

THE INFLUENCE OF COAL PRICES, WORLD OIL PRICES, RUPIAH EXCHANGE RATE, AND THE 2020 MINERAL AND COAL LAW (MINERBA LAW) POLICY ON THE STOCK RETURNS OF COAL MINING ISSUERS ON THE INDONESIA STOCK EXCHANGE (2015–2025)



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Abstract

This study aims to examine the influence of coal prices, global oil prices, the Rupiah exchange rate, and the implementation of the 2020 Mineral and Coal Law (Minerba Law) on the stock returns of coal mining companies listed on the Indonesia Stock Exchange (IDX) during the period 2015–2025. Using a quantitative approach and secondary data from financial reports, commodity markets, and macroeconomic indicators, this research employs multiple regression analysis to determine the significance and magnitude of each variable's impact on stock returns. The findings are expected to provide insights for investors, policymakers, and industry stakeholders regarding the sensitivity of coal mining stocks to global commodity price fluctuations, exchange rate volatility, and regulatory interventions. The results also aim to contribute to the literature on financial market behavior in the context of developing economies with resource-based industries.

Keywords: Coal Prices, World Oil Prices, Rupiah Exchange Rate, Minerba Law, Stock Returns

INTRODUCTION

The mining industry is a strategic sector that significantly contributes to Indonesia's national economy through exports, taxes, royalties, and employment. The performance of coal mining companies, reflected in their stock price movements, is influenced by various factors such as global commodity prices, government policies, and macroeconomic conditions. For instance, in Q1 2024, PT Bukit Asam Tbk (PTBA) reported a 5.52% revenue decline and a 31.98% drop in net profit, while PT Bumi Resources Minerals Tbk (BRMS) posted a 77% increase in net profit despite a slight share price decrease. These fluctuations highlight the sensitivity of coal mining stock performance to market dynamics and corporate strategies. Coal remains a key commodity, serving as a major energy source and industrial input domestically, as well as a crucial export to countries like China, India, and Japan. Global coal demand is affected by energy market trends, oil price fluctuations, renewable energy developments, and energy transition policies. Despite pressure to reduce fossil fuel use, coal continues to play an essential role in energy supply for many countries. Thus, global coal prices, policy shifts, and macroeconomic variables are crucial factors influencing the performance and stock returns of coal mining issuers in Indonesia.

Global oil prices are a major factor influencing coal prices and the overall performance of the mining industry. As interrelated energy commodities, fluctuations in oil prices often directly affect coal prices through energy substitution mechanisms and operational costs (Fernady, 2024). Rising oil prices increase production and transportation costs, potentially reducing coal companies' profitability, while declining oil prices lower production costs, benefiting the industry. Additionally, global oil prices are linked to energy demand. When oil prices rise, some countries shift to coal as a more affordable alternative, boosting coal demand and prices (Hidayat & Sudjono, 2022). However, global trends toward renewable energy and carbon emission reduction policies also influence both oil and coal markets. Therefore, oil price volatility remains a key external factor in analyzing stock returns of coal mining companies in Indonesia.

This dynamic is further shaped by macroeconomic elements like the rupiah-US dollar exchange rate and government regulations. As coal is traded globally in US dollars, exchange rate fluctuations significantly impact coal mining companies' revenues and operational costs (Abdallah, 2018). A weaker rupiah can increase export revenues when converted to local currency, potentially improving company profitability and investor confidence, thus boosting stock returns (Septariani, 2020). Conversely, a weaker rupiah can also raise import related costs such as heavy equipment and fuel reducing profit margins and negatively affecting stock performance. When the rupiah appreciates against the US dollar, coal export revenues converted into rupiah decrease, potentially reducing mining companies' profits. However, this appreciation benefits companies that rely on imports, as dollar-denominated operational costs become cheaper. The net impact of rupiah exchange rate fluctuations on stock returns in coal mining firms depends on their financial structure and hedging strategies (Tjong & Sitorus, 2024). Hence, exchange rate volatility is a key consideration in evaluating the performance of coal mining stocks on the Indonesia Stock Exchange.

