Enrichment: Journal of Management, 14 (3) (2024)

Published by: Instiute of Computer Science (IOCS)

Enrichment: Journal of Management

Journal homepage: www.enrichment.iocspublisher.org

The influence of esg performance on stock price volatility in Indonesia

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ARTICLE INFO

Article history:

Received Jul 23, 2024
Revised Aug 02, 2024
Accepted Aug 27, 2024

Keywords:

Environment;
Governance;
Social;
Volatility.

ABSTRACT

This study investigates the influence of Environmental, Social, and Governance (ESG) performance on stock price volatility in the Indonesian stock market. The research focuses on four main points. First, the stock market provides potential capital growth through dividends and capital gains, with capital gains offering higher returns but also carrying the risk of losses if stock prices decline. Second, stock price volatility can be high during economic crises, such as the COVID-19 pandemic, which has the potential to trigger significant downturns (market crashes). Third, internal factors of companies such as size, profitability, and strategy influence the stability of stock price volatility, especially during crises. Fourth, ESG disclosure is increasingly important for investors seeking sustainable practices and effective risk management. Companies with high ESG scores tend to send positive signals to investors, reducing uncertainty and increasing confidence. The study's findings suggest that ESG performance has the potential to reduce stock price volatility, especially in non-crisis conditions. This research provides valuable insights for regulators, investors, and companies to understand how ESG affect the dynamics of the Indonesian stock market.

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INTRODUCTION

The growth of a country's economy can be seen from various aspects, one of which is the growth of companies as drivers of economic activity in a country. Growing companies will provide jobs and economic turnover for the community (Amrillah, 2016). The growth of a company cannot be separated from the presence of investors. Some of the main benefits of investing in the capital market are that the capital market offers the potential for significant capital growth (Listiadi, 2023). By buying shares, investors can generate passive income through dividends or interest payments.

This provides an additional source of income for investors. Investors will also benefit from the increase in the price of the shares over time or commonly referred to as capital gain (Lisa et al., 2019).

Investors' income from capital gains is generally much greater than income from dividends (Aladini & Nurulrahmatia, 2020). However, the large amount of profit also has a risk that can cause losses to investors when investors sell shares when the share price is below the figure when the purchase was made. One effort that can be made to minimize this risk is to choose shares with low volatility in share price movements (Xu, 2023). Volatility usually becomes very high when there is a certain event that massively affects the economy. For example, when the Covid-19 pandemic occurred, the COVID-19 pandemic caused a global recession which then caused economic problems that were worse than the Subprime Mortgage in 2008 (Nugroho & Robiyanto, 2021). Indonesia also cannot escape losses due to the COVID-19 outbreak. As is known, the trade relationship between Indonesia and China is very close, so that the Indonesian economy has also experienced a downturn where export and import activities, the tourism sector, and investment have decreased (Prayoga et al., 2022). This then causes a market crash or market shock which will trigger stock price volatility (Mazur et al., 2021).

The existence of a company in the midst of business competition in the current free market era is an important aspect that must be considered by every company (Palomino et al., 2022). The company must have the right strategy to continue to increase the company's value. With the very rapid development of business, every business activity is required to not only focus on the company's profits, but also consider the impacts that will arise from the company's operational activities (Mudzakir & Pangestuti, 2023). As the stock market transforms, the risks associated with stock market investments increase. Volatility presents significant risks to investors. Volatility can also be seen as a measure of risk, with greater volatility leading to more significant variations in returns but also increasing the risk in an investment (Kurniawan & Husodo, 2023). One thing that can be done to mitigate excessive volatility is to choose stocks with strong internal conditions (Rauf & Rashid, 2021). Internal factors such as size, age, profitability, productivity, research and development, resources, special competences, strategy, innovation, operations, marketing and financial capabilities can be supporting factors that make volatility more stable even when a crisis occurs.

