

## **Profitability Mediates The Impact of Coal Commodity Prices on Firm Value in Indonesian Coal Mining Companies**

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### **Abstract**

**Backgrounds:** The influence of PP 15/2022 on the relationship between coal commodity prices cannot be predicted with certainty. Before PP 15/2022 was enacted, coal commodity prices tended to rise and fall according to global and regional market demand and vice versa. **Objectives:** The study analyses coal commodity prices and business value before and after PP 15 of 2022, mediated by profitability. **Methods:** This research includes quantitative causal studies. The population of this research is all coal sector companies registered on BEI A12 (Coal) during the research period, namely from 2019-2022; a total of 43 companies and 25 companies were sampled using a purposive sampling technique. This research uses quantitative data, namely data measured on a numerical scale. The type of data used by researchers is secondary data. **Results:** This research found that coal commodity prices affect firm value before and after PP No. 15/2022. If the outcomes differ before and after, coal commodity prices impact profitability and strong value. Firm value is indirectly affected by coal commodity prices via profitability; hence, profitability is a full mediator coal to commercial value. That's only true if outcomes match before or after. **Keywords:** Coal Commodity Prices; Firm value; Profitability; PP 15/2022

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## **INTRODUCTION**

Globalization has an impact on a country's economy. In the current situation, economic improvement is focused on international trade (Iyul Dwiana Putra & Karsudjono, 2022). International trade can increase state income, open job opportunities, improve welfare, and maintain good relations between countries. International trade aims to meet needs that are not available in that country. This global trade activity cannot be separated from exports and imports (Kasuma et al., 2020). Indonesia is a country famous for its abundant natural wealth, ranging from marine, terrestrial, and natural riches within the earth to biological natural resources in the form of plantation products. Indonesia is one of the largest coal-producing countries in the world. Data from the BP Statistical Review on World Energy publication in 2021, it is stated that Indonesia is the 4th largest coal-producing country (Endri et al., 2021). This is in line with the opinion of the

Indonesian Coal Mining Association (APBI), which states that Indonesia is the 4th largest coal-producing country in the world.

As a commodity, coal prices are determined by global market demand and supply (Amanda et al., 2018). If coal prices rise, coal mining companies can increase their income because the selling price of their products will increase. In this case, the company's profitability may increase due to higher revenues. On the other hand, if coal prices fall, coal mining companies may experience a decrease in revenue and profits because the selling price of their products will decrease. (Endri et al., 2021) The signaling theory states that companies can send signals to the market regarding their financial conditions and prospects through certain actions. (Zhu et al., 2022) coal commodity prices, companies can use the selling price of their products as a signal to the market regarding their financial condition and prospects. An increase in the selling price of coal products can be interpreted as a signal that companies have good financial opportunities and that they can maintain or increase their profitability. Hapsari 2007 (Amanda et al., 2018) revealed that the profitability ratio or reliability ratio shows the company's success in generating profits. According to research conducted by (Woraphan, W., & and Termkiat, 2012), changes in commodity prices have a significant positive effect on profitability. Therefore, company management needs to consider changes in commodity prices in planning their business strategy to increase profitability and firm value. found that price has a positive and significant impact on accounting returns (profitability). (Endri et al., 2021) This positive impact occurs in companies involved in commodity production and exploration, and does not occur in companies involved in commodity distribution and retail. In addition, this study also finds that the relationship between commodity price volatility and firm-level returns is stronger in years of economic uncertainty. The results of this research provide useful insights for corporate decision-makers and investors in understanding the relationship between commodity price volatility and company performance. (Amanda et al., 2018) Shows a significant positive relationship between commodity prices and the profitability of coal mining companies. So, the hypothesis can be formulated, namely:

**H1: It is suspected that there is a significant favorable influence between commodity prices on company profitability**