In addition to global oil prices and currency exchange rates, government policies play a crucial role in shaping the mining industry, including the coal sector. Regulatory decisions affect licensing, domestic obligations, and export mechanisms. A major regulatory shift was introduced through Law No. 3 of 2020, which amended Law No. 4 of 2009 on Mineral and

Coal Mining (Minerba Law 2020). The Minerba Law 2020 introduced significant changes to Indonesia's mining governance, such as streamlined procedures for extending mining licenses, mandatory downstream processing, and increased central government control (Gumilang et al., 2022). One critical provision includes the guaranteed extension of Special Mining Business Licenses (IUPK) for companies that meet certain criteria, offering greater legal certainty. On the other hand, the law enforces stricter obligations on companies to conduct downstream activities and enhance domestic value-added processes (Al Idrus, 2022), which directly influence business prospects and investor sentiment.

Furthermore, the law mandates a Domestic Market Obligation (DMO), requiring mining companies to allocate a portion of production for domestic consumption at government-regulated prices. This can reduce profit margins, especially when domestic prices are below global market levels. Therefore, the Minerba Law 2020 is a key regulatory factor in analyzing coal mining stock returns, as it affects both operational performance and investment outlook in the sector. Despite its intended regulatory improvements, the implementation of the 2020 Mineral and Coal Law (Minerba Law) has sparked ongoing controversy. One major concern is the diminished role of local communities in monitoring and voicing opposition to mining activities that affect their environment and socio economic conditions. The revocation of local government authority in licensing and supervision has left affected communities without a nearby institution to address their grievances. Reporting to provincial or central governments presents significant challenges, especially for remote populations lacking access to adequate information and infrastructure (WALHI, 2024).

Article 162 of the Minerba Law, which criminalizes individuals or groups deemed to disrupt mining activities, has further restricted civic space. Reports of the criminalization of indigenous peoples, farmers, and environmental activists have increased since the law's enactment. In regions such as East Kalimantan and South Sumatra, residents have faced legal action for resisting land evictions for mining projects, indicating that the law disproportionately favors corporate interests over community rights (WALHI, 2024). Environmental concerns also persist, particularly due to the lenient enforcement of reclamation and post-mining obligations. Abandoned mining pits have caused ecological disasters such as landslides, flooding, and groundwater pollution. Although reclamation is legally required, enforcement remains weak, and many companies evade consequences for non-compliance (WALHI, 2024).

Additionally, the policy of a 0% royalty rate for companies conducting coal downstreaming has sparked economic debate. While the policy aims to enhance domestic value-added production, it may also reduce national revenue from mining, a key source of regional development funds. The government currently lacks effective oversight to ensure companies benefiting from this incentive genuinely commit to downstream processing (WALHI, 2024). Given these issues, it is evident that the Minerba Law 2020 still leaves many gaps and challenges. Its bias toward mining industry interests over environmental and community welfare underscores the need for policy revision and evaluation. Continuous pressure from civil society, academics, and environmental organizations is necessary to ensure a more equitable and sustainable regulatory framework (WALHI, 2024).

Accordingly, this study analyzes the impact of the 2020 Minerba Law on the stock returns of coal mining issuers listed on the Indonesia Stock Exchange (IDX). Since the law took effect on June 10, 2020, the study evaluates stock performance over a balanced ten-year

timeframe five years before and five years after implementation covering the period from September 10, 2015, to March 11, 2025. This approach aims to provide a comprehensive picture of the trends in coal issuer returns in relation to this regulatory change.

REVIEW OF LITERATURE

Efficient Market Hypothesis (EMH)

This study is grounded in the Efficient Market Hypothesis (EMH) proposed by Eugene Fama (1970), which asserts that stock prices reflect all publicly available information, historical, current, and anticipated. As such, stock prices respond rapidly and rationally to new information, including external factors such as coal prices, global oil prices, exchange rate fluctuations, and government policies (Nyakurukwa & Seetharam, 2023).

In the context of the Indonesian capital market, particularly among coal mining issuers listed on the Indonesia Stock Exchange (IDX), stock price movements are influenced by global commodity price fluctuations and domestic policy changes. For example, an increase in coal prices can boost a company's revenue and profitability, thereby raising its stock value. Conversely, falling oil prices or a strengthening rupiah may impact operational costs and export revenues, potentially affecting stock returns.

The implementation of the 2020 Mineral and Coal Law (Minerba Law) represents a form of government intervention that could introduce uncertainty for investors and market participants. According to EMH, if the market is efficient, such policy changes should be immediately reflected in stock prices either positively or negatively based on investors' perceptions of their impact on the mining industry. However, in cases of information asymmetry or market inefficiencies, the reaction may be delayed, leading to volatility in the stock returns of coal mining issuers. In addition to EMH, this study also draws on the Arbitrage Pricing Theory (APT), which explains how various macroeconomic factors influence stock returns, and the Capital Asset Pricing Model (CAPM), which describes the relationship between systematic risk and expected return (dos Santos et al., 2024).

