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Market responses in Indonesia to the Russia—Ukraine War Announcment: Evidence from LQ45 Companies (2020–2024)

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ABSTRACT

Purpose: _This study aims to examine whether the Indonesian capital market experienced significant differences in average abnormal return (AAR) and average trading volume activity (ATVA) before and after the announcement of the Russia–Ukraine war._ **_Methodology:_** _The research employs an event study approach involving 24 companies consistently listed in the LQ45 index during the 2020–2024 period. Abnormal returns were calculated using the Market-Adjusted Return model, while trading volume activity was measured as the ratio of traded shares to outstanding shares. Due to data non-normality, the Wilcoxon Signed Rank Test was applied for hypothesis testing._ **_Results:_** _The results indicate that the announcement of the Russia–Ukraine war did not significantly affect average abnormal returns, but it had a significant impact on trading volume activity, reflecting changes in investor behavior._ **_Novelty:_** _This study extends the event window to a four-year period, offering a long-term perspective on capital market responses to geopolitical shocks. Findings: Investors tended to reduce trading activity following the war announcement, signaling increased caution and declining market liquidity._ **_Originality:_** _The originality of this study lies in its long-horizon event study design focusing on Indonesia's leading stocks._ **_Conclusions:_** _Geopolitical events may not immediately alter stock returns but can significantly influence market liquidity and trading behavior._ **_Type of Paper:_** _Empirical Quantitative Research Paper._

INTRODUCTION

Global economic and political events have long influenced investor sentiment and market stability. The outbreak of COVID-19 in early 2020 caused significant disruptions across industries, and before recovery was fully achieved, the world faced new uncertainty with the Russia–Ukraine war declared on February 24, 2022. This conflict has triggered global economic turbulence, particularly in the energy and food sectors, since Russia is one of the largest crude oil exporters and Ukraine a major wheat supplier (International Energy Agency, 2022). For Indonesia, which imports substantial wheat and relies heavily on global energy markets, such shocks are expected to affect its capital market performance (GoodStat, 2020).

The motivation for this study arises from the need to examine how the Indonesian stock market, especially highly liquid companies in the LQ45 index, responds to geopolitical shocks. The LQ45 index, consisting of top firms with large capitalization and consistent trading activity, is a key barometer for investors and reflects the efficiency of the Indonesian market. Understanding its reaction provides insights into whether geopolitical announcements carry information value for investors in emerging markets.

Market efficiency can be observed from the ability of investors, as market participants, to access and process information circulating in the market at relatively low cost and with ease. One approach frequently employed to measure market efficiency is the event study. An event study is a method designed to examine efficiency by investigating the relationship between publicly released information and the corresponding security prices (Hadi, 2015). The procedure typically involves calculating the abnormal return (AR), which represents the difference between the actual return and the expected return, as well as assessing trading volume activity (TVA), defined as the total value of stock transactions including sales and purchases conducted by investors (Sutrisno, 2000, as cited in Mailangkay, 2021). To evaluate the significance of abnormal return and TVA, additional statistical testing is required, with difference tests being one of the most commonly applied techniques.

The variables examined in this study consist of Average Abnormal Return (AAR) and Average Trading Volume Activity (ATVA). AAR measures the deviation between actual returns and expected returns over the event period and serves as an indicator of market price reaction to new information (Jogiyanto, 2022). A significant AAR suggests that investors perceive the event as having informational value that influences firm valuation. Meanwhile, ATVA reflects changes in market liquidity by comparing the number of shares traded to the total number of shares outstanding. According to Husnan (2015: 415), trading volume can serve as an important measure of investor response because it reflects the level of market participation and confidence in the face of new information. A significant change in ATVA indicates altered investor behavior, such as increased caution or speculative activity, in response to the event. Together, these two indicators provide a comprehensive assessment of how the Indonesian stock market—both in terms of price and liquidity—responded to the Russia–Ukraine war announcement.

In addition to market efficiency, this study also draws upon Signaling Theory, which explains how information acts as a signal that influences investor perception and decision-making (Spence, 1973). In the context of capital markets, geopolitical events such as the Russia–Ukraine war can serve as negative signals that increase uncertainty and risk perception among investors. These signals may not necessarily alter intrinsic firm values but can significantly affect investor behavior, leading to fluctuations in trading activity and liquidity. As supported by recent research, geopolitical uncertainty often induces investors to adjust their portfolios more cautiously, reflecting their interpretation of external events as warning signals about potential economic instability (Al-Awadhi et al., 2025). Therefore, integrating market efficiency and signaling theory provides a comprehensive framework to analyze both price reactions and behavioral responses within the Indonesian capital market.

