

# Stock Return Movement in Indonesia Mining Companies

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**ABSTRACT:** This research empirically analyzes and examines the influence of environmental performance and environmental disclosure on stock return. The environmental performance variable was measured based on PROP-ER (government ranks), and the environmental disclosure was assessed using index. The stock return variable was reflected by cumulative abnormal return. The samples used in this research were 41 companies with the observing year of 2015-2017; thus, the total samples were 123. The data was analyzed using Statistical Package for Social Science with multiple linear regression analysis methods. The results showed that the environmental performance variable had a positive impact on stock return. The environmental disclosure variable had a positive impact on the stock return, which means the higher environmental disclosure items by the company, the higher investor's positive responds reflected through the stock return.

*Keywords:* stock return, environmental performance, environmental disclosure

## 1 INTRODUCTION

Stock return is a level of stock return that is expected upon investment in a stock or some groups of stock through a portfolio. Excellent environmental performance and environmental disclosure from a company become the primary consideration for the investor. Better environmental performance and environmental disclosure of a company are expected to increase the stock price and provide a high stock return to the investor because the stock return is the difference between the current stock price and the previous stock price. The high rate of return given by the company to investors shows that the company has an excellent company performance, signifying that the investor believes the company will give positive returns toward the stocks that have been invested in the capital market. Environmental performance and environmental disclosure are paradigm alterations in the business world, which come from profit-oriented only and then oriented with three things called Triple-P Bottom Line. The orientation alteration into those three things is an effort by the company manager to reach the sustainability development, through operation activities that are respon-

sibly done by considering profit, planner, and people (Elkington, 1997).

The implementation of social and environmental responsibility is explained in the company annual report and accounts for Shareholders' General Meeting (RUPS). The information on excellent environmental performance and environmental disclosure in the annual report is one of the company's ways to show excellent performance to stakeholders. Companies can build an environmentally friendly image to stakeholders. The excellent environmental performance and the environmental disclosure items also become one of the investor considerations in investment decision making. Investors tend to invest in a company that has excellent environmental performance and a high level of environmental disclosure because the investor believes that it can be achieved only if the company has good economic performance. The better environmental performance and the higher environmental disclosure in annual report increases the number of investors that implicates to stock return improvement.

The previous empirical evidence showed many results in the relationship between company environmental performance, the level of environmental

disclosure, and its implication to company stock. Quiros, et al., (2016) stated a great corporate social responsibility (CSR) and environmental management would improve the company value through investors' positive response. Stekelenburg et al. (2015) concluded that the market rewards high CSR performance firms with significant positive growth in stock returns. Pan et al. (2014) showed that the differences in the relationship between CSR and Corporate Financial Performance are due to industry characteristics. Lourenc et al. (2013) showed that the net income of firms with a good sustainability reputation has a higher valuation by the market when compared to their counterparts. Guenster et al. (2011) reported that eco-efficiency relates to operating performance. Karagiorgos (2010) concluded that there is a positive correlation between stock returns and CSR performance in Greek companies.

Hussainey & Salama, A. (2010) suggested that firms with higher Corporate Environmental Reputation scores get higher levels of share price anticipation of earnings than firms with lower Corporate Environmental Reputation scores. Brammer et al. (2006) argued that considerable abnormal returns are available from holding a portfolio of the socially least desirable stocks.

Al-Tuwaijri et al. (2004) found that "good" environmental performance is significantly associated with "good" economic performance. Meanwhile, Fiori et al. (2015) proposed evidence that good social performance has a negative influence on stock prices in the Italian Stock Exchange Market. Weir (2010) showed that the stock market reacts negatively to news about the environmental behavior of firms.

Mohammadi et al. (2018) said the overall extent of sustainability disclosure arranged in accordance with the low rate of sustainability reporting for listed firms in Tehran Stock Exchange.