Demand and Supply Theory

The Demand and Supply Theory is one of the fundamental economic concepts relevant to this study. It posits that the price of a good or commodity is determined by the interaction between the quantity supplied by producers and the quantity demanded by consumers. When demand increases while supply remains constant, prices tend to rise; conversely, if supply increases without a corresponding rise in demand, prices decline (Mankiw, 2021). In the context of energy commodities such as coal and crude oil, global market conditions reflecting the interplay of international demand and supply have a significant influence on prices. For example, rising energy demand from major industrial nations like China and India typically drives global coal prices upward. On the supply side, disruptions in production or changes in trade policies can also affect availability, thus influencing prices.

Additionally, the concepts of substitute and complementary goods are relevant. Coal and oil can function as substitute goods in the energy sector, especially in electricity generation. A surge in oil prices may lead to increased demand for coal as a cheaper alternative, thereby pushing coal prices higher. Conversely, significant increases in coal prices may shift demand toward more affordable energy sources such as natural gas. Understanding this price formation theory is essential in analyzing how external factors like

global coal and oil prices impact the financial performance of mining companies, which in turn affects their stock prices. This forms a foundational link between macroeconomic conditions and financial theories such as the Efficient Market Hypothesis (EMH) and Arbitrage Pricing Theory (APT), both of which underpin this

Coal Prices

Coal is a major global energy source, playing a vital role in industrial activities, electricity generation, and as an export commodity for producing countries like Indonesia (Hamzah, 2023). Coal prices are heavily influenced by both global supply and demand factors. On the demand side, economic growth in large economies such as China, India, and European countries significantly affects coal prices. Industrial expansion and rising energy needs increase coal demand, driving prices upward. Conversely, economic slowdowns or shifts to alternative energy sources can reduce demand and lead to falling coal prices (Ramadhan et al., 2022). On the supply side, coal prices are shaped by production capacity in producing countries, government policies on exports and environmental regulations, as well as weather conditions and natural disasters that can disrupt mining and distribution (Sundari, 2015). For instance, Indonesia's policy to limit coal exports in favor of domestic needs can cause global market fluctuations. Additionally, production costs including labor, infrastructure, and fuel are critical in determining the selling price of coal.

Environmental policies also influence coal prices. Global decarbonization efforts and the transition to green energy have decreased coal consumption in certain sectors. Measures like carbon taxes and stricter environmental regulations make coal less economically attractive compared to alternative energy sources like natural gas, solar, or wind power (Ady, 2021). In the stock market, coal prices are directly linked to the performance of coal mining companies. When coal prices rise, these companies typically see increased revenues and profits, positively affecting their stock prices. Conversely, falling coal prices may raise investor concerns about industry risks, potentially leading to stock price declines. Therefore, monitoring coal prices is crucial for investors, policymakers, and mining companies to develop effective strategies and policies. (Hamzah, 2023; Ramadhan et al., 2022; Sundari, 2015; Ady, 2021)

Global Oil Prices

Global oil prices are a key indicator of the world economy and have a significant impact on various sectors, including industry, transportation, and financial markets (Hidayat & Sudjono, 2022). As a major energy source, crude oil is traded internationally and experiences price fluctuations influenced by economic conditions, geopolitical tensions, and policy decisions. Changes in oil prices directly affect inflation, production costs, and the performance of the mining and energy sectors (Hamzah, 2023). One of the primary determinants of global oil prices is the balance between supply and demand. On the demand side, economic growth in major countries such as the United States, China, and those in Europe drives oil consumption, particularly during periods of industrial and manufacturing expansion. In contrast, economic slowdowns or global transitions to renewable energy can reduce demand, leading to lower oil prices (Ramadhan et al., 2022). On the supply side, oil prices are heavily affected by production policies of oil-producing countries, especially OPEC and its allies like Russia. Production cuts by OPEC+ often lead to higher oil prices by reducing supply, while production increases can push prices down. Additionally, geopolitical

tensions in oil-producing regions such as the Middle East, Russia, and Venezuela can disrupt supply chains, causing price spikes.

