. Structural/systemic problems, repeated incidents and the firm has an inadequate management system.
Category 5	Severe impact on the environment and society with serious business risks. Incredible egregious behavior, high frequency of incidents and the firm has poor controversy management.

Data analysis techniques

Descriptive statistics test are statistics that describe phenomena or characteristics from data that has been collected without any generalized conclusions [17]. So Descriptive Statistics is used in research to describe sample data without intending to make general conclusions. Descriptive Statistics provides a description of data seen from the Maximum, Minimum, Average (Mean) and Standard Deviation which are presented through tables, graphs and diagrams.

Table 3 Inner Model

Inner model	Criteria of test	Conclusion
R square	0,25	Weak model
	0,50	Average model
	0,75	Strong model
Goodness of fit	Srmr < 0,10	Fit model
F square	0,02	Small / low
	0,15	Average
	0,35	Strong / big
Path coefficient (direct effect)	P values < 0,05	Significant
	P values > 0,05	Insignificant

Source : [19]

Table 4 Outer model

Outer model	Criteria
Uji validitas	
Validitas convergent	Loading factors > 0,70
	Ave > 0,50
Validitas discriminant	Htmt < 0,90
Uji reliabilitas	
Cronbach alpha	>0,70
Composite reliability (rho_r)	

Source : [19]

To test the speculation in this inquire about multivariate examination was utilized utilizing the Smartpls 3.0 program. Speculation testing is carried out by comparing the noteworthiness likelihood (p) with the noteworthiness level (α) decided at 5%. In case the sig likelihood is littler than 5%, at that point the invalid speculation is rejected, which suggests that there's a relationship between the factors examined. In the event that the sig likelihood is more prominent than 5%, at that point the null theory is acknowledged, which implies that there's no relationship between the variables studied.

Corroborative calculate examination is looking at markers that are reasonable to be used to create a develop. To discover out whether or not an pointer can be said to create a build, it can be seen from the likelihood esteem of the lambda coefficient. In the event that the lambda coefficient is littler than σ (5%), at that point it can be concluded that the marker is appropriate for shaping a develop. Moreover, on the off chance that the lambda coefficient is more noteworthy than σ (5%), at that point the pointer isn't appropriate for shaping a build.

3 RESULTS

Table 5 Statictic Descriptive

Variable	Mean	MIN	MAX
ESG	2,71	2	5
Deviden	2,95	0	5
Power	3,66	1	7,18
Harga	7,02	1,05	9,28

Source : Smartpls3.0

Tabel 5 Statistic descriptive show that ESG 2,71 ; Devidend 2,95 ; Power called market capitalization 3,66 and price 7,02.

Table 6 Corellation

	DEVIDEN	ESG	POWER	PRICE
DEVIDEN	1.000			
ESG	0.055	1.000		
POWER	-0.011	-0.022	1.000	
PRICE	0.234	-0.106	0.725	1.000

Source : Smartpls 3.0

Table 7 R Square

	R Square	R Square Adjusted
DEVIDEN	0.003	-0.027
POWER	0.001	-0.03
PRICE	0.594	0.555

Source : Smartpls 3.0

Based on the R square and adjusted square table 7, it shows that the deviden have R square value is 0.003, while the adjusted R square value is -0.027. Independent Variables can influence to Dependent Variable with 0,3 % and -2,7%. The ESG will influence to price with mediation of Deviden 0,003 point and -0,027 point. The residual percent of other independent variables from out of this research model have impact in price stock.

The market capitalization (power) have R square value is 0.001, while the adjusted R square value is -0.03. Independent variables can influence to Dependent variable with -1 % and -3 %. The ESG will influence to price with mediation of Market capitalization 0,001 point and -0,03 point. The residual percent of other independent variables from out of this research model have impact in price stock.