In relation to theoretical foundations, this research is grounded in the Efficient Market Hypothesis (EMH) proposed by Fama (1970). The EMH asserts that stock prices fully reflect all available information, meaning that no investor can consistently achieve abnormal returns through publicly available data. Under the semi-strong form of efficiency, market prices are expected to adjust rapidly to new public information, such as geopolitical events or policy announcements. Therefore, if the Indonesian capital market operates efficiently, the announcement of the Russia–Ukraine war should be immediately absorbed into stock prices, resulting in an insignificant change in abnormal returns. Conversely, any significant deviation or delayed reaction would indicate an inefficiency in information processing. By testing market reactions through abnormal return and trading volume activity, this study provides empirical evidence on the degree of informational efficiency in the Indonesian capital market in the face of global uncertainty.

Despite its importance, the problem of whether the Russia–Ukraine war significantly influenced the Indonesian capital market remains unresolved. Previous research provides mixed results. For instance, some studies reported significant abnormal returns surrounding the war announcement (Yulianti et al., 2023), while others found no evidence of such reactions (Kusuma et al., 2022). Findings on trading volume activity are also inconsistent: Priyambodo and Yunita (2023) revealed significant changes in market liquidity, whereas Ferli et al., (2024) argued that the event had little effect. These contradictory findings highlight the need for further exploration with a broader event window.

To bridge this gap, the present study adopts a longer observation period of four years (2020–2024) and focuses on firms consistently listed in the LQ45 index. The purpose is to analyze empirically whether significant differences exist in average abnormal return (AAR) and average trading volume activity (ATVA) before and after the Russia–Ukraine war announcement. This contributes to the literature by offering a long-term perspective on geopolitical risk and its impact on emerging capital markets, while also providing practical insights for investors and policymakers.

METHOD

ANALYTIC METHOD

This study employed a quantitative research design using the event study approach, which is widely recognized as suitable for assessing market reactions to specific information disclosures. The research was conducted in Indonesia and covered a four-year period from 2020 to 2024, including two years before and two years after the official announcement of the Russia–Ukraine war on February 24, 2022. The event study method was selected because it allows researchers to measure whether an event conveys information that affects security prices and trading behavior. According to Kothari and Warner (2007), the event study framework remains one of the most effective methodologies for testing market efficiency and evaluating how new information is incorporated into stock prices.

The object of this study consists of companies consistently listed in the LQ45 index from 2020 to 2024, representing highly liquid and well-capitalized firms that are considered benchmarks of the Indonesian capital market. The research variables include abnormal return (AR) and trading volume activity (TVA), both of which serve as proxies for market reaction. Abnormal return was derived from the difference between actual return and expected return using the Market-Adjusted Return model, while trading volume activity was calculated as the ratio of daily traded shares to listed shares.

The sample selection used purposive sampling, with criteria that companies must have been consistently included in the LQ45 index during the entire observation period. Based on these criteria, 24 firms were selected as the final sample. Data were collected from secondary sources, primarily the Indonesia Stock Exchange (IDX) official website www.idx.co.id, Yahoo Finance, and Investing.com. The materials required included historical daily closing prices, trading volumes, and listed shares of the sample companies. Data were extracted and processed using Microsoft Excel for preliminary calculations, and statistical analysis was conducted using SPSS version 30.

Data collection techniques relied on documentation, specifically by downloading daily stock prices and trading volumes for each sample company. The period of observation was divided into two windows: two years before and two years after the announcement date, with February 24, 2022 set as the event date (t0).

In terms of data analysis, abnormal returns were first calculated for each firm, then averaged to obtain the Average Abnormal Return (AAR). Similarly, daily trading volume activity was averaged to compute the Average Trading Volume Activity (ATVA). Prior to hypothesis testing, data were subjected to the Kolmogorov-Smirnov normality test. Since the data were not normally distributed, the Wilcoxon Signed Rank Test was employed to assess differences in AAR and ATVA before and after the event. This nonparametric method is suitable for paired samples and does not assume normal distribution. The significance level was set at 5% ($\alpha = 0.05$).

The procedures outlined in this study, including variable definitions, data sources, calculation methods, and statistical tools, provide a clear framework that enables replication. By applying a systematic event study approach with rigorous statistical testing, this research ensures reliability and validity in evaluating the Indonesian capital market's reaction to the Russia–Ukraine war announcement.

RESULTS AND DISCUSSION

RESULTS

This section presents the empirical findings of the study, systematically describing statistical results and their interpretations. The results focus on the behavior of the Indonesian capital market before and after the announcement of the Russia–Ukraine war on February 24, 2022, with special emphasis on average abnormal return (AAR) and average trading volume activity (ATVA). Table 1 shows the descriptive statistics of AAR before and after the event. The mean AAR before the announcement was positive, while after the announcement it declined slightly into negative values. This indicates a modest decrease in investors' expectations.

