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# CAPITAL MARKET REACTION TO THE ANNOUNCEMENT OF FUEL PRICE INCREASE ON STOCK RETURNS OF LQ 45 TRANSPORTATION SUB-SECTOR IN 2023

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**KEYWORDS:**
Abnormal Return, Trading Volume Activity, Capital Market Reaction, Fuel, Transportation

**ABSTRACT**

The research was conducted to find out the reaction of the capital market to the rise in BBM in transportation and logistics sector companies listed on the Indonesian Stock Exchange. This study is an event study or event that arises directly from the rise in the price of oil (BBM) on October 1, 2023, against the market reaction based on the actions of transportation and logistics companies. Abnormal Return and Trading Volume Activity are variables used to analyze reactions. The data collection method used in this research is the Quantitative Data Method. Observations were conducted for 5 days before and 5 days after the BBM rise on October 1, 2023, using the Wilcoxon Signed Ranks test with a sample of 10 companies and a data test of 110. On the test results, there were abnormal differences in return and trading volume activity before and after the rise in BBM prices, the results could help market participants understand market dynamics, find investment opportunities, and manage risk. With a rise in sales, this means investors respond to events so that the markets react. The findings support the theory of signals because investors see the announcement of a BBM rise as a signal that can affect the stock price.

## INTRODUCTION

The capital market is comprised of two primary segments: the stock market and the bond market. In the stock market, investors have the option to acquire company shares, thereby becoming stakeholders in the company. In the bond market, governments or companies can secure funds by issuing bonds, which investors then purchase. The presence of a capital market enables companies to access a more extensive source of funding beyond relying solely on bank loans or internal revenue. Beyond offering investment opportunities to financiers, the capital market also provides companies with the means to acquire capital for expanding businesses and undertaking projects. As asserted by Lawrence (2013), the capital market plays a pivotal role as one of the driving forces behind a country's economy.

Fluctuations in stock prices in the capital market reveal the inconsistency among capital market participants. The shifts in stock prices stem from investors' responses to information, encompassing both business-specific and overall economic factors. Capital market investors

typically seek information regarding a country's political and economic conditions, influencing potential changes in stock prices (Rinda et al., 2014).

Fuel oil (BBM) holds a crucial role in the daily lives of Indonesians. Transportation, business, and various domestic sectors rely on fuel as a fundamental commodity. Indonesia's fuel history is marked by challenges, opportunities, and transformations, influencing public policy, the environment, and the economy. Since the discovery of petroleum, fuel has served as Indonesia's primary energy source. Pertamina, the country's largest energy company, plays a pivotal role in fuel production, distribution, and management. However, a significant challenge for Indonesia is its reliance on imports to fulfill domestic needs, prompting shifts in policies and the exploration of more environmentally friendly alternative energy sources.

Changes in global crude oil prices and government policies regarding fuel subsidies or regulations play a significant role in shaping the capital market. Typically, the stock prices of energy-related companies or sectors impacted by oil prices tend to mirror fluctuations in global oil prices. When oil prices rise, it usually translates to increased share prices for oil and gas companies, whereas a decrease often leads to a decline. Additionally, government announcements regarding fuel subsidies, regulatory changes, or initiatives to reduce dependence on fossil fuels can have a notable influence on the capital market, particularly affecting the energy sector.

The Indonesian government has effectively implemented policies aimed at ensuring economic stability, which include regulations pertaining to fuel price adjustments. The objective behind the government's decision to raise fuel prices is to enhance the welfare of the populace and stimulate economic development within the nation. While the dynamics of the capital market may not be directly impacted, the increase in fuel prices remains linked to stock market activities (Akbar et al., 2019).

A rise in fuel prices has the potential to influence investors' decisions regarding buying and selling shares in the capital market. This, in turn, can impact the behavior and attitudes of investors engaged in trading shares, leading to a market response. The dissemination of information to consumers, issuers, and investors affects trading activities in the capital market. For instance, stock prices may fluctuate, either rising or falling, in the period preceding and following the receipt of information by market participants (Grenda et al., 2023).

Fluctuations in stock prices can prompt abnormal returns, which refer to returns earned by investors that deviate from their anticipated returns, potentially eliciting a market response. These market reactions can be assessed by comparing abnormal returns before and after a specific event or day. Additionally, market reaction can be gauged through trading volume activity, which serves as a tool for assessing market responses to information within the capital market by analyzing trading activity. Trading volume activity indicates how market prices adjust to changes in information. Securities experiencing high trading volumes typically yield significant stock returns (Liogu and Saerang, 2015).