In recent years, ESG disclosure has become very important in meeting the increasing investor demand for non-financial information (Liu et al., 2024). When a company presents non-financial information, investors will see that the company complies with non-financial disclosure practices. In terms of ESG disclosure, many companies follow the standards of the GRI (Global Reporting Initiative). Companies will receive an ESG score after making ESG disclosures (Wahdan & Rahmawati, 2023). In this study, signaling theory plays a major role in understanding how companies use signals to communicate with investors about their future conditions and prospects (Boshnak, 2021). Companies that have good ESG performance and disclosure tend to send positive signals to investors regarding sustainable practices, effective risk management, and attention to environmental and social issues. These positive signals can reduce uncertainty and increase investor confidence, which can ultimately reduce stock price volatility (Ningwati et al., 2022). In some modern literature, sustainability factors are factors that investors consider when choosing a stock to invest in. One of the indicators is known as the Environmental, Social, and Governance (ESG) report. Some investors show excessive interest in products from companies that make good ESG disclosures (Gavrilakis & Floros, 2024). This shows that investors view companies that do good ESG disclosure as sound companies.

Companies that make good ESG disclosures mean that the company cares about the environment, takes real action for social matters such as employees and the community, and complies with government regulations properly (de Villiers et al., 2023). Companies that take such actions are certainly considered bonafide companies because they are willing to spend large

amounts on ESG operational activities. This can certainly attract the attention of both long-term and short-term investors (Almeyda & Darmansya, 2019). So when a crisis occurs that causes stock market volatility to spike, companies with good ESG performance can reduce the impact of that volatility.

Xu (2023) and Sabbaghi (2020) In his research, he proved that ESG performance disclosure can significantly and negatively affect stock price volatility, meaning that the better the ESG performance, the lower the stock price volatility will be. Kurniawan & Husodo (2023) also specifically conducted research on how ESG performance can significantly affect stock price volatility in the Indonesian stock market. ESG scores are positively correlated with company value. This suggests that companies with high ESG scores may be able to improve their performance (Lee & Cho, 2021). ESG performance can reduce corporate risk taking and produce a more stable corporate environment.

Research conducted by Zanatto (2023) shows that during non-crisis periods, ESG news can reduce volatility, and when considering the period before the financial crisis, the disclosure content (positive or negative) of the news becomes important. However, during the economic crisis, neither the amount nor the content of ESG news disclosures affect volatility; thus, ESG attention may no longer be of importance. However, research conducted by Xu (2023) shows that ESG disclosure significantly affects the volatility of stock price movements negatively.

RESEARCH METHOD

This study examines the effect of ESG performance on stock price volatility in all companies that disclose ESG performance in Indonesia from 2015-2022. The consideration for choosing an analysis period of 8 years is because companies with ESG disclosures in Indonesia are not yet very popular, as evidenced by the fact that in 2022 only 64 companies made ESG disclosures out of a total of more than 800 companies that had IPOs. Stock price volatility is measured using volatility measurements adapted from research Xu (2023), while the ESG data in this study uses secondary data obtained from a third party, namely Refinitiv Eikon, which is measured using 630 measurement indicators. This study also uses several control variables with the following measurements :

Tabel 1. Variable Measurement

Code	Definition	Measurement	Sumber
Size	Company size calculated from the company's total assets	Ln (total asset)	Xu (2023)
Leverage	Company debt to total assets ratio	$Debt\ to\ asset\ ratio = \frac{Total\ debt}{Total\ asset}$	Xu (2023)
ROA (*Return on asset*)	Company net income to total assets ratio	$ROA = \frac{Net\ income}{Total\ aset}$	Xu (2023)
Cash	Net cash flow ratio from operating activities to Total Assets	$Cash = \frac{Net\ Cash\ Flow\ from\ operating}{Total\ aset}$	Xu (2023)
ATO (*Total Asset Turnover Rasio*)	Ratio of operating income to average total assets	$Cash = \frac{\text{Operating income}}{Avg\ Total\ aset}$	Xu (2023)
Growth	Operating income growth	$Growth = \frac{Operating\ income_t}{Operating\ income_{t-1}}$	Nichols et al. (2017)
Top1	Number of shares held by the largest shareholder/total number of shares	$Top1 = \frac{Number\ of\ shares\ in\ the\ largest\ shareholder}{Number\ of\ shares}$	Xu (2023)
Board	Number of directors	Ln (Number of directors)	Xu (2023)
FirmAge	Age of company in operation	ln (current year - year of establishment + 1)	Xu (2023)
BM (*Book to market*)	Ratio of book value to total market value	Book value/total market value	Xu (2023)

