



The influence of reference coal price and inflation on the share price of sharia coal companies (Case Study of PT. Adaro Energy Indonesia Tbk)

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ABSTRACT

In the context of the coal industry, fluctuations in benchmark coal prices and inflation rates are important factors that correlate with the financial performance of coal sector companies and their stock values in the capital market. This research aims to investigate the correlation between benchmark coal prices and inflation with the Sharia stock price of PT Adaro Energy Indonesia Tbk (ADRO), using historical data from 2020 to 2023. Utilizing multiple linear regression analysis, this study shows that collectively, benchmark coal prices and inflation have a significant influence on ADRO's stock price. Individually, benchmark coal prices have an influence on ADRO's stock price, whereas inflation does not have an impact on ADRO's stock price.

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1. INTRODUCTION

Indonesia holds a highly significant position in the global coal market as one of the world's leading coal producers. Coal mining has become one of the main sectors in Indonesia's economy over the past few decades. Coal is widely used as a primary energy source for domestic industrial needs and serves as a significant export commodity for Indonesia's economy (Triyuwono, 2001).

According to data from Minerba One Data Indonesia (MODI), Indonesia produced 382.75 million tons of coal as reported on July 26, 2021. The Director General of Mineral and Coal at the Ministry of Energy and Mineral Resources, Mr. Ridwan, stated that currently, around 80% of coal is utilized for electricity generation (Hakim et al., 2019). Coal remains a cheap energy alternative for the Asia-Pacific region. This region currently has a large coal capacity, both existing (76%) and planned for development (94%). Indonesia has estimated coal reserves of 38.84 billion tons (Sirajudin, 2020). With an average annual coal production of around 600 million tons, it can be assumed that coal reserves will suffice for the next 65 years, without considering the discovery of new reserves (Ministry of Energy and Mineral Resources, n.d.). Overall, Indonesia plays a crucial role as a coal producer in the global market (Raihan, 2020).

Tensions between Russia and Ukraine are escalating, creating a tense geopolitical situation in Eastern Europe. The crisis reached its peak when Russia invaded Ukraine. This political instability and tension have raised concerns and affected global market dynamics. Russia's invasion of Ukraine on February 24, 2022, marked the emergence of an interstate conflict not seen in Europe since 1945. This

event has had serious implications for the global market and potentially caused ripple effects throughout the world economy. Russia and Ukraine play important roles in the global market for commodities such as wheat, oil, fertilizers, energy, and gas. Russia itself is one of the world's largest oil producers. Besides oil, Russia is also the second-largest exporter of natural gas and the third-largest exporter of coal (Fauzie, 2018).

The benchmark coal price is a key parameter in international coal trade. When this price changes, it significantly impacts coal mining companies. A rise in the benchmark coal price is usually associated with increased revenue and profitability for these companies, which in turn can influence their stock prices (Linda et al., 2022).

Additionally, inflation plays an important role in a country's economic dynamics. High inflation can decrease consumer purchasing power and increase production costs. This also impacts the performance of coal companies, as rising coal prices and high operational costs due to inflation can reduce their profitability. Consequently, the stock prices of these coal companies can be affected in the capital market. Therefore, fluctuations in the benchmark coal price and inflation rate are both important factors influencing the financial health of coal mining companies and their stock values (Linda et al., 2022).

PT Adaro Energy Tbk (ADRO) is chosen as the research subject due to its crucial position in Indonesia's coal mining industry and its inclusion in the Sharia-compliant stocks in the Indonesian stock market. As one of the main players in this sector, the price movement of ADRO shares has significant implications for the market and stakeholders in the coal industry. With most of its revenue coming from coal sales, ADRO is closely tied to the benchmark coal price (Wijayanto, 2019).

This research aims to investigate the correlation between the benchmark coal price and inflation with ADRO's stock price. Through a comprehensive analysis of historical data, this study aims to provide an overview of how changes in the benchmark coal price, reflecting global coal price trends, and inflation affect the financial performance of local coal mining companies like ADRO. This research will explore the extent to which changes in these global commodity prices and inflation rates impact ADRO's financial performance and stock price. The findings of this study offer valuable investment insights for investors involved in the coal sector (Iswadi & Yunina, 2006).