The government has officially declared an upcoming fuel price hike scheduled to take effect on October 1, 2023. The adjustments involve Pertamax Non-Subsidized, increasing from IDR 13,300 to IDR 14,000 per liter, Pertamax Turbo from IDR 15,900 to IDR 16,600 per liter, Dexlite from IDR 16,350 to IDR 17,200 per liter, and Pertamax Dex from IDR 16,900 to IDR 17,900 per liter (Pertamina.com). Dexlite fuel has experienced the most significant fluctuations

this year, according to Pertamina data. At the beginning of the year in January 2023, the price was registered at IDR 16,150 per liter. It steadily declined until reaching a low of IDR 12,650 in June. However, in the subsequent months, the price rose again, reaching IDR 17,200 on October 1, 2023. Additionally, Pertamax Dex reached a second-highest record. Calculating between the lowest price in June, IDR 13,250, and the highest price in October, IDR 17,900, Pertamax Dex increased by 35%, equivalent to IDR 4,650. Meanwhile, the current price of Pertamax Dex rose by 6.8%, or Rp 1,150, from the initial price of Rp 16,750. Furthermore, as of October, Pertamax Turbo witnessed a 22% increase, or Rp 3,000, compared to the lowest price this year, which was Rp 13,250.

The surge in crude oil prices, which has remained at US$ 90 per barrel since September 8, 2023, has influenced the increase in fuel prices. At 14:00 WIB, the price of Brent crude oil increased to US$ 94.77/barrel, as reported by Refinitiv. Currently, WTI oil prices stand at US$ 91.28 per barrel. Oil prices have maintained their highest level in over a year since November 11, 2022. Following this, in early September, there was a notable spike in crude oil prices. Saudi Arabia has opted for a voluntary reduction in oil production by 1 million barrels per day (bpd) until the year-end, with a further decrease to 9 million barrels per day (bpd) in October, November, and December 2023. Additionally, Russia has decided to extend its voluntary cut of 300,000 barrels per day until December 2023. (cnbcindonesia.com).

Analyzing market responses before and after the fuel price hike on October 1, 2023, reveals potential consequences. The escalation in fuel prices may result in increased operational expenses for transportation companies, including airlines, land, and sea transport entities. Such a scenario can directly affect both individual travel costs and distribution expenses for companies. In order to gain a clearer understanding of the policy's impact, the researcher holds stocks in the transportation and logistics sector, an industry heavily reliant on fuel for its operations.

Research conducted in 2016 by Desi & Silvana and in 2020 by Ketut et al. shows that there is no substantial variation in Trading Volume Activity (TVA) before and after the announcement of the gasoline price hike, nor is there a discernible change in abnormal returns during each occurrence. In contrast, studies by Stesia & Ivonne (2014) and Siti Choriliyah et al. (2016) show that there was a notable difference in Trading Volume Activity (TVA) and average abnormal returns between the time before and after the fuel reduction announcement.

The researchers in this study selected a research topic that looked at how rising fuel prices affected stock returns because of a variety of relevant factors. More precisely, businesses that depend heavily on fossil fuels are believed to be vulnerable to growing fuel costs. Moreover, alterations in the stock prices of specific issuers could indicate how the capital market responds to the rise in fuel prices. This study aims to ascertain any variations in Abnormal Return and Trading Volume Activity (TVA) prior to and following the announcement of the fuel price hike. Additionally, it seeks to explore the Indonesian capital market's reaction in the case of a gasoline price increase. Giving investors relevant information to utilize as a guide when deciding what to buy and sell in the capital market is the study's main objective. Therefore, the study's question is whether there is a significant positive average abnormal return and trading

volume activity (TVA) for the LQ 45 Transportation Sub Sector stocks before, during, and after the fuel price increase event on October 01, 2023.

## RESEARCH METHODS

This research is an event study that specifically addresses the October 1, 2022, fuel price hike (BBM) and its effects on market responses in the transportation and logistics companies industry. This study compares the trading volume activity (TVA) and abnormal return (AR) of enterprises in the transportation and logistics industry before and after the October 1, 2023, fuel price hike.

Sample, Population, and Sampling Procedures. 37 logistics and transportation firms that are listed on the Indonesia Stock Exchange (IDX) make up the study's population. corporations in the Transportation and Logistics sector listed on the IDX, corporations with complete stock prices for the entire 2023 period, and enterprises defined as large with significant operating experience were the particular criteria used in a purposive sampling technique. As a result, the study used ten companies as its sample size. There are 110 total data points for analysis when taking into account observations made five days prior to and five days following the fuel price hike (BBM). The Indonesia Stock Exchange website (https://idx.co.id) provided secondary data for this investigation.

