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Does earning management mediate the effect of stock price on company value? Main Board Energy Sub-Sector Companies in Indonesia During the Covid-19 Period

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Abstract

The purpose of the study was to analyze the effect of stock price fluctuations, with the mediation of earnings management on the value of companies listed in the main board energy sub-sector in Indonesia during the 2018-2020 period of covid-19. The research sample uses 31 companies through purposive sampling. The research analysis tool uses SmartPLS 3.0. Based on the results of the analysis, the path coefficient of stock price fluctuations with company value shows that there is an effect of stock price fluctuations on company value. The path coefficient of stock price fluctuations with earnings management shows that there is an effect of stock price fluctuations on earning management. Meanwhile, the coefficient of earning management path with company value, there is no effect of earning

management on company value. It also occurs in the path coefficient of earning management as a mediation of stock price fluctuations on company value. The analysis shows that there is no effect of earning management as a mediation of stock price fluctuations on company value. This is supported by the results of testing the third hypothesis which makes earning management as a mediation a negative effect on company value. However, because the results of testing the second hypothesis have an effect on stock price fluctuations on earning management, it can be concluded that earnings management only mediates a small part of stock price fluctuations on company value, although there is no effect of earning management as a mediator.

Keywords: Stock Prices, Earning Management, Company Value, Economic Value Added (EVA) and Covid-19

1. Introduction

COVID-19 disrupts the mining and oil and gas segments. Corrected by 210,881,801 cases in the world and 3,950,304 cases in Indonesia on January 1, 2022 (Johns Hopkins University, 2022) ^[20]. COVID-19 is one of the factors causing the movement of the Composite Stock Price Index (JCI). JCI affects stock prices, including stock prices in the energy sector. The Energy sector sells products and services related to energy extraction including non-renewable energy (fossil fuels), so that its income is directly affected by the prices of energy commodities in the world such as Petroleum Mining companies (Bursa Efek Indonesia, 2022) ^[11].

Fluctuations in oil prices have always been considered as an economic barometer. The principle of fluctuations in oil prices in the international market is determined by the mechanism of demand and supply (Hussein & Azhar, 2021) ^[19]. Oil prices have been shown to affect firm profitability (Alaali, 2020) ^[4] and stock market returns (Phan *et al.*, 2016) ^[26]. However, according to Phan *et al.*, the uncertainty of crude oil prices negatively affects the company's investment and the effect depends on the market and stock characteristics of a company (Phan *et al.*, 2019) ^[27]. In addition, the effect is stronger on the crude oil producer group than the crude oil consumer group. In Singhal's research, oil prices have a negative effect on Mexican stock prices while (Singhal *et al.*, 2019) ^[29]. Darko and Kruger found that crude oil prices have an effect on accounting earnings, such as earnings per share and return on equity (Darko & Kruger, 2017). Petroleum companies have an interest in maintaining their profits because profit is one of the important information used by stakeholders to evaluate the company's performance. The importance of earnings information directs oil companies to engage in earnings management, especially during an economic recession (Lee & Lee, 2015) ^[23].

Earning Management is profit engineering carried out by managers (Ningsih, 2017) ^[25]. Earning management to make good financial reports. Good finance can make investors interested in buying company shares because it has good performance. Earnings management is a deliberate process, within the limits of financial accounting standards to direct earnings reporting at a certain level (Bachiller *et al.*, 2008) ^[8]. However, the practice of earning management is considered detrimental to investors

because it can reduce the quality of financial reports and provide irrelevant information (Darwis, 2012) ^[12]. There is some evidence that earnings management is carried out by oil companies, oil companies were involved in earnings management in the global financial crisis in 2008 (Lee & Lee, 2015) ^[23]. Another study also found that US oil companies carried out earnings management especially around the Arab Spring events in 2011 (Yen, 2018).