The capital market is a place where various long-term financial instruments are traded, such as mutual funds, stocks, bonds, and others. It facilitates companies and governments in raising capital from investors for their projects and operations. This market also aids in the allocation of financial resources in society. (Utusan Online, 2015) According to Robert Ang, the capital market is a non-bank financial institution involved in trading and offering securities. The capital market serves as a platform for companies that wish to raise capital from the public, where the public can purchase company shares. The principle of the capital market is similar to a conventional market where merchandise is available. Just like in a conventional market, the capital market has sellers, known as securities companies, and buyers, known as investors. The market in the context of the capital market is known as the stock exchange. Issuers who sell part of their shares to the public are referred to as suppliers, while the shares sold are called securities (Maulana, 2018).

The Sharia capital market refers to all activities in the capital market that comply with Islamic principles. From this perspective, there are two main factors that form the Sharia capital market, namely the structure of the capital market and the Islamic principles applied within it. Therefore, to understand the Sharia capital market, a comprehensive understanding of the overall capital market and the underlying Islamic principles is crucial; both aspects cannot be separated (Prabandanu, 2017).

Inflation is an economic phenomenon characterized by a continuous increase in general prices. Causes of inflation include various factors such as increased household consumption, excess liquidity, or even speculation, and dysfunctions in the distribution of goods. Additionally, inflation results in a continuous decline in the value of money (Nano Prawoto, 2019, p. 89). Inflation is a condition where there is a general increase in prices, including goods, services, and production factors. This definition indicates that inflation reflects a decrease in purchasing power accompanied by a decrease in the real value of the currency (Prabandanu, 2017).

Fundamental Analysis, also known as Fundamental Analysis, is a method of analysis that considers various factors, including company performance, competitor business evaluation, industry analysis, as well as economic and macro and micro market conditions assessment. By applying this approach, an evaluation of the strength of a company's condition can be conducted. Through this examination process, investors have the ability to identify which companies are still robust and can be considered potential options for investment (Mahamood, 2013).

Stocks are securities in the form of proof of ownership in a company (Muhammad Khozin Ahyar & Rozaq Muhammad Yasin, 2023, p. 8). In principle, investors obtain two benefits when purchasing stocks: first, capital gains and second, dividends. Capital gain is the profit that investors get when they sell stocks above the price at the time of purchase. Meanwhile, dividends are portions of the profit distributed to shareholders. Islamic jurists state that a stock can be considered compliant with Sharia principles if the activities carried out by the company issuing the stock do not involve activities prohibited in Islamic Sharia (KOSSOVSKY, 2013).

2. RESEARCH METHOD

This research employs a quantitative approach, which provides a robust scientific foundation, enabling the study to systematically collect, analyze, and interpret data. The quantitative method is regarded as scientific due to its adherence to scientific guidelines: systematic, objective, measurable, rational, and concrete. This research utilizes multiple linear regression analysis to evaluate the correlation between the reference coal price, the inflation rate, and the stock price of ADRO. Multiple regression is a model development that involves two or more independent variables. The purpose of regression analysis is to assess the effects of several independent variables on a dependent variable, using the values of those independent variables as the basis for evaluation (Steak et al., 2016).

In this analysis, the independent variables (X) are the reference coal price and inflation, which are considered to influence the stock price of ADRO. Meanwhile, the dependent variable (Y) is the stock price of ADRO.

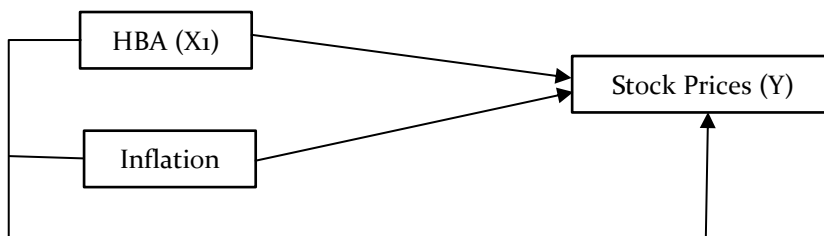


Figure 1. Structure of Influence Relationship

3. RESULTS AND DISCUSSIONS

Descriptive Analysis

The following is the historical data of reference coal prices for the period 2020-2023 as published by the Ministry of Energy and Mineral Resources (Primadona et al., 2022).