This research employs the quantitative data collection method, characterized by a research approach that utilizes numerical data and relies on statistical and mathematical analysis to comprehend and interpret the studied phenomenon. Secondary data serves as the source for this research, acquired indirectly through intermediary channels, particularly the Indonesia Stock Exchange website.

In this research, a comparison will be made between data before and after the announcement of fuel price increases. If the data follows a normal distribution, the data analysis will employ the t-test. However, in cases where the data does not exhibit a normal distribution, the Wilcoxon Signed Ranks test will be utilized.

## RESULTS AND DISCUSSION

### Deskripsi Analisis

The initial analytical step in this research is referred to as descriptive analysis. Descriptive analysis aims to furnish general descriptive information regarding fuel prices before and after the October 1, 2023, increase. Table 1 presents the mean, minimum, maximum values, and standard deviation for both Abnormal Return and Trading Volume Activity during the study period.

**Table 1**
**Descriptive analysis**

| Descriptive Statistics | | | | | |
|---|---|---|---|---|---|
| | N | Minimum | Maximum | Mean | Std. Deviation |
| AR | 110 | -1,35178 | 5,27494 | ,0000002 | ,60749955 |
| TVA | 110 | ,00009 | ,03009 | ,0017462 | ,00325800 |
| Valid N (listwise) | 110 | | | | |

Source: data processed 2024

Based on Table 1, the Abnormal Return and Trading Volume Activity (TVA) were examined in 110 samples before and after the fuel price increase. The Abnormal Return showed an average of 0.0000002, ranging from a minimum value of -1.35178 to a maximum value of 5.27494, with a standard deviation of 0.60749955. Meanwhile, Trading Volume Activity (TVA) exhibited an average of 0.0017462, with a minimum value of 0.000009, a maximum value of 0.03009, and a standard deviation of 0.00325800.

For the Abnormal Return (AR) variable before and after the fuel price increase, the standard deviation value exceeds the mean value. This implies a considerable variation in the data, indicating that any given average cannot be regarded as a representative sample for all the data.The next variable is Trading Volume Activity (TVA) which has similar results to the AR variable, namely, the standard deviation value is greater than the mean value, this indicates that there is a fairly high data variation which means that any available average cannot be considered as a sample that represents all data.

**Normality Test**

The normality test is a technique used to determine whether a data set has a normal distribution or not, to determine this data is done using the Shapiro-Wilk Test conducted in this study with a significance level of 0.05. The basic decision for making is :

1. If the significance level is >0.05 then the data will be normally distributed.
2. If the significance level is <0.05 then the data will not be normally distributed.

**Table 2**
**Data Normality Test Results**

| Tests of Normality | | | | | | |
|---|---|---|---|---|---|---|
| | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
| | Statistic | Df | Sig. | Statistic | df | Sig. |
| AR | ,378 | 110 | ,000 | ,375 | 110 | ,000 |
| TVA | ,306 | 110 | ,000 | ,435 | 110 | ,000 |
| a. Lilliefors Significance Correction | | | | | | |

source: data processed 2024

From the table provided, it is evident that the significance value for Abnormal Return before and after the fuel price hike is 0.000, which is less than 0.05. This indicates that the data is not normally distributed. Similarly, the significance value for Trading Volume Activity

before and after the fuel price increase is also 0.000, less than 0.05, suggesting that the data is not normally distributed.

**Wilcoxon Signed Rank Test**

The Wilcoxon Signed Ranks test was used to test the two hypotheses in this study. The test results for the first and second hypotheses are presented in the following table:

**Table 3**
**Uji Peringkat Wilcoxon Signed Rank Data Abnormal Return dan Trading Volume Activity (TVA)**

| Ranks | | | | |
|---|---|---|---|---|
| | | N | Mean Rank | Sum of Ranks |
| TVA - AR | Negative Ranks | 91[a] | 46,21 | 4205,00 |
| | Positive Ranks | 19[b] | 100,00 | 1900,00 |
| | Ties | 0[c] | | |
| | Total | 110 | | |
| a. TVA < AR | | | | |
| b. TVA > AR | | | | |
| c. TVA = AR | | | | |

The table indicates that there are 91 samples with negative ranks, having a mean rank of 46.21 and a sum of ranks totaling 4,205.00. This signifies that 91 samples exhibited a decline in both Abnormal Return and Trading Volume Activity. The mean rank, or the average decrease, is 46.21. However, the number of negative ranks is 4,205.00. On the other hand, there are 19 samples with positive ranks, boasting a mean rank of 100.00 and a sum of ranks reaching 1,900.00. This implies that 19 samples are undergoing an increase in both Abnormal Return and Trading Volume Activity. The mean rank, or the average increase, is 100.00. Nevertheless, the number of positive ranks is 1,900.00. In this table, the ties value is 0, leading to the conclusion that there is an identical value between Abnormal Return and Trading Volume Activity before and after the fuel price increase event in 2023.