(Amanda et al., 2018) In signaling theory, coal commodity prices can be considered as a signal indicating the condition and prospects of the company, which, in the end, can influence the company's value. If coal prices increase, the market may perceive this as a signal that the financial prospects of companies related to the coal industry will improve, which can increase the value of those companies. This is due to the market's belief that companies can obtain more significant revenues from higher product selling prices, and are able to maintain or increase their profitability in the future. In accordance with research by Ismaila et al (2017), it was found that prices significantly and positively influence firm value. In this case, an increase in commodity prices can improve a company's operational performance, where a company's performance reflects the value of the company, while a decrease in commodities can reduce the company's operational performance. then (Zhu et al., 2022) also stated that significant price changes have a positive impact on firm value. These results indicate that companies that are affected by commodity price fluctuations can experience significant changes in firm value. This study provides implications for

companies to pay attention to external factors, such as changes in commodity prices, in evaluating company performance and making investment decisions. and the results of research conducted by (Oloni., 2015) show a significant positive relationship between commodity prices and firm value, the results of this research can provide insight for companies and investors in understanding how changes in commodity prices can affect firm value in the Nigerian food and beverage industry . (Amanda et al., 2018) shows a significant positive relationship between commodity prices and the value of coal mining companies . So the hypothesis can be formulated, namely:

**H2: It is suspected that there is a significant positive influence between commodity prices on firm value**

The profitability indicator is critical since it is directly related to the company's profit (Endri et al., 2021). The profitability ratio assesses a company's profitability in relation to its overall revenue. Many investors will pay special attention to a company that has consistently increased its profit year after year. Companies that have demonstrated profitability are more likely to win investor confidence, according to (Habibah et al., 2022). Because of the low profits associated with such enterprises, this is a good indicator for financiers. In this circumstance, the company's management may issue new shares in order to raise money (Endri et al., 2021). Because profitability is the most important indicator of a company's performance, the beneficial impact of corporate value is a hopeful potential for organizations seeking to attract investors. Based on the findings of (Sahyu & Maharani, 2023), who identified a positive association between corporate profitability and market value, a hypothesis can be developed:

**H3: It is suspected that there is a significant favorable influence between profitability and firm value**

Using signaling theory, Company profitability can strengthen coal commodity prices' influence on firm value. If the company has a good level of profitability, this can be considered a positive signal that the company is able to generate good and stable profits in the future, despite fluctuations in coal commodity prices . Hapsari (2007) revealed that the profitability ratio or reliability ratio shows the company's success in generating profits. Thus, increasing coal prices can increase company revenues and, in turn, increase profitability. Positive signals from increasing profitability can strengthen positive signals from increasing coal prices , thereby increasing firm value. In accordance with research (Kusumawardhani, N., Wardhani, R. A., & Kartika, 2016) on coal mining companies in Indonesia also shows that profitability has a significant positive influence on firm value. Apart from that, they also found that coal prices and profitability interact and influence each other to influence firm value (Endri et al., 2021). Also research by (Khorshed, M., Uddin, M., & Gasbarro, 2019) on coal mining companies in Australia also shows that profitability can strengthen the positive influence of coal prices on firm value. They found that companies with higher levels of profitability were better able to weather coal price fluctuations and provide positive signals to the market about their financial prospects. So the hypothesis can be formulated, namely:

**H4: It is suspected that profitability strengthens the relationship between commodity prices and firm value**

(Khorshed, M., Uddin, M., & Gasbarro, 2019) Signal theory states that companies can send signals to the market through the actions they take. In this case, commodity prices can affect firm value because companies that depend on commodity prices tend to have high fluctuations in firm

value. However, profitability factors can also moderate the influence of commodity prices on firm value (Endri et al., 2021). When a company that depends on commodity prices continues to generate high profits despite commodity price fluctuations, the company can send a positive signal that the company is successful in its operations and able to overcome commodity price risks. Conversely, when a company experiences a decline in profitability, the influence of commodity prices on firm value will be greater. (Endri et al., 2021) Therefore, management needs to consider profitability factors in making business decisions to minimize fluctuations in firm value and ensure sending positive signals to the market, especially for companies that depend on commodity prices.