The Price stock (PRICE) have R square value is 0.594, while the adjusted R square value is 0.555. Independent Variables can influence to Dependent Variable with 59,4% and 55,5%. The ESG will influence to price stock with 0,594 point and 0.555 point. The residual percent of other independent variables from out of this research model have impact in price stock.

Tabel 8 Direct Effect

Variable	PRICE
ESG	-0.003

Source : Smartpls 3.0

Based on table 8 Direct effect ESG have impact on price stock significantly negative with -0,003. It means that ESG can reduce price stock with 5% significantly. The higher ESG the lower price stock for firms. The ESG implementation in management firms have negative signal for investor so that the decrease price stock. The results because the poor implementation in ESG so that It can not the improve price stock.

Table 9 f Square

No	Variabel	f Square	sig	Note
1	Deviden	0,151	>10%	Rejected
2	ESG -> Deviden	0,003	<5%	Accepted
3	ESG -> Market Capitalization	0,001	<5%	Accepted
4	ESG -> Price	0,026	<5%	Accepted
5	Market Capitalization	1,295	>10%	Rejected
6	Price	-	-	-

Source : Smartpls3.0 (2024)

Based on the f square table, the results show that:

a) Deviden (D) has an f square value of 0.151 , meaning a value greater than 0.10 or 10% is Rejected

b) Mediation of Deviden (D) have an f square value of 0.003, meaning a value smaller than 0.05 or 5% is accepted.

c) Mediation of Market Capitalization (MC) have an f square value of 0.001, meaning that a value smaller than 0.05 or 5% is accepted.
d) Price have an f square value of 0.051, meaning a value greater than 0.05 or 5% is rejected.
e) ESG has an f square value of 0.058, meaning a value greater than 0.05 or 5% is rejected.

Total Effect

Table 10 Total effect

NO	Variabel	Total Effect
1	Deviden to price stock	0.248
2	ESG to price stock	-0.106
3	Power to price stock	0.725
4	ESG to Deviden	0.055
5	ESG to Power	-0.022

Source : Smartpls (2024)
Total Effect to create path model regression coefficient values, the regression equation is as follows (Berdasarkan tabel Total Effect) :
Ylaba = alpha + 0.248 deviden – 0.106 ESG + 0.725 power + 0.055 ESG*Deviden – 0.022 ESG*Power