Table 1. Descriptive Statistics

Month	2020	2021	2022	2023
January	65.93	75.84	158.5	305.21
February	66.89	87.79	188.38	277.05
March	67.08	84.47	203.69	283.08
April	65.77	86.68	288.4	265.26
May	61.11	89.74	275.64	206.16
June	52.98	100.33	323.91	191.26
July	52.16	115.35	319	191.6
August	50.34	130.99	321.59	179.9
September	49.42	150.03	319.22	133.13
October	51	161.63	330.97	123.96

Month	2020	2021	2022	2023
November	55.71	215.01	308.2	139.8
December	59.65	159.79	281.48	117.38

Table 2. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std.deviation
HBA	48				
Valid N (listwise)	48	49.42	330.97	164.3429	96.07260

Table 3. Historical data of reference coal prices for the period 2020-2023 as published by the Ministry of Energy and Mineral Resources

2020		2021		2022		2023	
Month	%	Month	%	Month	%	Month	%
January	2.68	January	1.55	January	2.18	January	5.28
February	2.98	February	1.38	February	2.06	February	5.47
March	2.96	March	1.37	March	2.64	March	4.97
April	2.67	April	1.42	April	3.47	April	4.33
May	2.19	May	1.68	May	3.55	May	4
Juny	1.96	Juny	1.33	Juny	4.35	Juny	3.52
July	1.54	July	1.52	July	4.94	July	3.08
August	1.32	August	1.59	August	5.69	August	3.27
September	1.42	September	1.6	September	5.95	September	2.28
October	1.44	October	1.66	October	5.71	October	2.56
November	1.59	November	1.75	November	5.42	November	2.86
December	1.68	December	1.87	December	5.51	December	2.61

This statistical analysis describes the characteristics of the data related to the HBA variable. From the 48 observations recorded, we can see significant variation in values. The data ranges from a minimum value of 49.42 to a maximum of 330.97. The average HBA value is approximately 164.3429, providing an overview of the central point of the data distribution.

Below is the historical inflation data of Indonesia for the period 2020-2023 published by Bank Indonesia (Sukmayadi & Zaman, 2020).

Table 4. Historical inflation data of Indonesia for the period 2020-2023 published by Bank Indonesia

	N	Minimum	Maximum	Mean	Std.Deviation
Inflasi Valid N (listwise)	48				
	48	1.32	5.95	2.8927	1.47760

A descriptive analysis of the INFLATION variable from 48 sample data points shows a significant range of values. This range spans from 1.32 to 5.95, illustrating a wide variation in the levels of inflation observed in the sample. The average INFLATION is 2.8927, providing an overview of the median value of the observed inflation rates within the sample. This indicates that overall, the inflation rate tends to be around this figure.

Below is the historical stock price data for PT. Adaro Energy Indonesia Tbk for the period 2020-2023 (Sulia Sukmawati et al., 2020).

Table 5. Historical stock price data for PT. Adaro Energy Indonesia Tbk for the period 2020-2023

2020		2021		2022		2023	
Month	Share Price	Month	Share Price	Month	Share Price	Month	Share Price
January	1200	January	1205	January	2240	January	2940
February	1175	February	1195	February	2560	February	3000
March	995	March	1175	March	2690	March	2940
April	920	April	1260	April	3340	April	3130
May	1100	May	1190	May	3270	May	2040
Juny	995	Juny	1220	Juny	2860	Juny	2270
July	1090	July	1345	July	3260	July	2410
August	1090	August	1280	August	3560	August	2680
September	1150	September	1775	September	3930	September	2830

October	1120	October	1655	October	3940	October	2500
November	1410	November	1730	November	3930	November	2640
December	1430	December	2170	December	3610	December	2380

Table 6. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std.Deviation
Share Price Valid	48	920.000	3940.00	2121.3542	950.834131
N (listwise)	48				

Based on a descriptive analysis of stock price data from 48 samples, the range of stock prices varies from 920.00 to 3940.00. The average stock price in the sample is approximately 2121.3542. This indicates that, in general, stock prices tend to hover around this average value, although there is significant variation between the lowest and highest prices in the sample.

Table 7. ANOVA

Model	Sum of squares	df	Mean Square	F	Sig.
1 Regression	36256301.281	2	18128150.641	130.821	.000 ^b
Residual	6235735.698	45	138571.904		
Total	42492036.979	47			

a. Dependent Variabel : Share_Price

b. Predictors : (constant), Inflation, HBA

Hypothesis Testing

The ANOVA table above shows a Sig. value of 0.000. Therefore, it can be concluded from the results above that HBA and inflation collectively have a significant relationship with the stock price of Adaro Energy Indonesia Tbk.