Code	Definition	Measurement	Sumber
SOE	State-controlled enterprises	State-owned companies are given code 1, and those that are not are given code 0	Xu (2023)
Big4	The Big 4 Company is a term given to the four largest public accounting firms in the United States. The four accounting firms are Ernst & Young (EY), Deloitte, Klynveld Peat Marwick Goerdeler (KPMG), and PricewaterhouseCoopers (PwC)	Companies audited by Big4 (PwC, Deloitte, KPMG, Ernst & Young) are coded 1, and those not are coded 0.	Xu (2023)
TobinQ	Tobin's Q is a ratio measuring tool that defines company value as a form of tangible and intangible asset value	$\text{Tobins'Q} = \frac{\text{Equity market value+ Liability market value}}{Total\ book\ value\ of\ assets}$	Kyere & Ausloos (2021)
P/E rasio	Current closing price / (Net income for the current year / Paid-in capital for the current period end)	$PE = \frac{Closing\ price}{Net\ income\ current\ year\ /\ Paid-in\ Capital\ Current\ Period\ Ending\ Value}$	Xu (2023)
PB	Current Closing Price Current Period Value / (Total Owners' Equity Ending Value / Paid-in Capital Current Period Ending Value)	$PB = \frac{Closing\ price}{Total\ Owners\ Equity\ Ending\ Value\ /Paid-in\ Capital\ Current\ Period\ Ending\ Value}$	Xu (2023)
Cap	Market Capitalization Value	Ln (*Market capitalization*)	Xu (2023)

The empirical model in this study is as follows :

$$Vol_{it} = \beta_0 + \beta_1 ESG + \beta_2 \text{FinCris} + \beta_3 \text{Size} + \beta_4 Lev + \beta_5 ROA + \beta_6 Cash + \beta_7 ATO + \beta_8 Growth + \beta_{10} Top1 + \beta_{11} Board + \beta_{12} Age + \beta_{13} BM + \beta_{14} SOE + \beta_{15} BIG4 + \beta_{16} Tobin + \beta_{17} PE + \beta_{18} PB + \beta_{19} Cap + \varepsilon$$

This study uses all companies listed on the Indonesia Stock Exchange and have ESG disclosure data. From the data obtained, it is known that only 64 companies have ESG disclosure data, so the sample in this study only uses 64 companies. Not all companies have complete ESG data for 8 years, so the data analyzed in this study is unbalanced, the data sample studied in this study was 335 observations. Additional data were sourced from Capital IQ. The analyzed data was winsorized by deleting around 34 observation data so that the analyzed data did not contain outlier data.

RESULTS AND DISCUSSION

Descriptive Data

Table 1 shows the results of descriptive statistical analysis. The stock market volatility value has an average of 1,528 with a standard deviation of 0.925 and a minimum value of 0.231 to a maximum of 6,703. The higher the volatility value, the greater the stock price movement.