**Table 4**
**Wilcoxon Signed Rank Test Results Abnormal Return and Trading Volume Activity (TVA) Data**

| Test Statistics | |
|---|---|
| | TVA - AR |
| Z | -3,437[b] |
| Asymp. Sig. (2-tailed) | ,001 |
| a. Wilcoxon Signed Ranks Test | |
| b. Based on positive ranks. | |

Table 4 shows the Wilcoxon signed rank test results with a significance level of 0.05. The basic decision is :

1. If the Asym.Sig level <0.05 then the Hypothesis is accepted.

2. If the Asym.Sig level > 0.05 then the Hypothesis is rejected.

Table 4 displays a z-score result of -3.437 with a significance value of 0.01 < 0.05. From this, we can infer that Hypotheses 1 and 2 are accepted, signifying a distinction in the average Abnormal Return and Trading Volume Activity before and after the fuel price increase.

**Discussion**

Analyzing the results of the Wilcoxon Signed Ranks test reveals a notable difference in Abnormal Return before and after the fuel price increase. This confirms that the market's response to the fuel price increase event carries substantial informational content, prompting investors to react upon the announcement. Consequently, observing the market's reaction to the fuel price increase announcement implies that the signal from the event prevents investors from anticipating abnormal occurrences. This finding aligns with previous studies by Stesia & Ivonne (2014) and Siti Choriliyah et al. (2016), which also demonstrated a significant difference in the average abnormal return before and after the announcement of both declining and increasing fuel prices.

Trading Volume Activity mirrors Abnormal Return, indicating differences before and after the fuel price increase. This affirms that the announcement of the fuel price increase triggered heightened buying and selling activities among investors on the Indonesia Stock Exchange (IDX). As buying and selling activities increase, investors respond to unfolding events, causing a reaction in the market. The findings of this study align with signal theory, as investors perceive the announcement of a fuel price increase as a signal capable of influencing stock prices. This research is consistent with the studies conducted by Stesia & Ivonne (2014) and Siti Choriliyah et al. (2016), which demonstrate variations in Trading Volume Activity before and after the announcement of both declining and increasing fuel prices.

## CONCLUSION

Previous research on the impact of increasing fuel prices on the movement of Transportation and Logistics sector stocks concludes that there are significant differences in the AR and TVA variables of these stocks in the period before and after the announcement of rising fuel prices. This suggests that the government's policy of increasing fuel prices as of October 1, 2023, influences market conditions, eliciting reactions, particularly in the Transportation and Logistics sector stocks.

Investors are expected to consider published information when making investment decisions. This is necessary to determine the best way to analyze the economic value of the published announcement data. Investors are expected to look at information from multiple perspectives, not just one. For example, they should look at the increase in fuel prices in Indonesia and also understand information about fuel prices worldwide.

Future research is anticipated to broaden its scope, encompassing a wider range of studies. Additionally, employing calculation methods other than Wilcoxon Signed Rank may introduce additional factors influencing the level of abnormal stock returns and trading volume activity for companies. Given the limited sample in this study, subsequent research endeavors

will strive to include all companies listed on the Indonesia Stock Exchange for enhanced accuracy.

## BIBLIOGRAPHY

Tanza, A., Maulidya, R. P., Junita, T. P., & Widodo, E. (2023). Analisis Pengaruh Kenaikan Harga BBM Terhadap Pergerakan Saham Sektor Transportasi dan Logistik. Dialektika: Jurnal Ekonomi dan Ilmu Sosial, 8(1), 52-62.

Lawrence, S. S. (2013). Pengaruh variabel makro ekonomi dan harga komoditas terhadap Indeks Harga Saham Gabungan di Indonesia. Finesta, 1(2), 18-23.

DP, E. N. (2014). Analisis Pengaruh Kenaikan Harga Bahan Bakar Minyak (BBM) terhadap Pergerakan Harga Saham (Seminggu Sebelum dan Sesudah Kenaikan BBM) Tahun 2013. Jurnal Ekonomi, 22(3), 168-182.