Before discussing the influence of PP 15/2022 on the relationship between coal commodity prices and profitability and firm value, it is a good idea first to understand PP 15/2022. PP 15/2022 is Government Regulation (PP) Number 15 of 2022 concerning Domestic Coal Price Management. This PP aims to control domestic coal prices so that they remain affordable for the public and domestic industry, as well as to promote the use of cleaner and environmentally friendly coal. In order to control domestic coal prices, PP 15/2022 implements a price setting mechanism carried out by the Ministry of Energy and Mineral Resources (ESDM) involving various related parties, including coal producers. Returning to the question regarding the relationship between coal commodity prices and profitability and firm value, this relationship is very dependent on market conditions and the situation of each company. Prior to the enactment of PP 15/2022, coal commodity prices tended to rise and fall according to global and regional market demand. This can affect the profitability of coal mining companies listed in Indonesia. If coal prices rise, company profits will increase, and vice versa. However, with PP 15/2022, domestic coal prices will be controlled by the government. This can affect the profitability of coal mining companies, depending on the price setting mechanism carried out by the Ministry of Energy and Mineral Resources. If the set coal price does not match the company's production costs, the company's profitability can be negatively affected.

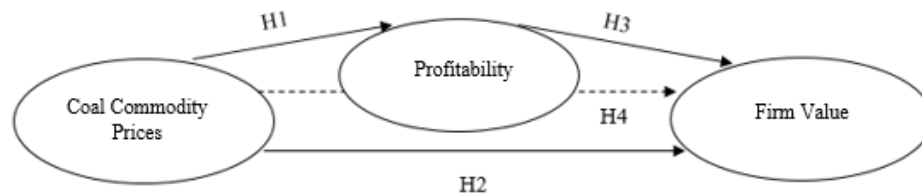
Meanwhile, the influence of PP 15/2022 on the value of coal mining companies listed in Indonesia also depends on how the market responds to the pricing mechanism implemented by the Ministry of Energy and Mineral Resources. If the market responds positively, then the firm value can increase, and vice versa. In conclusion, the influence of PP 15/2022 on the relationship between coal commodity prices and profitability and firm value cannot be predicted with certainty. This depends on the price setting mechanism implemented by the Ministry of Energy and Mineral Resources, as well as how the market responds to this policy.

The impact of changes in coal commodity prices on firm value can be strengthened by using signaling theory to increase company profitability. The company's ability to obtain good and reliable profits in the future, despite volatile coal commodity prices, can be measured from its level of profitability. According to Hapsari (2007), a company's potential to generate profits can be measured by looking at its profitability ratio. Company revenues and profitability can benefit from rising coal prices. Firm value can increase if coal prices rise and the positive signals accompanying rising profits are strengthened. In accordance with research (Kusumawardhani, N., Wardhani, R. A., & Kartika, 2016) on coal mining companies in Indonesia also shows that profitability has a significant positive influence on firm value. Apart from that, they also found that coal prices and profitability interact and influence each other to influence firm value. Also research by (Khorshed, M., Uddin, M., & Gasbarro, 2019) on coal mining companies in Australia also shows that profitability can strengthen the positive influence of coal prices on firm value. They found that



companies with higher levels of profitability were better able to weather coal price fluctuations and provide positive signals to the market about their financial prospects. So the hypothesis can be formulated, namely:

**H5: It is suspected that profitability can mediate the relationship between commodity prices and firm value before and after the implementation of PP 15 of 2022**



**Figure 1.** Conceptual Framework



**Figure 2.** Conceptual Framework Before and After the Influence of PP 15/2022 on the Profitability Relationship as a mediator between Coal Commodity Prices and Firm value

## RESEARCH METHOD

This research set out to answer the question, "Does profitability before and after the implementation of PP 15 of 2022 in publicly traded Indonesian coal mining companies moderate the impact of coal commodity prices on business valuation?" with respect to publicly traded coal mining companies in Indonesia. To do this, the study followed an explanatory research model. The Smart Partial Least Square (SmartPLS) programme, version 3.0, was used as the analytical tool for hypothesis testing. The process of computing is aided by the use of quantitative research data, in particular data collected from secondary sources. This analysis zeroes in on manufacturing companies' 2016-2022 financial statements for the sake of precision. The measurement model (outer model) is used to assess the validity and reliability of the model, while the structural model (inner model) is evaluated using several indicators including the R-squared for the dependent construct, the Stone-Geisser Q-squared test for predictive relevance, the t test, and the significance of the structural path parameter coefficients. This study used a non-probability sampling method called purposive sampling, which does not provide every part of the population an equal chance of being chosen as a sample. This method was chosen instead of using a random sampling technique because it was thought to accomplish the goals of the study better. According to (Sugiyono., 2017), a non-probability sampling approach is one in which not every component or member of the population has an equivalent or proportional chance of being selected as a sample. This means that there are more likely to be picked than others within the population are specific elements or persons. Purposive sampling, as defined by (Sugiyono., 2017), is the process of selecting samples according to predetermined standards. The considerations or criteria determined in determining the sample in this research are:



**Table 1.** Sample Criteria

Criteria	Total
Coal Sector Company A12 ( <i>Coal</i> )	43
Coal Companies That Did Not Publish Financial Reports During the Research Period	5
Coal Companies Who Had Their IPO Before the Research Period	8
Delisting Coal Companies	5
<b>Research Sample</b>	<b>25</b>
Number of Years of Research	4
<b>Total Sample</b>	<b>100</b>

Source: Processed Data, 2023

Based on the criteria in the table, 25 companies were produced as the research sample and 100 as the total sample. The following are the names of Coal Sector Manufacturing Companies that have met the criteria and were selected as research samples based on the Purposive Sampling used.

**Table 2.** Research Sample

No	Company Code	Company name
1	ADRO	Adaro Enegry Tbk
2	ARII	Atlas Resources Tbk
3	BOSS	Borneo Olah Sarana Sukses Tbk
4	BSSR	Baramulti Suksessarana Tbk
5	EARTH	Bumi Resources Tbk
6	BYAN	Bayan Resources Tbk
7	GOD	Darma Henwa Tbk
8	DOID	Delta Dunia Makmur Tbk
9	DSSA	Dian Swastatika Sentosa Tbk
10	AIMS	Akbar Indo Makmur StimecTbk
11	GEMS	Golden Energy Mines Tbk
12	GTBO	Garda Tujuh Buana Tbk
13	HRUM	Harum Energy Tbk
14	INDY	Indika Energy Tbk
15	ITMG	Indo Tambangraya Megah Tbk
16	KKGI	Resource Alam Indonesia Tbk
17	MBAP	Mitrabara Adiperdana Tbk
18	MYOH	Samindo Resources Tbk
19	PKPK	Perdana Karya Perkasa Tbk
20	PTBA	Bukit Asam Tbk
21	PTRO	Petrosea Tbk
22	SMMT	Golden Eagle Energy Tbk
23	TOBA	Toba Bara Sejahtera Tbk
24	RIGS	Rig Tenders Indonesia Tbk
25	TPMA	Trans Power MarineTbk

Source: Data www.idx.co.id, 2023

## Variable Measurement

### The Dependent Variable is *Firm Value* (Y)

The worth of a corporation can be thought of as the present value of its expected future profits or cash flows, as defined by (Sudana, 2012). According to (Sahyu & Maharani, 2023), the market price of a company's shares can be interpreted as a reflection of how the general public



values the company's performance. (Sahyu & Maharani, 2023) Tobins-q, which is found by dividing Market Value Equity by Total Debt, by Total Assets (Oloni., 2015), is just one of several valuation metrics available. Others include Price to Book Value (PBV) and Earnings Price Share (EPS). It is usual practise to define market capital in terms of Tobins q, which stands for the book value of debt and capital. In this study, earnings per share (EPS) is employed as a surrogate for firm value (Sahyu & Maharani, 2023):

$$\text{EPS} = \frac{\text{Laba Bersih}}{\text{Jumlah saham Biasa yang Beredar}}$$

### The Mediating Variable is *Profitability (Z)*

The ability of a business to generate profits in relation to sales, total assets, and own capital is what is meant by the term "profitability" (Amanda et al., 2018). This research employs ROA as a surrogate for profitability. Return on Investment or ROI The Return on Assets (ROA) is the net profit as a percentage of total assets. The higher the ROA, the greater the profitability and efficiency with which a corporation uses its assets. According to (Hanafi, 2008), ROA "determines the extent to which a firm can turn its assets into net income." Return on assets (ROA) is a common metric for evaluating a company's performance and attractiveness to potential investors. The following is how Return On Assets (ROA) is evaluated per (Gitman, 2000)in (Endri et al., 2021):