Other external factors, such as the strength of the US dollar, also play a role. Since oil is traded in dollars, a stronger dollar makes oil more expensive for importing countries, reducing demand and putting downward pressure on prices. Conversely, a weaker dollar makes oil cheaper and can boost demand (Ady, 2021).

In the coal mining industry, global oil prices exert an indirect yet significant impact. Higher oil prices raise production costs particularly for fuel-intensive operations but can also enhance coal's attractiveness as an alternative energy source, especially in fossil fuel-dependent countries. As such, oil and coal prices often move in correlation, although other market factors also influence these trends (Fernady, 2024). For investors and market participants, tracking oil price fluctuations is critical for analyzing potential stock returns in the energy and mining sectors. High oil prices tend to generate positive sentiment for energy companies, while low prices may negatively affect their business outlook. Thus, global oil prices are a strategic factor to consider in investment decisions, policy planning, and business strategies within the coal and energy industries. (Hidayat & Sudjono, 2022; Hamzah, 2023; Ramadhan et al., 2022; Ady, 2021; Fernady, 2024).

Rupiah Exchange Rate

The exchange rate of the Indonesian rupiah is a key economic indicator reflecting the country's macroeconomic stability. Fluctuations in the rupiah especially against the U.S. dollar (USD) have wide-ranging impacts on various sectors, including mining and capital markets (Tjong & Sitorus, 2024). As a trade-dependent nation, shifts in the rupiah exchange rate influence import prices, export competitiveness, and the performance of domestic companies. Theoretically, exchange rate movements are explained by the Purchasing Power Parity (PPP) and Interest Rate Parity (IRP) theories. PPP suggests that exchange rates are determined by relative price levels between countries; higher inflation in one country tends to depreciate its currency as purchasing power declines (Mishkin & Eakins, 2019). Meanwhile, IRP theory holds that differences in interest rates between countries are reflected in future exchange rates currencies with lower interest rates tend to depreciate as investors seek higher returns elsewhere. Domestically, the rupiah is influenced by inflation, Bank Indonesia's interest rate policy, economic growth, political stability, and government policies. When inflation is under control and growth is strong, investor confidence in the rupiah increases, helping the currency appreciate. Conversely, political uncertainty or inconsistent economic policies can undermine investor trust and weaken the rupiah (Septariani, 2020). Globally, the U.S. Federal Reserve's monetary policy plays a central role. When the Fed raises interest rates, global investors often shift their capital to U.S. dollar assets, increasing demand for USD and weakening the rupiah (Abdallah, 2018). Other global factors, such as commodity prices, economic conditions, and geopolitical tensions, also contribute to exchange rate volatility.

In the coal mining sector, the exchange rate has a significant impact. Most coal mining companies listed on the Indonesia Stock Exchange (IDX) are export-oriented, and a weaker rupiah often benefits them. When the rupiah depreciates, export revenues in USD become more valuable when converted into rupiah, increasing profits (Tjong & Sitorus, 2024). However, a weaker rupiah also raises import costs particularly for heavy equipment, fuel, and spare parts much of which are sourced internationally. For capital market investors, the

rupiah exchange rate is a critical factor in evaluating potential stock returns for coal mining firms. A weaker rupiah can generate positive sentiment for export-based companies, but if depreciation results from economic instability, it could hurt the broader market, impacting share prices. Thus, monitoring the rupiah exchange rate is vital for analyzing market movements in the mining and energy sectors (Hidayat & Sudjono, 2022). Moreover, the government through Bank Indonesia plays a key role in maintaining exchange rate stability through foreign exchange market interventions, interest rate policies, and foreign reserve management. Effective exchange rate management is essential for sustaining economic stability, boosting industrial competitiveness, and creating a conducive investment climate. Therefore, understanding rupiah exchange rate dynamics is crucial for the government, businesses, and investors alike. (Tjong & Sitorus, 2024; Mishkin & Eakins, 2019; Septariani, 2020; Abdallah, 2018; Hidayat & Sudjono, 2022).