Earnings engineering carried out by managers can affect the assessment of the company's condition. Meanwhile, the condition of the company with a high level of profit affects the performance of management which reflects good managerial performance. Economic Value Added (EVA) is lauded as the latest and most interesting innovation in managerial performance evaluation measures (Pompili & Tutino, 2019) ^[28]. EVA is a financial performance measurement tool that takes into account the company's actual economic benefits (Fitriani, 2017) ^[17]. EVA is also a measure of the company's financial performance in increasing the value of the company through operational profits after tax minus the cost of capital by considering fairly the expectations of each provider of funds (Fadjar, 2018) ^[14]. EVA which is positive means that the company is considered to have been able to create value for shareholders because it is able to generate operating profit above the cost of capital.

Basically, the company aims to increase the prosperity of the owners or shareholders of the company through increasing company value (Dominick Salvatore, 2018) ^[13]. Company value is very important because the higher the firm value, the higher the shareholder wealth (Brigham, Eugene F. Houston, 2014) ^[10]. The value of the company reflects the management's ability to manage the company's assets. This can be seen from the level of the company's financial performance. The research states that earning management has a negative effect on firm value. This is found to be especially strong in companies with strong investment opportunities and high external financial needs (Fernandes & Ferreira, 2011) ^[15].

Based on the description above, fluctuations in stock prices on company value with earnings management mediation are very interesting, as in Hapsoro's research which says that capital structure has a positive effect on company value and real earnings management variables which are proven to mediate some of the effects of capital structure on company value in 144 companies manufacturing (Hapsoro & Bahantwelu, 2020) ^[18]. Yuniarsih & Indrawati also revealed the effect of accrual-based and real earnings management on company value with corporate governance as a mediator variable in manufacturing companies during 2016 and 2017 found that accrual-based earnings management had an effect on company value while real-based earnings management had a negative impact on company value. (Yuniarsih & Indrawati, 2019) ^[34]. Kamran *et al.*, (2018) ^[21] added a new mechanism of earnings management in exploring the mediation between financial policies and the market value of companies carried out in the manufacturing sector with a sample of 857 companies for China and 150 companies for Pakistan taken from the list of Stock Exchanges during the 2012 period, the results reveal that in both countries, earnings management practices of managers significantly mediate between financial policies and firm value as measured by Tobin's Q and stock returns and this is the first empirical evidence that makes the importance of efficient

financial policies influenced by earnings management and ultimately affects firm performance. Mahrani & Soewarno (2018) ^[24] examined the direct effect of good corporate governance (GCG) mechanisms in maximizing firm value and corporate social responsibility (CSR) on financial performance and through earnings management as a mediating variable with 102 companies listed on the Indonesia Stock Exchange for the period 2014 finding that GCG mechanism in maximizing firm value and CSR has a positive effect on financial performance. The results also show that there is a partial mediation of earnings management on the impact of GCG mechanisms in maximizing firm value on financial performance and full mediation of earnings management on the impact of CSR on financial performance.

This study was conducted to obtain empirical evidence of the effect of stock price fluctuations on firm value through earning management as a mediator. Oil-producing stock prices that are included in the energy sector have been significantly affected by the COVID-19 pandemic, many companies have reduced their operating hours, resulting in a decrease in energy demand in the sector (Adiarso, Hilmawan, E., & Sugiyono, 2020) ^[2]. Companies listed on the main board are companies that have a big influence on the decrease in energy demand in the energy sector, because they are companies that have a large size and good track record. The effect of stock price fluctuations due to the COVID-19 pandemic which is quite significant on company value by mediating earnings management in the Main Board Energy Sub-Sector in Indonesia, makes the authors interested in discussing more about this research.

2. Methods and data

This type of research is descriptive research with a quantitative approach. This study uses a population of companies on the Indonesia Stock Exchange that are classified as companies in the Indonesian Energy Sub-Sector during the COVID-19 Period 2018–2020. Sampling in this study by purposive sampling technique. The test criteria are 3 things including (1) Companies listed on the IDX and Indonesian Energy Sub-Sector companies during the COVID-19 Period 2018–2020. (2) The company is included in the Indonesian Energy Sub-Sector during the 2018–2020 period, which is the Indonesian Main Board Energy Sub-Sector for the 2018–2020 period. (3) The company has financial statements for the 2018–2020 period. Based on these criteria, the number of tests that meet the sample criteria are 31 companies from the 67 Main Board Energy Sub-Sector companies in Indonesia during the 2018–2020 period of COVID-19.