Table 2. Descriptive Data

Variable	Obs	Mean	Std. dev.	Min	Max
Vol_{it}	301	1.528	0.925	0.231	6.073
ESG	301	0.450	0.195	0.082	0.853
Size	301	17.415	1.078	12.871	19.840
LEV	301	0.464	0.195	0.103	0.961
ROA	301	0.006	0.006	-0.020	0.038
CashflowRatio	301	0.117	0.111	-0.247	0.578
ATO	301	0.127	0.125	-0.222	0.956
Growth	301	0.122	0.683	-2.671	3.401
Top1	301	0.545	0.192	0.101	0.987
Board	301	1.864	0.276	0.693	2.639
FirmAge	301	3.778	0.563	2.079	5.100
BM	301	0.470	0.666	-2.698	2.944

TobinQ	301	0.578	0.223	0.140	1.810
PE	301	19.598	17.952	-19.193	130.576
PB	301	3.402	5.779	0.173	46.428
Cap	301	14.700	1.228	9.317	17.624

Empirical Findings

The selected model in this study is fixed effect, but in the classical assumption test it is known that there are heteroscedasticity and autocorrelation problems so that treatment testing is needed. Therefore, the hypothesis test is carried out with robust standard error with Driscoll-Kraay standard. The following are the results of panel data regression testing with the accepted model:

Table 3. ESG on the Volatility

Variable	Coefficient	t	P>t
ESG	-0.513	-2.070	0.077*
Size	-0.077	-0.660	0.532
LEV	0.077	0.090	0.934
ROA	-4.756	-0.150	0.888
CashflowRatio	1.232	1.370	0.212
ATO	-1.855	-0.920	0.389
Growth	0.121	1.230	0.258
Top1	-0.496	-2.230	0.061*
Board	-0.597	-3.060	0.018**
FirmAge	0.231	1.520	0.172
BM	-0.172	-3.360	0.012**
SOE	-0.396	-3.480	0.01**
Big4	-0.458	-2.040	0.081*
TobinQ	0.009	0.010	0.989
PE	0.001	0.700	0.505
PB	0.003	0.680	0.519
Cap	-0.024	-0.150	0.884
_cons	4.048	8.450	0.000
R-Squared		0.1575	
F-Statistics		0.0000	
Obs		301	

From the test results, it can be concluded that hypothesis 1 which tests the effect of ESG performance on stock market volatility shows a value of 0.077 more than 0.05, which means that ESG performance does not have a significant effect on stock market volatility at alpha 5%, but ESG performance has a significant effect on alpha 10%. The negative coefficient value indicates that the higher the ESG performance of companies in Indonesia, the lower the volatility will be. The coefficient value of -0.513 indicates that when ESG increases by 1 unit, the volatility value will decrease by 0.513 points. Companies that make good ESG disclosures mean that the company cares about the surrounding environment, takes real action for social matters such as employees and the community, and complies with government regulations properly (de Villiers et al., 2023). Companies that take such actions are certainly considered bonafide companies because they are willing to spend large amounts on ESG operational activities. This can certainly attract the attention of both long-term and short-term investors. So that when a crisis occurs that causes stock market volatility to spike, companies with good ESG performance can reduce the impact of that volatility. The results of this study are in line with those conducted by Xu (2023) and Sabbaghi (2020) which shows that ESG performance has a significant influence on stock market volatility. However, this study is not in line with that conducted by Meher et al. (2020) which shows that ESG performance is unable to significantly influence stock market volatility. The results also show an r square value of 0.1575, which means that 15.75% of the return volatility variable in the stock market can be explained by the Esg performance variable and all control variables in this study. While the remaining 84.25% is influenced by other variables outside this study.

CONCLUSION

ESG performance has been shown to significantly influence stock market volatility. A negative coefficient value indicates that the higher the ESG performance, the lower the stock market volatility. If investors want to avoid uncertain stock market volatility, they can see the level of ESG performance disclosure in each company. Companies with high ESG performance have been shown to be able to suppress stock market volatility even during a crisis. This means that if investors want to avoid uncertain stock market volatility, they can avoid investing in stock purchases during a financial crisis such as during the Covid-19 pandemic. This action is commonly known as wait and see, where investors prefer to wait for the right time to enter the stock market. ESG value is measured using the percentage of disclosure of 630 established indicators related to environmental, social and corporate governance. Companies that take such actions are certainly considered bona fide companies because they are willing to spend large costs on ESG operational activities. Therefore, investors are advised to invest in companies that make high ESG disclosures because they can be considered bona fide companies, which of course can minimize stock sales when a crisis occurs.