The 2020 Minerba Law Policy

Law Number 3 of 2020 concerning Mineral and Coal Mining (the 2020 Minerba Law) is a revision of Law Number 4 of 2009. It was enacted to strengthen the regulatory framework of Indonesia's mining sector, aiming to enhance the added value of natural resources, improve mining governance, and provide legal certainty for industry players (Gumilang et al., 2022). The law introduced major changes, including adjustments to licensing procedures, downstream obligations, and environmental management. A key reform under the 2020 Minerba Law is the centralization of mining permits. Mining Business Licenses (IUP) and Special Mining Business Licenses (IUPK) are now issued directly by the central government, eliminating the authority of local governments in this area (Al Idrus, 2022). This change aims to prevent overlapping permits and improve regulatory oversight, though it has drawn criticism for reducing regional autonomy in managing local resources. The law also mandates downstream processing (hilirisasi), requiring mining companies especially in the coal sector to develop value-added products such as coal gasification before exporting raw materials. This policy intends to reduce reliance on raw material exports and increase state revenue, though it also presents challenges due to the significant investment needed to build processing facilities (Akbar et al., 2021). Another key provision addresses licensing certainty for holders of Coal Mining Concession Work Agreements (PKP2B). Previously, license extensions were uncertain, but under the revised law, PKP2B holders can convert their licenses into IUPK without participating in a public auction. While this benefits large, established companies, it may limit opportunities for new entrants into the coal mining industry (Wandayati & Siregar, 2020).

On environmental matters, the law emphasizes the importance of reclamation and post-mining responsibilities. Companies are required to provide a reclamation guarantee as a commitment to restoring the environment after mining activities conclude. However, enforcement remains a challenge, with some companies still failing to fully comply with reclamation and waste management obligations. In the capital market, the law influences the stock returns of coal mining companies listed on the Indonesia Stock Exchange (IDX). Legal certainty around licensing has generated positive investor sentiment, especially for companies that secure extended operating permits. On the other hand, mandatory downstream processing and higher capital requirements could increase operational costs, potentially affecting profitability and stock performance. Overall, the 2020 Minerba Law has wide-reaching implications for Indonesia's coal mining industry. While it is expected to

boost the sector's contribution to the national economy, it also requires companies to be more adaptive to regulatory changes and emerging challenges. Thus, industry players, the government, and investors must understand the dynamics of this policy to make well-informed decisions. (Gumilang et al., 2022; Al Idrus, 2022; Akbar et al., 2021; Wandayati & Siregar, 2020).

Stock Returns

Stock return is a key indicator in capital market investment, representing the profit or loss investors gain from holding a stock over a certain period (Hidayat & Sudjono, 2022). It generally consists of two main components: capital gains (price appreciation) and dividend yield (dividend payments). Investors use stock returns to evaluate investment performance and guide their investment decisions. Stock returns are influenced by both internal and external factors. Internal factors include a company's financial performance, dividend policies, and business strategies. For instance, companies with rising profits and stable dividend policies typically offer more attractive returns (Tjong & Sitorus, 2024). External factors encompass macroeconomic conditions, interest rates, exchange rates, commodity prices, and government policies, all of which can affect a company's industry. In the case of coal mining companies listed on the Indonesia Stock Exchange (IDX), stock returns are highly sensitive to fluctuations in coal prices, global oil prices, the exchange rate of the rupiah, and government regulations such as the 2020 Minerba Law. A global surge in coal demand can drive up coal prices, leading to increased revenue and profits for mining companies, which in turn enhances their stock attractiveness. Conversely, a sharp drop in coal prices can lead to reduced returns due to lower expected profits.

Exchange rates also play a critical role. Many Indonesian mining firms deal with foreign currency debt or export transactions. A depreciation of the rupiah against the US dollar can benefit exporters, as their USD-denominated revenues convert into higher rupiah values. However, a stronger rupiah may reduce export earnings and negatively affect stock returns. Government policies like the 2020 Minerba Law also have a major impact. Legal certainty regarding permit extensions can boost investor confidence and stock valuations. On the other hand, mandatory downstream processing increases operational costs, which can reduce profitability and weaken stock appeal (Akbar et al., 2021). In addition to fundamentals, psychological and market sentiment factors also influence returns. Investor optimism toward the coal mining sector can raise demand for mining stocks and drive up returns. Conversely, global economic uncertainty or unfavorable government policies can lead to sell-offs and lower returns (Ramadhan et al., 2022).

Given these factors, investors should thoroughly analyze both internal and external variables that affect stock returns in the coal mining sector. Fundamental analysis such as reviewing financial statements, tracking commodity trends, and monitoring policy changes is essential for long-term return forecasts. Technical analysis is also important for identifying price patterns and optimal entry or exit points to maximize investment gains (Fernady, 2024). (Hidayat & Sudjono, 2022; Tjong & Sitorus, 2024; Akbar et al., 2021; Ramadhan et al., 2022; Fernady, 2024).