$$\text{Return on Asset (ROA)} = \frac{\text{Laba bersih}}{\text{Total aset}}$$

### The Independent Variable is *Commodity Price of Coal (X1)*

The Director General of Mineral and Coal Regulation No. 515.K/32/DJB/2011 governs the process of Reference Coal Price Determination (HBA). Since HBA is a globally traded commodity, it is especially susceptible to the effects of the economy as a whole. Four commonly used coal price indices are weighted and averaged to arrive at the Reference Coal Price Value (HBA). Coal prices tracked by the Indonesia Coal Index, Platts, New Castle Export, and New Castle Global Coal Indices. Coal with a calorific value of 6,322 kcal/kg As Received (GAR), total moisture content of 8%, sulphur content of 0.8% as received (ar), and ash content of 15% as received (ar) is considered HBA coal. According to the HPB Maker coal trademark, the Coal Benchmark Price (HPB) is determined using the HBA and is affected by factors including quality (in this case, calorific value, water content, sulphur content, and ash content). HPB Maker is made up of eight well-known and widely-traded coal labels. To convert to an equivalent calorific value of 6,322 kcal/kg GAR, the Reference Coal Price is calculated as follows (Gunarto & Wulansari, 2020):

$$\text{HBA} = 25\% \text{ICI} + 25\% \text{Platts} + 25\% \text{NEX} + 25\% \text{GC}$$

Where:

HBA = Reference Coal Price

ICI = Indonesia Coal Index

NEX = New Castle Export Index

GC = New Castle Global Coal Index

## RESULTS AND DISCUSSION

The results of descriptive statistical testing in this research are presented in Table 4 which displays information about descriptive statistics for each variable.

**Table 3.** Descriptive Statistics Results

Information	N	Minimum	Maximum	Mean	Std. Deviation
Commodity Prices	100	58.17	276.58	133.5275	86.14013
Profitability	100	-.58	.57	.0839	.18157
The value of the company	100	-1533.81	15773.22	682.0543	2102.58054
Valid N (listwise)	100				

Source: Statistical Processing Data, 2023

The results of research model hypothesis testing using Smart PLS can be explained as follows:

**Table 4.** Statistical T test results and P Value

Relationship	Original Sample (O)	T Statistics ( O/STDEV )	P Values
HBA -> Firm value	0.198	2.445	<b>0.015</b>
HBA -> Profitability	0.330	3.165	<b>0.002</b>
Profitability -> Firm value	0.340	4.221	<b>0.000</b>
HBA -> Profitability -> Firm value	0.112	2.407	<b>0.016</b>
HBA -> Firm value (Before the Entry of PP 15/2022)	0.176	1.611	<b>0.108</b>
HBA -> Profitability (Before the Entry of PP 15/2022)	0.238	2.081	<b>0.038</b>
Profitability -> Firm value (Before the Entry of PP 15/2022)	0.262	1.992	<b>0.047</b>
HBA -> Profitability -> Firm value (Before the Entry of PP 15/2022)	0.062	1.189	<b>0.235</b>
HBA -> Firm value (After the Entry of PP 15/2022)	0.115	1.071	<b>0.285</b>
HBA -> Profitability (After the Entry of PP 15/2022)	0.261	2.142	<b>0.033</b>
Profitability -> Firm value (After the Entry of PP 15/2022)	0.422	4.016	<b>0.000</b>
HBA -> Profitability -> Firm value (After the Entry of PP 15/2022)	0.110	1.710	<b>0.088</b>

Source: Statistical Processing Data, 2023

### The Effect of Commodity Prices on Firm Value

The path coefficient before PP No.15/2022 was 0.062, with a t value of 1.189. This value is below the t table (1.960) and larger than 5% ( $P > 0.05$ ) at 0.235. HBA did not affect firm value before PP 15/2022. Post-PP No.15/2022 data show that the route coefficient value of 0.110 matches the positive direction with a t value of 1.710. 0.088 is larger than 5% ( $P > 0.05$ ) and smaller than the t table (1.960). This implies that HBA will not affect firm valuation after PP 15/2022. HBA has no effect on firm value. Signal theory emphasizes that commodity prices are not a direct indicator of the fundamental value of a company. Conversely, commodity prices can be influenced by various