The reason this research was conducted to analyze the effect of stock price fluctuations on company value in the Main Board Energy Sub-sector company through earning management as a mediator. The type of data taken is secondary data in the form of stock price data obtained from closing prices and financial statement data. Questions about conclusions are drawn based on measurable test results. The strategy for preparing additional information that has been collected from various sources is carried out using several computer programs such as Microsoft Excel 2010 and SmartPLS v.3.0. Microsoft Excel 2010 is used for creating tables and processing data. While SmartPLS v.3.0 is used to perform Measurement (Outer) Model and Structural (Inner) Model. Withdrawal of the conclusion statement is based on

the research hypothesis test.

2.1 Measurement (Outer) Model

The Outer Model is obtained by running the PLS Algorithm in SmartPLS 3.0.

a. Reliabilitas Indikator

Indicator reliability aims to assess whether the latent variable measurement indicators are reliable or not by evaluating the results of the outer loading of each indicator. The value of outer loading is above 0.7. This shows that the construct can explain more than 50% of the indicator variance so that the measurement indicator is a reliable latent variable.

b. Internal Consistency

Reliability Internal Consistency Reliability measures how capable the indicator can measure its latent construct with composite reliability and Cronbach's alpha. Composite reliability variables X and Y have a value above 0.7 so they have good reliability, while Variable M is below a value of 0.7.

c. Convergent Validity

Convergent validity of a construct with reflective indicators was evaluated by Average Variance Extracted (AVE). The AVE value is more than 0.5, which means that the construct can explain 50% or more of the item variance.

d. Discriminant Validity

▪ Cross Loading

Nilai cross loading masing-masing konstruk dievaluasi untuk memastikan bahwa korelasi konstruk dengan item pengukuran lebih besar daripada konstruk lainnya. Nilai cross loading yang diharapkan adalah lebih besar dari 0,7, dan dilihat nilai cross loading pada indicator terhadap variable adalah lebih besar dari 0,7

▪ Fornell-Larcker Criterion

Nilai Fornell-Larcker Criterion menunjukkan bahwa model tersebut dikatakan memiliki nilai validitas diskriminan yang baik.

▪ Heterotrait – Monotrait Ratio (HTMT)

Nilai HTMT adalah kurang dari 0,9 sehingga validitas diskriminan antara dua konstruk reflektif.

2.2 Structural (Inner) Model

Structural (Inner) Model checks the existence of collinearity between constructs and predictive ability of the model.

a. VIF

VIF evaluates multicollinearity collinearity, the VIF value is less than 5, thus indicating that there is no collinearity between constructs.

b. R2

R2 assesses the magnitude of the endogenous construct explained by the exogenous construct, the value of R2 is 0.226 which means moderate.

c. Q2

R2 assesses the magnitude of the endogenous construct explained by the exogenous construct, the value of R2 is 0.226 which means moderate.

d. F2

F2 assesses the influence between variables with Effect Size or f-square. the value of f2 of variable X to Variable Y is more than 0.35, which means that there is a large effect. Variable X to Variable M is more than

0.02 so there is a moderate effect. While the variable M to Variable Y is less than the value of 0.02 so it is considered that there is no effect.

e. Path Coefficients

Path coefficients test hypotheses. The value of path coefficients is getting closer to the value of +1, so the relationship between the two constructs is getting stronger and more positive. Variable X to variable Y and variable X to variable M is significant, while variable M to variable Y is not significant. This also happened to variable X to variable Y with variable M mediating not significant.

Table 1: Reliability

	Outer Loading		
	M	X	Y
M1	0,709		
M2	0,793		
X1		1,000	
Y1			0,975
Y2			0,801

Table 2: Construct Reliability and Validity

	Internal Consistency		Validitas konvergen
	Cronbach's alpha	Composite Reliability	AVE
M	0,234	0,722	0,566
X	1,000	1,000	1,000
Y	0,788	0,886	0,797

Table 3: VIF dan F2

	VIF			F2		
	M	X	Y	M	X	Y
M			1,056			0,000
X	1,000		1,056	0,056		0,366
Y						

Table 4: R2 dan Q2

	R2		Q2		
	R Square	R Square Adjusted	SSO	SSE	Q2
M	0,053	0,021	62,000	61,32	0,011
X			31,000	31,000	
Y	0,278	0,226	62,000	52,473	0,154