## 2 RESEARCH METHODS

This study used the population of 489 companies listed on the Indonesia Stock Exchange over the 2015- 2017 period. The sampling techniques used was purposive sampling, with criteria:

(1) The company listed on the Indonesia Stock Exchange and published its annual report over the 2015-2017 period; (2) Companies that are ranked on the company's performance rating assessment program (PROPER) over the 2015-2017 period; and (3) Companies that have a complete data related to research variables. Based on the criteria, the sample

used in this research was 123 mining companies for three years. The environmental performance variable used the PROPER ratings obtained from the Ministry of Environment and Forestry of the Republic of Indonesia Database ([www.menlh.com](http://www.menlh.com)).

Table 1. Environmental Performance Indicator

Indicator	Value
Gold	5
Green	4
Blue	3
Red	2
Black	1

\*Source: Ministry of Environment and Forestry of the Republic of Indonesia, 2013

Data related to environmental disclosure variable used Clarkson, *et al.*, (2008) index:

Table 2. Environmental disclosure indicator

Governance Structure and Management Systems	
1.	Existence of a Department for pollution control and/or management positions for environmental management
2.	Existence of an Environmental and/or a Public Issues Committee on the board
3.	Existence of terms and conditions applicable to suppliers and/or customers regarding environmental practices
4.	Stakeholder involvement in setting corporate environmental policies
5.	Implementation of ISO14001 at the plant and/or firm-level
6.	Executive compensation is linked to environmental performance
Credibility	
1.	Adoption of GRI sustainability reporting guidelines or provision of a CERES report
2.	Independent verification/assurance about environmental information disclosed in the EP report
3.	Periodic independent verifications/audits on environmental performance and/or systems
4.	Certification of environmental programs by independent agencies
5.	Product Certification with respect to environmental impact
6.	External Environmental Performance Awards and/or inclusion in a Sustainability Index
7.	Stakeholder involvement in the environmental disclosure process
8.	Participation in voluntary environmental initiatives endorsed by EPA or Department of Energy
9.	Participation in industry-specific associations/initiatives to improve environmental practices
10.	Participation in other environmental organizations/assoc. to improve environmental practices (if not awarded under 8 or 9 above)
Environmental Performance Indicators (EPI)	
1.	EPI on energy use and/or energy efficiency
2.	EPI on water use and/or water use efficiency
3.	EPI on greenhouse gas emissions
4.	EPI on other air emissions
5.	EPI on NPI (land, water, air)
6.	EPI on other discharges, releases and/or spills (not TRI)
7.	EPI on waste generation and/or management (recycling,

*Cont.*

- re-use, reducing, treatment and disposal)
- 8. EPI on land and resources use, biodiversity and conservation
- 9. EPI on environmental impacts of products and services
- 10. EPI on compliance performance (e.g., exceedance, reportable incidents)
- Environmental Spending
  - 1. Summary of dollar savings arising from environmental initiatives to the company
  - 2. Amount spent on technologies, R&D and/or innovations to enhance environmental performance and/or efficiency
  - 3. Amount spent on fines related to environmental issues

Sources: Clarkson *et al.* (2008)

The stock return variable used the cumulative abnormal return proxy, the percentage amount of all abnormal returns over a period of time. This study used multiple linear regression analysis methods with regression models as follows:

$$SR = \alpha + \beta_1 EP + \beta_2 ED + e$$

- SR : Stock Return
- EP : Environmental Performance
- ED : Environmental Disclosure
- $\beta_1, \beta_2$  : Estimated regression coefficient
- $\alpha$  : Constant
- e : Error term

### 3 RESULTS AND DISCUSSIONS

The result of regression analysis can be seen on Table 3:

Table 3. Hierarchical Regression Analysis

Hypothesis	Regression	Beta	t	P-Value	Explanation
H1	EP* → SR***	0.047	6.884	.001	Accepted
H2	ED** → S	0.056	3.226	.016	Accepted
1. Adj R <sup>2</sup> = 0.285					
2. F = 18,441, <i>p-value</i> = 0.000					
*EP = Environment Performance					
**ED = Environment Disclosure					

Source: Data processing, 2019

The results of the environmental performance variable on the stock return showed sig (0.001) < (0.05), which means the environmental performance variable significantly influenced the stock return. The relationship between environmental performance and stock return signifies that the better the company performance, which is reflected by PROPER rating, in the activities and management of the environment, the better the company image in the eye of stakeholders and users of financial statements. Positive images will draw the stakeholders' attention as well as the users of financial statements so that the market will respond positive-

ly through the fluctuations in the stock price followed by the rising stock return.