F Square

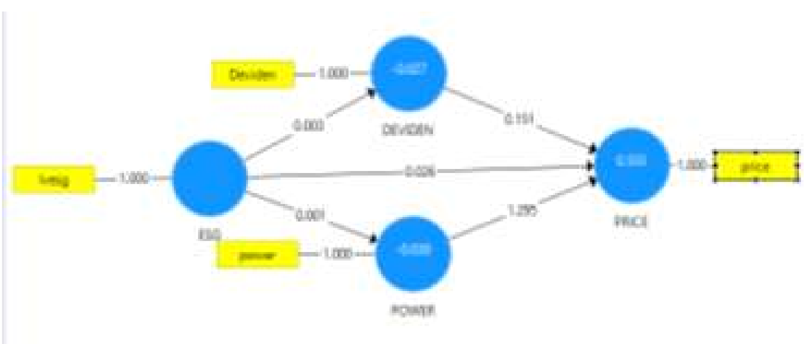

Fig. 1. F square

Path Analysis

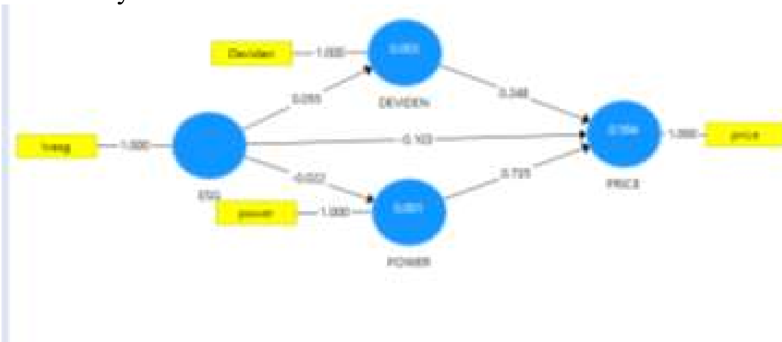

Fig. 2. Path analysis

Discussion

1. ESG and Devidend
   ESG have significant effect on dividend. It represents that the improvement of ESG can improve the dividend payment. This results have similar finding by research about Determinant of ESG [20] and ESG dividend payout [21].
2. ESG and Market capitalization
   ESG have significant effect on Market Capitalization. It represents that the improvement of ESG can improve the market capitalization. This results have similar finding by research about [20].
3. ESG and Stock Price
   ESG have significant effect on stock price. ESG have positive significant effect on price stock. It represents that the improvement of ESG can improve the price stock. This results have similar finding by research about ESG and return saham [22]
4. The mediation of Devidend between ESG and Stock price
   Devidend have non significant on mediation between ESG and stock price. This results have similar finding by research about ESG ,deviden and return saham [23] and [7]. The sharing of dividend can not significantly create the higher ESG the higher price stock. Thus, the hipotesis is rejected.
5. The mediation of Market capitalization between ESG and Stock price
   Market capitalization have non significant on mediation between ESG and price stock. This results have similar finding by research about ESG and market capitalization [20]. The emerging of market capitalization can not significantly increase ESG on price stock. Thus, the hipotesis is rejected.

4 Conclusion

Simultaneously, ESG significantly affect on stock prices. Partially, ESG have significant impact on Devidend and Market capitalization. Market capitalization and

Devidend partially affect on stock prices not significantly with the 0,10 level of significant. Market capitalization and devidend have insignificant impact on stock price because the market capitalization growth and deviden growth inline with the movement of stock price. When raising the company's stock prices, firm management is suggested to consider ESG , devidend and Market capitalization. The establishment of a ESG is imperative for the firm to mould its future prospects, thereby fostering investor confidence and potentially driving up stock prices.

The limitation of research are the Study does not provide many sector firms in Indonesia stock exchange so that the study have limitation of samples. The study also can not provide several years so that the results only conduct in the limitation of time. Beside that, the study only conduct in three variables for determining the factors on stock prices so that for future the researchers can use the several variables for the large scope of research variables.

5 References

1. Edmans, A. The end of ESG. *Financ. Manag.* **2023**, *52*, 3–17, doi:10.1111/fima.12413.
2. Safriani, M.N.; Utomo, D.C. Pengaruh Environmental, Social, Governance (ESG) Disclosure terhadap Kinerja Perusahaan. *Diponegoro J. Account.* **2020**, *9*, 1–11.
3. Gupta, A.K.; Gupta, N. Effect of corporate environmental sustainability on dimensions of firm performance – Towards sustainable development: Evidence from India. *J. Clean. Prod.* **2020**, *253*, 119948, doi:10.1016/j.jclepro.2019.119948.
4. Șerban, R.-A.; Mihaiu, D.M.; Țichindelean, M. Environment, Social, and Governance Score and Value Added Impacts on Market Capitalization: A Sectoral-Based Approach. *Sustainability* **2022**, *14*, 2069, doi:10.3390/su14042069.
5. Alam, M.M.; Tahir, Y.M.; Saif-Alyousfi, A.Y.H.; Ali, W.B.; Muda, R.; Nordin, S. Financial factors influencing environmental, social and governance ratings of public listed companies in Bursa Malaysia. *Cogent Bus. Manag.* **2022**, *9*, doi:10.1080/23311975.2022.2118207.
6. Atif, M.; Liu, B.; Nadarajah, S. The effect of corporate environmental, social and governance disclosure on cash holdings: Life-cycle perspective. *Bus. Strateg. Environ.* **2022**, *31*, 2193–2212, doi:10.1002/bse.3016.
7. Allini, A.; Rossi, F.M.; Wright, R. Corporate Governance and Contingency Theory. *Corp. Gov. An Int. Rev.* **2020**.
8. Apriliawati, F.; Nassar, S.N. Struktur Modal Dan Kebijakan Deviden Terhadap Nilai Perusahaan Dengan Keputusan Investasi Sebagai Variabel Moderasi Pada ESG Quality 45 Indeks IDX KEHATI. *Pros. Semin. Nas. FEB UNIKAL* **2022**.
9. Houqe, M.N.; Monem, R.M.; van Zijl, T. Business strategy, cash holdings, and dividend payouts. *Account. Financ.* **2023**, *63*, 3999–4035, doi:10.1111/acfi.13082.
10. Widiatmoko, J.; Indarti, M.G.K.; Pamungkas, I.D. Corporate governance on intellectual capital disclosure and market capitalization. *Cogent Bus. Manag.* **2020**, *7*, 1750332, doi:10.1080/23311975.2020.1750332.
11. Vivianita, A.; Januarti, I.; Kusumadewi, R.R.K.A. Pengaruh Pengungkapan ESG Terhadap