Table 5: Path Coefficients

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Value
X->Y	0,528	0,512	0,202	2,612	0,009
X->M	0,231	0,276	0,130	1,769	0,077
M->Y	-0,005	-0,017	0,173	0,031	0,976
X->M->Y	-0,001	-0,012	0,053	0,023	0,981

Valid and reliable constructs were obtained after testing the validity and reliability with the AVE value of the validity test above 0.5 for each variable and the value of the composite reliability test being above 0.7 for each variable. The results show that the correlation between indicators and their variables is valid and reliable according to the model construct.

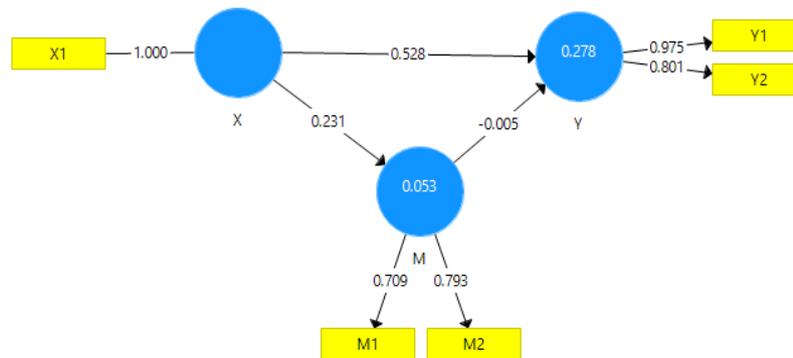


Fig 1

3. Results and discussion

3.1 Stock Price Fluctuations on Company Value

The results of testing the first hypothesis indicate that there is an effect of stock price fluctuations on company value. This can be seen from the test results which show that the path coefficient obtained from the relationship between the stock price fluctuation variable and the company value is 0.202 with a t-statistic value of 2.612. The t-statistic value is greater than the t-table 1.29 ($2.612 > 1.29$), so H_{o1} is rejected. This shows that H_{a1} is accepted and can be interpreted that stock price fluctuations have an effect on company value. The stock price of a company reflects the value of the company, if the share price of a company is high then the value of the company is also good and vice versa. Stock prices are an important factor and must be considered by investors in investing, stock price movements are in line with the performance of the issuer. If the issuer has better performance, the profits from running its business will be even greater. Stock value is the right index for the effectiveness of the company. So, it is often said, maximizing company value also means maximizing shareholder wealth. The higher the stock price, the higher the value of the company and vice versa. Therefore, every company that issues shares is very concerned about its share price. Prices that are too low often mean the company's performance is not good. However, if the stock price is too high, it will reduce the ability of investors to buy, making it difficult for stock prices to rise again.

This is supported by research by Gunadi *et al.*, (2020) which says that stock prices have a positive effect on company value, this makes increased stock price activity results in an increase in company value, while it is different from research by Agnatie & Amalia (2018) [3] which says that EVA has no effect on stock prices.

$H_1 =$ Stock price fluctuations affect the company value in the main Indonesian energy sub-sector companies during the COVID-19 period 2018-2020

3.2 Stock Price Fluctuations on Earning Management

The results of testing the second hypothesis indicate that there is an effect of stock price fluctuations on earning management. The test results show that the path coefficient obtained from the relationship between stock price fluctuation variables and earning management is 0.130 with a t-statistic value of 1.769. The t-statistic value is greater than the t-table 1.29 ($1.769 > 1.29$), so H_{o2} is rejected. This shows that H_{a2} is accepted and can be interpreted that stock

price fluctuations affect earnings management. This shows that the higher the stock price fluctuations, the greater the occurrence of earnings management in a company Bhutto *et al.*, (2021) [9] which says that there is a significant and negative relationship between stock returns and real earnings management and accruals.