external factors, such as changes in global supply and demand, geopolitics, and speculative factors. Therefore, directly linking commodity price fluctuations and firm value may need to be more balanced with the complexity of the relationship. Internal factors such as profitability also have an important role in determining firm value. In accordance with research by Ismaila et al. (2017), it was found that prices significantly and positively influence firm value. In this case, an increase in commodity prices can improve a company's operational performance, where a company's performance reflects the value of the company, while a decrease in commodities can reduce the company's operational performance. Although commodity prices can affect some industries significantly, This is not in line with Amanda (2018), who shows a significant positive relationship between commodity prices and the value of coal mining companies.

However, when both tests were pooled, the variable association path coefficient was 0.198, and the t-value was 2.445. The p-value of 0.015 is below 5% ( $P > 0.05$ ) and over the t-table's threshold of 1.960. This suggests that HBA significantly affects corporate value. (Amanda et al., 2018) In signaling theory, coal commodity prices can be considered as a signal indicating the condition and prospects of the company, which, in the end, can influence the value of the company. If coal prices increase, the market may perceive this as a signal that the financial prospects of companies related to the coal industry will improve, which can increase the value of those companies. This is due to the market's belief that companies can obtain greater revenues from higher product selling prices and are able to maintain or increase their profitability in the future. In accordance with research (Sahyu & Maharani, 2023), it was found that prices significantly and positively influence firm value. In this case, an increase in commodity prices can improve a company's operational performance, where a company's performance reflects the value of the company, while a decrease in commodities can reduce the company's operational performance. also stated that significant price changes have a positive impact on firm value. These results indicate that companies that are affected by commodity price fluctuations can experience significant changes in firm value. This study provides implications for companies to pay attention to external factors, such as changes in commodity prices, in evaluating company performance and making investment decisions. And the results of research conducted by (2015) show a significant positive relationship between commodity prices and firm value; the results of this research can provide insight for companies and investors in understanding how changes in commodity prices can affect firm value in the Nigerian food and beverage industry. (Amanda et al., 2018) Shows a significant positive relationship between commodity prices and the value of coal mining companies.

### **The Effect of Commodity Prices on Profitability**

The test results show that the variable relationship shows a path coefficient value of 0.330 with a t-value of 3.165. This value is greater than the t table (1.960), and the p-value of 0.002 is smaller than 5% ( $P > 0.05$ ). This means the hypothesis is accepted. The findings continue to have the same major impact both before and after the implementation of Presidential Proclamation No. 15/2022. HBA affects profitability. (Amanda et al., 2018) As a commodity, the price of coal is determined by global market supply and demand. If coal prices rise, coal mining companies can increase their income because the selling price of their products will increase. In this case, the company's profitability may increase due to higher revenues. On the other hand, if coal prices fall, coal mining

companies may experience a decrease in revenue and profits because the selling price of their products will decrease. (Sihotang & Munir, 2021) The signaling theory states that companies can send signals to the market regarding their financial conditions and prospects through certain actions. In the context of coal commodity prices, companies can use the selling price of their products as a signal to the market regarding their financial condition and prospects. An increase in the selling price of coal products can be interpreted as a signal that companies have good financial prospects and that they can maintain or increase their profitability. Revealed that the profitability ratio or reliability ratio shows the company's success in generating profits. In accordance with research conducted by (Woraphan, W. & Termkiat, 2012) states that changes in commodity prices have a significant positive effect on profitability. Therefore, company management needs to consider changes in commodity prices in planning their business strategy to increase profitability and firm value. found that price has a positive and significant impact on accounting returns (profitability). This positive impact occurs in companies involved in commodity production and exploration and does not occur in companies involved in commodity distribution and retail. In addition, this study also finds that the relationship between commodity price volatility and firm-level returns is stronger in years of economic uncertainty. The results of this research provide useful insights for corporate decision-makers and investors in understanding the relationship between commodity price volatility and company performance. (Amanda et al., 2018) Shows a significant positive relationship between commodity prices and the profitability of coal mining companies.