Akbar, E. P., Saerang, I. S., & Maramis, J. B. (2019). Reaksi pasar modal terhadap pengumuman kemenangan Presiden Joko Widodo berdasarkan Keputusan KPU Pemilu Periode 2019-2024 (Studi pada perusahaan BUMN yang terdaftar di BEI). JMBI UNSRAT (Jurnal Ilmiah Manajemen Bisnis dan Inovasi Universitas Sam Ratulangi)., 6(2).

Manampiring, G. L., Saerang, I. S., & Samadi, R. L. (2023). REAKSI PASAR MODAL TERHADAP KENAIKAN HARGA BBM PADA PERUSAHAAN SUB SEKTOR TRANSPORTASI DARAT DI BURSA EFEK INDONESIA. Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi, 11(4), 294-301.

Liogu, S. J., & Saerang, I. S. (2015). Reaksi Pasar Modal terhadap Pengumuman Kenaikan Harga BBM atas Saham LQ 45 pada Tanggal 1 November 2014. Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi, 3(1).

Chavali, K., ALAM, M., & ROSARIO, S. (2020). Stock market response to elections: An event study method. The Journal of Asian Finance, Economics and Business, 7(5), 9-18.

Choriliyah, S., Sutanto, H. A., & Hidayat, D. S. (2016). Reaksi Pasar Modal terhadap Penurunan Harga Bahan Bakar Minyak (BBM) atas Saham Sektor Industri Transportasi di Bursa Efek Indonesia. Journal of Economic Education, 5(1), 1-10.

Ahmad, K. (2004). Dasar-dasar manajemen Investasi dan Portofolio. Jakarta: Rineka Cipta.

Harjito, M. S. D. D. A., & Martono, S. U. (2007). Manajemen Keuangan Edisi Pertama Cetakan Kedua. Yogyakarta Penerbit Ekonisia.

Juliana, S., & Saerang, I. S. (2015). Capital Market Reactions Toward The Announcement of Increasing Fuel Prices Over LQ45 Stock on November 1st, 2014. Jurnal EMBA, 3(1), 1274-1283.

Jogiyanto, H. (2010). Studi Peristiwa: Menguji Reaksi Pasar Modal Akibat Suatu Peristiwa. Yogyakarta: BFFE.

Fahmi, I. (2012). Manajemen Investasi: Teori dan Soal Jawab. Jakarta: Salemba Empat, 189.

Sunariyah. 2011. Pengantar Pasar Modal. Edisi Keenam. Yogyakarta: UPP STIM YKPN.

Yuliana, I. (2010). Investasi produk keuangan syariah. Malang: UIN-Maliki Press

Hartono, Jogityanto. 2005. Teori Portofolio dan Analisis Investasi, BPFE Yogyakarta, Edisi Kelima, Yogyakarta.

Pramana, Andi. 2012. Analisis Perbandingan Trading Volume Activity dan Abnormal Return Saham Sebelum dan Sesudah Pemecahan Saham. Jurnal Ekonomi dan Akuntansi. Fakultas Ekonomika dan Bisnis Universitas Diponegoro. Semarang. http://eprints.undip.ac.id/35804/1/JURNAL_ANDI.pdf. Diakses Januari, 27, 2024. Hal.15-54.

Dordi, T., & Weber, O. (2019). The impact of divestment announcements on the share price of fossil fuel stocks. Sustainability, 11(11), 3122.

HARGA, T. P. (2016). Events Study: the Effect of Oil Price Changes in Jokowi's Government to Share Price on Manufacturing Companies Listed in Indonesia Stock Exchange.

Anita, D., & Veronica, S. L. (2016). Analisis Reaksi Pasar Modal Dalam Perubahan Harga Bahan Bakar Minyak (BBM) Masa Pemerintahan Susilo Bambang Yudhoyono (Sby) Pada Sektor Transportasi Menggunakan Metode Event Study. Kurs: Jurnal Akuntansi, Kewirausahaan dan Bisnis, 1(2), 237-256.

Andarini, D., & Rahardjo, T. (2016). Analisis reaksi pasar modal terhadap perubahan harga bbm (event study kenaikan dan penurunan harga BBM pada perusahaan food and beverages yang terdaftar di Bursa Efek Indonesia). Jurnal Ilmiah Mahasiswa FEB, 3(2).

Dewi, N. P. S. P., & Wirawati, N. G. P. (2022). Reaksi Pasar Terhadap Peristiwa Kenaikan Harga Bahan Bakar Minyak (BBM) Di Bursa Efek Indonesia. JAKA (Jurnal Akuntansi, Keuangan, dan Auditing), 3(2), 332-343.