$H_2 =$ Stock price fluctuations have an effect on Earning Management in Indonesian Main Board Energy Sub-Sector Companies During COVID-19 period 2018-2020

3.3 Earning Management on Company Value

The results of testing the third hypothesis show that there is no effect of earning management on company value. This can be seen from the test results which show that the path coefficient obtained from the relationship between the earning management variable and the company value is 0.173 with a t-statistic value of 0.031. The t-statistic value is smaller than the t-table 1.29 ($0.031 < 1.29$), so H_{o3} is accepted. This shows that H_{a3} is rejected and it can be interpreted that earning management has no effect on company value. In this study, companies that perform earnings management do not affect company value. However, if it is carried out continuously for a long period of time, it can affect and cause a decrease in the value of the company in the future because the reported earnings information does not match the actual facts. The results of testing the third hypothesis in this study support the research conducted by Hapsoro & Bahantwelu (2020) [18] which states that earnings management has a negative effect on firm value and Yuniarsih & Indrawati (2019) [34] research which states that accrual-based earnings management has an effect on company value shown in the model 1. While model 2 concludes that real-based earnings management has a negative impact on firm value. Meanwhile, there is a difference in the research of Riswandi & Yuniarti (2020) which shows that earnings management has a significant positive effect on company value

$H_3 =$ Earning Management Does Not Affect Company Value in Indonesian Main Board Energy Sub-Sector Companies During COVID-19 period 2018-2020

3.4 Earning Management as a Mediation of Stock Price Fluctuations to Company Value

The results of testing the fourth hypothesis indicate that there is no significant effect on the relationship between

earnings management as a mediation of stock price fluctuations with company value. This can be seen from the test results which show that the path coefficient obtained from the relationship between earning management variables as a mediating variable for stock price fluctuations with a company value of 0.053 with a t-statistic value of 0.023, this value is smaller than t-table 1.29 ($0.023 < 1.29$), so H_{04} is accepted. This shows that H_{a4} is rejected and can be interpreted that earnings management does not mediate stock price fluctuations on firm value. This is supported by the results of testing the third hypothesis which makes earning management as a mediation a negative effect on firm value. However, because the results of testing the second hypothesis have a significant effect on the relationship between stock price fluctuations and earning management, it can be concluded that earnings management only mediates a small part of stock price fluctuations on firm value, although there is no significant effect as a mediator.

The results of testing this fourth hypothesis support several studies conducted by Hapsoro & Bahantwelu (2020) [18] which state that real earnings management is proven to mediate some of the effects of capital structure on company value and research by La Rosa *et al.*, (2020) [22] which states that the mediating effect of earnings management contributes for the relationship of ownership structure and cost of equity capital. However, this study has different results from the research of Kamran *et al.*, (2018) [21] which states that earnings management can significantly mediate between financial policy and company value and the research of Mahrani & Soewarno (2018) [24] which states that the partial mediation of earnings management on the impact of GCG mechanism on financial performance and full mediation of earning management on the impact of CSR on financial performance.

$H_{4=}$ Earning Management does not mediate stock price fluctuations on Company Value in Indonesian Main Board Energy Sub-Sector Companies During COVID-19 period 2018-2020

4. Conclusion

This research can be concluded that the path coefficient obtained from the relationship between stock price fluctuation variables and company value is 0.202 with a t-statistic value of 2.612. This shows that there is an influence on the relationship between stock price fluctuations and company value. The path coefficient obtained from the relationship between stock price fluctuation variables and earnings management is 0.130 with a t-statistic value of 1.769. This shows that there is an influence on the relationship between stock price fluctuations and earning management. The path coefficient obtained from the relationship between earning management variables and company value is 0.173 with a t-statistic value of 0.031. This shows that there is no effect on the relationship between earning management and company value. The path coefficient obtained from the relationship between earning management variables as a mediating variable for stock price fluctuations with a firm value of 0.053 with a t-statistic value of 0.023. This shows that there is no effect on the earning management relationship as a mediation of stock

price fluctuations on firm value. This is supported by the results of testing the third hypothesis which makes earning management as a mediation a negative effect on company value. However, because the results of testing the second hypothesis have a significant effect on the relationship between stock price fluctuations and earning management, it can be concluded that earnings management only mediates a small part of stock price fluctuations on company value, although there is no influence as a mediator.

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