Table 8. Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	535.855	119.143		4.489	.000
HBA	7.365	1.108	.744	6.648	.000
Inflation	130.022	72.035	.202	1.805	.078

a. Dependent Variabel: Share_Price

A partial test revealed that the significance value of the coal reference price was 0.000. This value is less than 0.05. The conclusion is that the coal reference price (HBA) has an influence on the stock price of Adaro Energy Indonesia Tbk.

This research indicates that the coal reference price has a relationship with the stock price of Adaro Energy Indonesia Tbk. An increase in the coal reference price can lead to a rise in stock prices in sectors related to the coal industry, such as coal mining companies. This is due to the expectation of higher profits from coal sales or the market's perception of better company performance in favorable coal price conditions (Muzaki, 2021). Conversely, a decrease in the coal reference price negatively affects the stock prices of issuers that rely on the coal industry, due to the reduced potential revenue and expected profits. Therefore, monitoring and analyzing the coal reference price can be an element considered by investors related to stocks in the coal mining sector.

The results of this research are consistent with the research by Listya. However, the findings of this research are contrary to those conducted by Indra and Rakhmi, whose research showed that the coal reference price did not impact stock prices. The inflation variable has a significance value of 0.078. This value exceeds 0.05. From these results, the conclusion is that inflation has no correlation with the stock price of Adaro Energy Indonesia Tbk (Fathurrahman & Al-Islami, 2023).

This research illustrates that inflation does not affect the rise and fall of the stock price of Adaro Energy Indonesia Tbk. Although inflation can influence various economic aspects, such as production costs and the balance of purchasing power, it appears that its impact is not directly reflected in the stock price movements of Adaro Energy Indonesia Tbk. This phenomenon may be due

to other more dominant indicators, such as financial performance, industry outlook, and corporate policy (Hidayat et al., 2023).

This research aligns with Nadila's findings that inflation does not significantly influence stock prices. However, these results are contrary to Listya's research, which found that inflation does impact stock prices.

Table 9. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimated
1	.924 ^a	.853	.847	372.25247

a. Predictors: (Constant), Inflation, HBA

The R Square value is 0.853. This result indicates that the reference coal price variable and inflation successfully influence the stock price variable of Adaro Energy Indonesia Tbk by 85.3%. The remaining 14.7% of the stock price is influenced by other indicators outside of this research (Putra & Azhar, 2022).

4. CONCLUSION

The study has several limitations that should be considered to enhance the depth and applicability of future research. Firstly, the research focuses narrowly on the influence of the coal reference price (HBA) and inflation on the stock price of Adaro Energy Indonesia Tbk, thereby excluding other potentially influential variables such as geopolitical factors, global economic conditions, and company-specific operational metrics. Broadening the scope to encompass these variables could provide a more comprehensive understanding of the dynamics affecting stock prices in the Sharia-compliant coal sector.

Secondly, the study's findings are specific to PT. Adaro Energy Indonesia Tbk and may not generalize to other Sharia-compliant coal companies or companies in different sectors. Future research should include comparative studies across multiple firms within the same industry or across diverse sectors to validate findings and enhance their applicability.

Moreover, the research acknowledges that factors beyond the studied variables contribute significantly to the variability in stock prices, accounting for 14.7% variance. Future studies could explore these external factors more deeply, including regulatory changes, market sentiment, and technological advancements, to provide a more nuanced analysis of their impact on stock prices.

Methodologically, while hypothesis testing demonstrates a significant relationship between HBA and stock price, inflation shows no significant influence in isolation. Further methodological refinements could include employing advanced statistical techniques or conducting longitudinal studies to capture the dynamic interactions between variables over time.

Lastly, the study highlights discrepancies in the literature regarding the impact of inflation on stock prices, indicating the need for continued research to resolve these inconsistencies. Future studies could explore different economic contexts or refine methodologies to reconcile contradictory findings and provide clearer insights for investors in the coal mining sector.

In conclusion, while the current research contributes valuable insights into the influence of HBA and inflation on stock prices in the Sharia-compliant coal industry, addressing these limitations through expanded variables, comparative analyses, deeper exploration of external factors, methodological improvements, and resolving inconsistencies in the literature will enhance the robustness and applicability of future research findings. These efforts will provide stakeholders with more reliable information for informed decision-making and investment strategies in the dynamic landscape of the coal mining sector.

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