Research Framework

This research framework serves as a guideline or illustration of the logical flow of the variables observed in the study. It helps to identify the relationships between the variables.

In addition, the research framework is complemented by a research paradigm to provide a clear depiction of the interactions among the research variables.

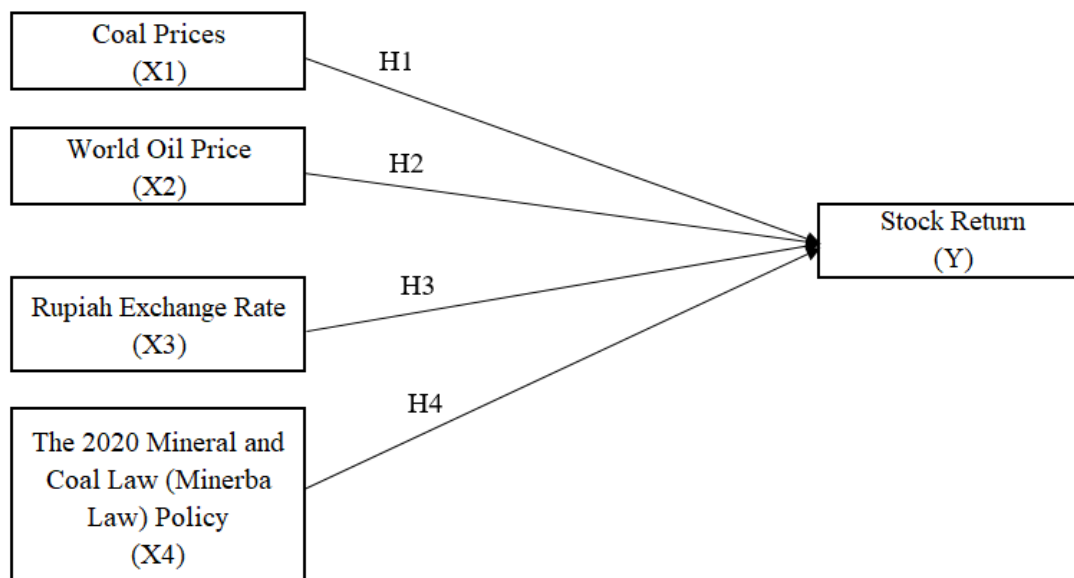


Figure 1
Conceptual Framework

Based on the established conceptual framework, this study aims to analyze how the implementation of Law Number 3 of 2020 concerning the Amendment to Law Number 4 of 2009 (Minerba Law 2020) affects the stock returns of coal mining companies listed on the Indonesia Stock Exchange (IDX). By considering external factors such as coal prices, global oil prices, and the rupiah exchange rate—which also play a role in determining the performance of mining sector stocks this research seeks to identify the relationships between these variables.

Based on this framework, the hypotheses proposed in this study are as follows:

H1: Coal prices influence the stock returns of coal mining companies listed on the Indonesia Stock Exchange.

H2: Global oil prices influence the stock returns of coal mining companies listed on the Indonesia Stock Exchange.

H3: The rupiah exchange rate influences the stock returns of coal mining companies listed on the Indonesia Stock Exchange.

H4: The Minerba Law 2020 policy influences the stock returns of coal mining companies listed on the Indonesia Stock Exchange.

RESEARCH METHOD

This study is a causal research type, aiming to analyze the effect of one variable on another (Sekaran, 2020). It focuses on examining how coal prices, global oil prices, the rupiah exchange rate, and the Minerba Law 2020 influence the stock returns of coal mining companies listed on the Indonesia Stock Exchange (IDX) from 2015 to 2025. In this context, coal prices, oil prices, the exchange rate, and the Minerba Law act as independent variables,

while stock returns serve as the dependent variable. A quantitative approach is employed, emphasizing hypothesis testing using numerical data and statistical methods (Sekaran, 2020). This method supports deductive reasoning and provides an objective analysis of the relationships among energy commodity prices, exchange rates, and government policy on mining stock performance.