This study has several limitations that can be used as input for further research. The use of ESG data from 2015 to 2023 may also have limitations related to data availability and consistency. ESG practices have been relatively new and widely adopted by companies in Indonesia in recent years. This could cause the ESG data used in this study to not fully reflect the company's commitment to ESG practices, as well as its effect on stock market volatility because the number of companies that make ESG disclosures is only 64 companies. Regulatory changes and increased corporate awareness of ESG during the research period could also affect the results obtained. It is hoped that further research can also analyze samples of companies in other countries so that it can be known for sure how ESG can affect company value.

References

Aladini, A., & Nurulrahmatia, N. (2020). The Effect Of Capital Gain And Division Of Dividends On Share Trading Volume In Pt. Unilever Indonesia Tbk. *Jurnal Ekonomi Balance*, *16*(2), 194–202. https://doi.org/10.26618/jeb.v17i1.5468

Almeyda, R., & Darmansya, A. (2019). The Influence of Environmental, Social, and Governance (ESG) Disclosure on Firm Financial Performance. *IPTEK Journal of Proceedings Series*, *0*(5), 278. https://doi.org/10.12962/j23546026.y2019i5.6340

Amrillah, M. F. (2016). Pengaruh Nilai Tukar Rupiah (Kurs), Inflasi dan Pertumbuhan Ekonomi Terhadap Return Saham Pada Perusahaan Perbankan yang Terdaftar di Bursa Efek Indonesia (BEI) Periode 2008-2014. *Jurnal Valuta*, *2*(2), 232–250. www.yahoo.finance.com,

Boshnak, H. A. (2021). The impact of board composition and ownership structure on dividend payout policy: evidence from Saudi Arabia. *International Journal of Emerging Markets*, *October*. https://doi.org/10.1108/IJOEM-05-2021-0791

de Villiers, C., Ma, D., & Marques, A. (2023). Corporate social responsibility disclosure, dividend payments and firm value – Relations and mediating effects. *Accounting and Finance*, 1–35. https://doi.org/10.1111/acfi.13140

Gavrilakis, N., & Floros, C. (2024). *Volatility and Herding Bias on ESG Leaders ' Portfolios Performance*.

Kurniawan, M., & Husodo, Z. A. (2023). The effect of ESG performance on stock price volatility: A study of emerging markets in Asia. *Asia. BISMA (Bisnis Dan Manajemen)*, *16*(1), 29–46. https://doi.org/10.26740/bisma.v16n1.p29-46

Kyere, M., & Ausloos, M. (2021). Corporate governance and firms financial performance in the United Kingdom. *International Journal of Finance & Economics*, *26*(2), 1871–1885. https://doi.org/https://doi.org/10.1002/ijfe.1883

Lee, J. H., & Cho, J. H. (2021). Firm-value effects of carbon emissions and carbon disclosures—evidence from korea. *International Journal of Environmental Research and Public Health*, *18*(22). https://doi.org/10.3390/ijerph182212166

Lisa Kustina, Otika Safitri, & Samsul Anwar. (2019). Kebijakan Deviden Dan Capital Gain: Pengaruhnya Terhadap Harga Saham. *Jurnal Investasi*, *5*(1), 24–37. https://doi.org/10.31943/investasi.v5i1.16

Listiadi, A. (2023). The Effect of Financial Performance on The Tobin's Q Value of Company Investment. *International Journal of Scientific Research and Management (IJSRM)*, *11*(12), 5566–5574. https://doi.org/10.18535/ijsrm/v11i12.em07