These results support research that has been done by Quiros, *et al.*, (2016) that stated if the company implements a good corporate social responsibility and environmental management, it will increase the value of the company through the positive investors' reaction. Stekelenburg *et al.* (2015) concluded that the market rewards high CSR performance firms with significant positive growth in stock returns. Pan *et al.* (2014) showed that the differences in the relationship between CSR and Corporate Financial Performance are due to industry characteristics. Lourenc *et al.* (2013) showed that the net income of firms with a good sustainability reputation has a higher valuation by the market when compared to their counterparts. Guenster *et al.* (2011) reported that eco-efficiency relates to operating performance. Karagiorgos (2010) concluded that there is a positive correlation between stock returns and CSR performance in Greek companies. Hussainey & Salama, A. (2010) suggested that firms with higher Corporate Environmental Reputation scores get higher levels of share price anticipation of earnings than firms with lower Corporate Environmental Reputation scores. Brammer *et al.* (2006) argued that considerable abnormal returns are available from holding a portfolio of the socially least desirable stocks.

Al-Tuwaijri *et al.* (2004) found that "good" environmental performance is significantly associated with "good" economic performance. Meanwhile, Fiori *et al.* (2015) proposed evidence that good social performance has a negative influence on stock prices in the Italian Stock Exchange Market. Weir (2010) showed that the stock market reacts negatively to news about the environmental behavior of firms. The test results of the environmental disclosure variables influence the stock return showed SIG (0.016) < (0.05), which means the environmental disclosure variable significantly influenced the stock return. The relationship between environmental disclosure and stock return is, the higher the level of environmental disclosure by the company, the more positive the investor's response, which can be seen through the stock return.

The disclosure of corporate environmental activities demonstrates corporate environmental responsibility. Besides, the company with high environmental disclosure items reflects that the company has a good level of disclosure transparency. It builds stakeholder opinion that the company has a good image. This environmental disclosure is in line with stakeholder theory that stated all stakeholders have the right to obtain information about the company's activities that may influence their

decision making. With the right image, the company will gain recognition and legitimacy of stakeholders that the company has an excellent performance so that more investors will invest in companies. It will implicate the stock returns increase. The results of this research are supported by Mohammadi et al. (2018) that said the overall extent of sustainability disclosure arranged in accordance with the low rate of sustainability reporting for listed firms in Tehran Stock Exchange. It was also found that sensitive firms have a higher level of corporate sustainability disclosure than other firms. Moreover, sustainability reporting was shown to affect market valuations, in which firms activating in sensitive industries with sustainability reporting have higher market valuations than firms activating in non-sensitive industries with sustainability reporting.

#### 4 CONCLUSION

The environmental performance variable had a positive influence on stock return, which means the better the company performance, reflected through PROPER rating, the better the company image in the eye of stakeholders and users of the financial report, and it will increase the stock return directly.

The environmental disclosure variable gave a positive impact on stock return, which means the higher the environmental disclosure by the company, the more positive the investor's response, which can be seen through the stock return. However, this research has some limitations namely the ability of independent variables in explaining the dependent variable is only 28.5%, the low number of companies that get PROPER rating and report environmental disclosure in the period of research, as well as the existence of subjectivity in measuring environmental disclosure index, so that the index determination for the same indicators can be different between each researcher and company. Therefore, future research should increase the number of samples and extend the period of observation, as well as observing other factors that can influence the stock return, such as economic performance, financial performance, financial literacy, and others.

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