### **The Influence of Profitability on Firm Value**

The analysis of the test data reveals that the variable association exhibits a path coefficient value of 0.429, accompanied by a t-value of 4.171. The observed value exceeds the critical value of the t-distribution (1.960), and the p-value of 0.000 is statistically significant at the 5% level of significance ( $p < 0.05$ ). This finding suggests that the theory has been supported. The findings continue to have the same major impact both before and after the implementation of Presidential Proclamation No. 15/2022. The profitability of a corporation has a significant influence on its overall value. Profitability is widely regarded as a crucial metric for assessing the performance of a corporation since it provides insight into its financial success. A higher profitability ratio is generally indicative of greater profitability. Companies that demonstrate a constant upward trajectory in their profitability are likely to attract significant attention from a multitude of investors. Investors are more likely to place trust in organizations that demonstrate the ability to generate substantial profits, as the resulting returns are comparatively modest. Consequently, this serves as a favorable indication of the company's performance. The prevailing situation will be leveraged by corporate executives to secure financial resources through the issuance of shares. Due to its significance as a key metric, profitability holds paramount importance for organizations. Consequently, the advantageous impact of firm value serves as a promising opportunity for enterprises to attract potential investors effectively. Based on the findings of (Sahyu and Maharani, 2023), it can be inferred that profitability exerts a positive impact on the value of a corporation. Profitability is widely regarded as a key metric for evaluating the performance of a corporation, as



it directly reflects the level of profit generated. A higher profitability ratio is indicative of greater profitability. Companies that continually enhance their financial gains will attract the attention of a multitude of investors. Investors are more likely to place trust in organizations that demonstrate the ability to generate substantial profits, as the resulting returns are quite small. Consequently, this serves as a favorable indication of the company's performance. The prevailing situation will be leveraged by corporate executives to secure financial resources through the issuance of shares. Due to its significance as a key metric, profitability holds paramount importance for organizations. Consequently, the advantageous impact of firm value serves as a promising opportunity for enterprises to appeal to potential investors effectively. The study conducted by (Sahyu Maharani, 2023) reveals that profitability exerts a positive impact on the value of a corporation.

### **The Effect of Commodity Prices on Firm Value in Moderating Profitability**

The test results show that the variable relationship shows a path coefficient value of 0.145 with a t-value of 2.544. This value is greater than the t table (1.960), and the p-value of 0.011 is smaller than 5% ( $P > 0.05$ ). This means the hypothesis is accepted. HBA influences firm value by mediating profitability. Company profitability can strengthen the influence of coal commodity prices on firm value using signaling theory. If the company has a good level of profitability, this can be considered a positive signal that the company is able to generate good and stable profits in the future despite fluctuations in coal commodity prices. Hapsari (2007) revealed that the profitability ratio or reliability ratio shows the company's success in generating profits. Thus, increasing coal prices can increase company revenues and, in turn, increase profitability. Positive signals from increasing profitability can strengthen positive signals from increasing coal prices, thereby increasing firm value. (Khorshed, M., Uddin, M., & Gasbarro, 2019) Signal theory states that companies can send signals to the market through the actions they take. In this case, commodity prices can affect firm value because companies that depend on commodity prices tend to have high fluctuations in firm value. However, profitability factors can also moderate the influence of commodity prices on firm value. When a company that depends on commodity prices continues to generate high profits despite commodity price fluctuations, the company can send a positive signal that the company is successful in its operations and able to overcome commodity price risks. Conversely, when a company experiences a decline in profitability, the influence of commodity prices on firm value will be greater. In accordance with research (Kusumawardhani, N., Wardhani, R. A., & Kartika, 2016) on coal mining companies in Indonesia, it also shows that profitability has a significant positive influence on firm value. Apart from that, (Sihotang Munir, 2021) also found that coal prices and profitability interact and influence each other to influence firm value. Also, research by (Khorshed, M., Uddin, M., & Gasbarro, 2019) on coal mining companies in Australia also shows that profitability can strengthen the positive influence of coal prices on firm value. They found that companies with higher levels of profitability were better able to weather coal price fluctuations and provide positive signals to the market about their financial prospects.