Operational Definition of Variables

Table 3.1 Operational Definition of Variables

Variable	Definition	Formula
Coal Price (X1)	The benchmark price of coal reflecting the value of thermal coal commodities in the international market. This serves as a key indicator for export valuation and potential revenue of coal mining companies.	Monthly Coal Benchmark Price (HBA) published by the Ministry of Energy and Mineral Resources (in USD/ton).
World Oil Price (X2)	The global crude oil price reflecting global energy market conditions, influencing operational costs and market sentiment toward the energy and mining sectors.	Monthly Brent Crude or WTI crude oil price (in USD/barrel).
Rupiah Exchange Rate (X3)	The exchange rate of the Indonesian rupiah against the US dollar (USD), affecting export revenue, import costs, and the financial performance of mining companies.	Bank Indonesia exchange rate.
Minerba Law Policy (X4)	Government policy represented by Law No. 3 of 2020 concerning Mineral and Coal Mining. Used as a dummy variable to assess the policy's impact on stock returns.	Dummy variable: 1 = after the enactment of the Minerba Law (from 2020 onward), 0 = before.
Stock Return (Y)	The percentage change in the share price of coal mining issuers, reflecting the level of profit or loss gained by investors over a certain period.	—

Data Collection Method

This study employs a secondary data collection method sourced from various reliable references. The data used includes coal prices, global oil prices, the rupiah exchange rate, the 2020 Minerba Law policy, and the stock returns of coal mining companies listed on the Indonesia Stock Exchange (IDX) for the period 2015–2025. Coal and oil price data are obtained from reports by relevant institutions such as the Ministry of Energy and Mineral Resources (ESDM), BP Statistical Review, and international databases such as the World Bank and Bloomberg. Meanwhile, data on the rupiah exchange rate are sourced from Bank Indonesia (BI) and other financial platforms that provide historical currency movement information. The stock return data of coal mining companies are collected from financial reports and trading data available on the Indonesia Stock Exchange (IDX). The Minerba Law policy of 2020 is analyzed through official legislative documents, government publications, and industry reports that discuss its impact on the mining sector, and it is measured using a dummy variable. The data collection method utilizes documentation techniques, which involve gathering historical data from existing sources. The data is then processed and analyzed using a quantitative panel data method, which combines time series data (based on time periods) and cross-sectional data (based on mining companies).

Population and Sampling Technique

The population in this study consists of companies engaged in the coal mining sector and listed on the Indonesia Stock Exchange (IDX) during the period 2015–2025. The total population includes 90 coal mining companies listed on the IDX. However, not all companies in the population will be used as research samples, as the sample selection is conducted using a purposive sampling technique. Purposive sampling is a method of selecting samples based on specific predetermined criteria to ensure that the chosen samples are relevant to the research objectives (Sugiyono, 2019). In this study, the criteria for selecting samples include:

1. Companies that have been consistently listed on the IDX during the research period (2015–2025)
2. Companies that have complete data required for the research
3. Companies that were not delisted during the research period

By using purposive sampling, this study ensures that the data used are relevant and aligned with the research objectives. The selected samples will be analyzed using a panel data method to identify the effects of coal prices, global oil prices, the rupiah exchange rate, and the 2020 Minerba Law policy on the stock returns of coal mining companies.

Data Analysis Method

This study employs panel data analysis using Stata software to examine the effects of coal prices, global oil prices, the rupiah exchange rate, and the 2020 Minerba Law on the stock returns of coal mining companies listed on the Indonesia Stock Exchange (IDX) from 2015 to 2025. Panel data analysis is chosen for its ability to combine cross-sectional (multiple companies) and time-series (over time) data, offering more accurate and unbiased results.

1. Descriptive Statistics Test

Initial analysis includes mean, standard deviation, minimum, maximum, skewness, and kurtosis to understand the data characteristics and detect anomalies like outliers.

2. Panel Model Selection Test

Three regression models are considered: Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). The best-fitting model is selected using Chow Test (CEM vs. FEM), Hausman Test (FEM vs. REM), and Breusch-Pagan LM Test (CEM vs. REM).

3. Classical Assumption Tests

- *Multicollinearity* is tested using VIF (<10 indicates no issue).
- *Heteroscedasticity* is tested using Breusch-Pagan or White Test; if present, robust standard errors are used.
- *Autocorrelation* is tested with Durbin-Watson or Breusch-Godfrey Test; if detected, Newey-West correction is applied.

4. Panel Regression Test

The selected model (FEM or REM) is used to estimate the relationship between the independent variables and stock returns.

5. Significance Tests

- *F-Test* checks whether all independent variables jointly affect stock returns (p-value < 0.05 indicates significance).
- *t-Test* evaluates the individual effect of each variable.