Nilai Perusahaan yang Dimoderasi Oleh Sustainable Growth Rate. *J. Proaksi* **2023**, *10*, 698–710, doi:10.32534/jpk.v10i4.5052.

12. Luo, D. ESG, liquidity, and stock returns. *J. Int. Financ. Mark. Institutions Money* **2022**, *78*, 101526, doi:10.1016/j.intfin.2022.101526.
13. Atan, R.; Alam, M.M.; Said, J.; Zamri, M. The impacts of environmental, social, and governance factors on firm performance. *Manag. Environ. Qual. An Int. J.* **2018**, *29*, 182–194, doi:10.1108/MEQ-03-2017-0033.
14. Pedersen, L.H.; Fitzgibbons, S.; Pomorski, L. Responsible investing: The ESG-efficient frontier. *J. financ. econ.* **2021**, *142*, 572–597, doi:10.1016/j.jfineco.2020.11.001.
15. Azeem, A.; Naseem, M.A.; Hassan, N.U.; Butt, I.; Aslam, M.T.; Ali, S.; Jadoon, A. khan A novel lens of stock market capitalization and environmental degradation. *Environ. Sci. Pollut. Res.* **2022**, *30*, 11431–11442, doi:10.1007/s11356-022-22885-1.
16. Feng, Z.; Wu, Z. ESG Disclosure, REIT Debt Financing and Firm Value. *J. Real Estate Financ. Econ.* **2023**, *67*, 388–422, doi:10.1007/s11146-021-09857-x.
17. Bougie, U.S.& R. Research Method For Business : A Skill Building Approach. *John Wiley Sons Ltd* **2020**, *fifth Edit*.
18. Idx Indonesia Stock Exchange.
19. Joseph F. Hair, J.; Black, W.C.; Babin, B.J.; Anderson, R.E. Multivariate Data Analysis. *pearson* **2020**.
20. Vivianita; Anantya Roestanto; Dian Indudewi Determinan Environmental, Social, And Governance (ESG) (Studi Empiris Perusahaan Di Indonesia Yang Terdaftar Di IDX 2018-2021). *J. Din. Ekon. dan Bisnis* **2024**, *21*.
21. Ropiah, S.; Jayanti, D. The influence of environmental social governance (esg) and dividend payout ratio (dpr) on stock returns (case study on companies listed on idxesgl BEI period 2020-2022). *COSTING* **2024**, *7*.
22. Giantari, T. ESG Terhadap Return Saham : Perusahaan Besar Lebih Unggul. *Proaksi* **2024**, *11*, 501–516, doi:10.32534/jpk.v11i3.5835.
23. Aditya, M. Implementasi Rating ESG dan Kebijakan Dividen terhadap Return Saham. *Keizai* **2022**, *3*, 48–56, doi:10.56589/keizai.v3i1.273.