### **The Influence of Commodity Prices on Firm Value in Profitability Moderation Before and After the Influence of PP 15/2022.**

The experiments showed a path coefficient of 0.062 and a t value of 1.189 before PP No.15/2022. This is less than the t table's expected 1.960, and the p value of 0.235 is  $> 5\%$ . Before PP 15/2022,

HBA had no effect on business profitability. A t-value of 1.70 and a path coefficient of 0.110 imply a positive direction, which is consistent with PP No.15/2022. This is below the t table's expected 1.960 and has a p-value of 0.088, which is more than 5%. After PP 15/2022, HBA will have little effect on business profitability. Meanwhile, the influence of PP 15/2022 on the value of coal mining companies listed in Indonesia also depends on how the market responds to the pricing mechanism implemented by the Ministry of Energy and Mineral Resources. If the market responds positively, then the firm value can increase, and vice versa. In conclusion, the influence of PP 15/2022 on the relationship between coal commodity prices and profitability and firm value cannot be predicted with certainty. This depends on the price-setting mechanism implemented by the Ministry of Energy and Mineral Resources, as well as how the market responds to this policy.

Overall, HBA increases company worth before and after PP 15/2022, mediated through profitability. The positive route coefficient of 0.112, larger-than-expected t-value of 2.407 (compared to the t-table's 1.960), and smaller-than-expected p-value of 0.016 (p0.05) show this. PP 15/2022 is Government Regulation (PP) Number 15 of 2022 concerning Domestic Coal Price Management. This PP aims to control domestic coal prices so that they remain affordable for the public and domestic industry, as well as to promote the use of cleaner and environmentally friendly coal. In order to control domestic coal prices, PP 15/2022 implements a price-setting mechanism carried out by the Ministry of Energy and Mineral Resources (ESDM) involving various related parties, including coal producers. Returning to the question regarding the relationship between coal commodity prices and profitability and firm value, this relationship is very dependent on market conditions and the situation of each company. Prior to the enactment of PP 15/2022, coal commodity prices tended to rise and fall according to global and regional market demand. This can affect the profitability of coal mining companies listed in Indonesia. If coal prices rise, company profits will increase, and vice versa. However, with PP 15/2022, domestic coal prices will be controlled by the government. This can affect the profitability of coal mining companies, depending on the price-setting mechanism carried out by the Ministry of Energy and Mineral Resources. If the set coal price does not match the company's production costs, the company's profitability can be negatively affected. PP 15/2022's impact on Indonesian coal mining businesses' values relies on market response to the Ministry of Energy and Mineral Resources' pricing system. The firm value may rise if the market does well, and vice versa. In conclusion, PP 15/2022's impact on coal commodity pricing, profitability, and firm value is unknown. This relies on the Ministry of Energy and Mineral Resources' price fixing procedure and market reaction.

The impact of changes in coal commodity prices on firm value can be strengthened by using signaling theory to increase company profitability. The company's ability to obtain good and reliable profits in the future, despite volatile coal commodity prices, can be measured by its level of profitability. According to Hapsari (2007), a company's potential to generate profits can be measured by looking at its profitability ratio. Company revenues and profitability can benefit from rising coal prices. Firm value can increase if coal prices rise and the positive signals accompanying rising profits are strengthened. In accordance with research (Kusumawardhani, N., Wardhani, R. A., & Kartika, 2016) on coal mining companies in Indonesia, it also shows that profitability has a significant positive influence on firm value. Apart from that, they also found that coal prices and profitability interact and influence each other to influence firm value. Research by (Khorshed, M., Uddin, M., and Gasbarro, 2019) on coal mining companies in Australia also shows that profitability can strengthen the positive influence of coal prices on firm value. They found that companies with



higher levels of profitability were better able to weather coal price fluctuations and provide positive signals to the market about their financial prospects.

## CONCLUSION

This study found that coal commodity prices affected firm value both before and after the implementation of PP No. 15/2022, but that this was only the case if the results converged after the law was passed. The study also found that coal commodity prices affected profitability, which in turn affected firm value, and that profitability mediated the relationship between commodity prices and firm value. Coal to the worth of the firm. For this reason, particularly for commodity-reliant businesses, managers should think about profitability issues while making business choices in order to reduce value volatility and give good signals to the market. That is not the case, however, if the outcomes do not coalesce either before or after.

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