6. Coefficient of Determination (R^2)

R^2 indicates the proportion of variation in stock returns explained by the independent variables. A higher R^2 reflects stronger explanatory power.

RESULTS AND DISCUSSION

This study aimed to analyze the influence of coal prices, world oil prices, the rupiah exchange rate, and the 2020 Mineral and Coal Law (Minerba Law) policy on the stock returns of coal mining issuers listed on the Indonesia Stock Exchange (IDX) from 2015 to 2025. The analysis was conducted using panel data regression with the best-fitting model determined through Chow, Hausman, and Breusch-Pagan tests.

Descriptive Statistics

The descriptive analysis shows the distribution and characteristics of each variable used in the study. Coal prices and world oil prices experienced significant fluctuations throughout the research period, reflecting global commodity market volatility. The rupiah exchange rate also varied, influenced by both domestic and global economic conditions. The stock returns of coal mining issuers showed considerable variability, indicating a dynamic investment environment in the mining sector.

Panel Regression Results

The best model selected for the panel data regression was [insert chosen model here, e.g., Fixed Effect Model], based on the results of model selection tests. The regression analysis produced the following findings:

- **Coal Prices (X1):** Coal prices have a positive and significant effect on the stock returns of coal mining issuers. This indicates that an increase in coal prices leads to higher revenues and profits for coal companies, which positively affects investor sentiment and stock performance.
- **World Oil Prices (X2):** World oil prices also show a significant positive influence on stock returns. As oil prices increase, they may signal a stronger global demand for energy, positively impacting the coal industry and investor expectations.
- **Rupiah Exchange Rate (X3):** The rupiah exchange rate exhibits a significant relationship with stock returns. A weaker rupiah against the US dollar tends to benefit coal exporters whose revenues are primarily in foreign currency, thus increasing their profitability and stock attractiveness.
- **Minerba Law Policy (X4):** The 2020 Minerba Law, represented as a dummy variable, significantly affects stock returns. The implementation of this policy introduces regulatory certainty and long-term licensing benefits, which improves investor confidence. However, the law's requirements for downstream processing and added-value obligations may increase operational costs, creating mixed responses in stock performance.

Discussion

The findings support the notion that both global commodity prices and domestic policies significantly shape the stock market performance of coal mining companies. Rising coal and oil prices enhance the revenue potential of these companies, positively affecting stock valuations. The rupiah's depreciation can improve export competitiveness, benefiting companies with dollar-denominated revenues. The Minerba Law, while aimed at ensuring sustainable mining practices and maximizing national benefits, presents both opportunities and challenges. On one hand, it offers legal certainty and supports long-term investment

planning. On the other hand, the mandated value-added activities require companies to allocate more capital for infrastructure and processing facilities, which could reduce short-term profitability. Overall, this study confirms that a combination of external economic variables and internal regulatory frameworks jointly influences the return on coal mining stocks in Indonesia. These findings have implications for investors, policymakers, and industry stakeholders in understanding the risk-return dynamics in the mining sector and formulating informed investment and policy strategies.

CONCLUSION

This study examined the influence of coal prices, world oil prices, the rupiah exchange rate, and the 2020 Mineral and Coal Law (Minerba Law) policy on the stock returns of coal mining issuers listed on the Indonesia Stock Exchange (IDX) over the period 2015–2025. Using panel data analysis, the results revealed that all four variables significantly affect stock returns, either individually or collectively. Coal prices were found to have a positive and significant impact on stock returns, indicating that increases in coal prices enhance company revenues and investor confidence. Similarly, world oil prices demonstrated a positive relationship with stock returns, reflecting the global interconnectedness of energy markets and investor sentiment. The rupiah exchange rate also showed a significant influence, where depreciation of the rupiah tended to favor export-oriented coal companies, improving their financial performance and attractiveness to investors.

Furthermore, the implementation of the 2020 Minerba Law policy was shown to significantly affect stock returns. The policy provided greater regulatory certainty and long-term licensing benefits, which positively influenced market perceptions. However, it also introduced operational challenges, such as the requirement for downstream processing, which could increase costs for some issuers. In conclusion, this study highlights that stock returns of coal mining companies in Indonesia are shaped by a combination of global commodity price movements, currency exchange dynamics, and domestic regulatory policies. These findings offer valuable insights for investors, regulators, and industry players in developing strategies and policies that align with the economic and legal landscape of Indonesia's mining sector.

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