Liu, G., Qian, H., Shi, Y., Zhang, Y., & Wu, F. (2024). Does ESG report greenwashing increase stock price crash risk? *China Journal of Accounting Studies*, *00*(00), 1–25. https://doi.org/10.1080/21697213.2024.2303070

Mazur, M., Dang, M., & Vega, M. (2021). COVID-19 and the march 2020 stock market crash. Evidence from S&P1500. *Finance Research Letters*, *38*(July 2020), 101690. https://doi.org/10.1016/j.frl.2020.101690

Meher, B. K., Hawaldar, I. T., Mohapatra, L., Spulbar, C., & Birau, R. (2020). The effects of environment, society and governance scores on investment returns and stock market volatility. *International Journal of Energy Economics and Policy*, *10*(4), 234–239. https://doi.org/10.32479/ijeep.9311

Mudzakir, F. U., & Pangestuti, I. R. D. (2023). Pengaruh Environmental, Social and Governance Disclosure Terhadap Nilai Perusahaan dengan ROA dan DER sebagai Variabel Kontrol. *Diponegoro Journal of Management*, *12*(2), 1–13. http://ejournal-s1.undip.ac.id/index.php/dbr

Nichols, D. C., Wahlen, J. M., & Wieland, M. M. (2017). Pricing and Mispricing of Accounting Fundamentals in the Time-Series and in the Cross Section. *Contemporary Accounting Research*, *34*(3), 1378–1417. https://doi.org/10.1111/1911-3846.12317

Ningwati, G., Septiyanti, R., & Desriani, N. (2022). Pengaruh Environment, Social and Governance Disclosure terhadap Kinerja Perusahaan. *Goodwood Akuntansi Dan Auditing Reviu*, *1*(1), 67–78. https://doi.org/10.35912/gaar.v1i1.1500

Nugroho, A. D., & Robiyanto, R. (2021). Determinant of Indonesian Stock Market's Volatility During the Covid-19 Pandemic. *Jurnal Keuangan Dan Perbankan*, *25*(1), 1–20. https://doi.org/10.26905/jkdp.v25i1.4980

Palomino, A. H., Gala-Velasquez, B. D. la, & Ccorisapra-Quintana, J. (2022). The interactive effect of innovation capability and potential absorptive capacity on innovation performance. *Journal of Innovation & Knowledge*, *7*, 1–10.

Prayoga, E. R., Ryansyah, M., & Jannah, N. (2022). Dampak Covid-19 terhadap Pertumbuhan Ekonomi pada Sektor Ekspor dan Impor Indonesia. *El-Mal: Jurnal Kajian Ekonomi & Bisnis Islam*, *3*(3), 457–465. https://doi.org/10.47467/elmal.v3i3.924

Rauf, R., & Rashid, A. (2021). Impact of Volatility on Firm Sales Growth Some Insights from Pakistan. *Business & Economic Review*, *13*(4), 47–76. https://doi.org/10.22547/ber/13.4.3

Sabbaghi, O. (2020). The impact of news on the volatility of ESG firms Omid. *Global Finance Journal*, 100570. https://doi.org/10.1016/j.gfj.2020.100570

Wahdan Arum Inawati, & Rahmawati, R. (2023). Dampak Environmental, Social, Dan Governance (ESG) Terhadap Kinerja Keuangan. *Jurnal Akademi Akuntansi*, *6*(2), 225–241. https://doi.org/10.22219/jaa.v6i2.26674

Xu, X. (2023). Has ESG Performance Reduced Stock Price Volatility. *Journal of Innovation and Development*, *3*(1), 59–66. https://doi.org/10.54097/jid.v3i1.8421

Zanatto, C. (2023). *The impact of ESG news on the volatility of the Portuguese stock market – Does it change during recessions ? September 2022*, 5821–5832. https://doi.org/10.1002/bse.3450