Table 1. Descriptive Statistics of Average Abnormal Return (AAR)

Period	N	Mean	Std. Deviation	Minimum	Maximum
Before Event	483	0.000272	0.0066888	-0.0192	0.0442
After Event	483	-0.000021	0.0057366	-0.0171	0.0255

Source: Processed in SPSS 30, 2024

Similarly, Table 2 presents ATVA statistics. The decline in mean ATVA after the event suggests a contraction in market liquidity, implying that investors reduced trading activity in response to heightened geopolitical risk.

Table 2. Descriptive Statistics of Average Trading Volume Activity (ATVA)

Period	N	Mean	Std. Deviation	Minimum	Maximum
Before Event	483	0.002134	0.0011408	0.0007	0.0097
After Event	483	0.001448	0.0006824	0.0004	0.0061

Source: Processed in SPSS 30, 2024

Although both AAR and ATVA showed declines after the event, the reduction in ATVA was more significant, suggesting that trading behavior was more sensitive to the war announcement compared to stock returns.

HYPOTHESIS TESTING RESULTS

The Wilcoxon Signed Rank Test was used since the data were not normally distributed.

Table 3. Wilcoxon Signed Rank Test for AAR and ATVA

Variable	Z-value	Asymp. Sig. (2-tailed)	Conclusion
AAR	-0.455	0.649	Not Significant
ATVA	-10.230	<0.001	Significant

Source: Processed in SPSS 30, 2024

Findings indicate no significant differences in average abnormal returns before and after the war announcement, implying that the market did not perceive the news as containing new information affecting firm valuation. Conversely, trading volume activity decreased significantly, showing investor hesitation and a decline in liquidity.

DISCUSSION

The empirical results of this study provide insights into how the Indonesian capital market, particularly firms in the LQ45 index, responded to the Russia–Ukraine war announcement. The absence of significant differences in average abnormal return (AAR) suggests that investors did not perceive the announcement as containing new information that could affect the intrinsic value of Indonesian firms. This finding is consistent with the Efficient Market Hypothesis (Fama, 1970), which posits that in semi-strong form efficiency, publicly available information is rapidly incorporated into prices, leaving little room for abnormal gains. In the context of LQ45 companies, which represent large-cap and fundamentally stable firms, investors may have viewed their performance as resilient to external geopolitical shocks.

However, the significant decline in average trading volume activity (ATVA) indicates that investor behavior was affected in terms of liquidity. This finding supports signaling theory (Spence, 1973), where geopolitical events serve as negative signals that trigger caution among investors. The reduced trading volumes reflect a “wait and see” attitude, where market participants refrain from active transactions under uncertain conditions. This aligns with Priyambodo and Yunita (2023), who found significant changes in trading activity despite limited evidence of abnormal returns, suggesting that liquidity is often more sensitive to external shocks than prices.

When compared with earlier studies, the results of this research both confirm and challenge prior evidence. For instance, the absence of abnormal return significance corresponds to the findings of Kusuma et al. (2022), but contrasts with Yulianti et al. (2023), who documented abnormal returns in shorter observation windows. The difference may be explained by this study’s extended event window of four years, which smooths short-term volatility and captures more stable long-term market adjustments. Thus, this research contributes to literature by demonstrating that while short-term shocks may produce temporary return fluctuations, long-term observations reveal a more muted price reaction but persistent effects on liquidity.

From an economic development perspective, the findings are important in two ways. First, they highlight the resilience of Indonesia’s capital market prices to geopolitical uncertainty, reflecting investor confidence in the country’s blue-chip firms. Second, they underscore the vulnerability of market liquidity, which is a critical factor in sustaining investment flows. Reduced liquidity can hinder capital mobilization and increase transaction costs, posing challenges for economic stability. By emphasizing the divergence between price and volume responses, this study contributes a nuanced understanding of how emerging markets absorb global shocks.

Moreover, the results can also be interpreted through the lens of Economic Policy Uncertainty (EPU) as proposed by Baker et al. (2016). Their research demonstrates that heightened uncertainty stemming from geopolitical tensions, policy changes, or macroeconomic shocks can reduce investment, employment, and market participation, as investors become more risk-averse and prefer holding liquid assets. The observed decline in trading volume following the Russia–Ukraine conflict aligns with this framework, indicating that investors in emerging markets such as Indonesia react to uncertainty not necessarily by repricing assets, but by reducing trading activity. Hence, the behavioral response observed in this study can be viewed as an outcome of increased global economic policy uncertainty transmitted through international financial channels.

In conclusion, this research adds to the body of knowledge by showing that geopolitical events may not always alter stock returns but can significantly influence market liquidity. This insight enriches economic development studies, as it reveals the dual dimension of market reactions price stability versus liquidity fragility that policymakers and investors must consider in managing risks from external shocks.

CONCLUSION

This study examined the impact of the Russia–Ukraine war announcement on the Indonesian capital market, focusing on firms consistently listed in the LQ45 index between 2020 and 2024. The results show that while the event did not significantly affect average abnormal return (AAR), it had a significant impact on average trading volume activity (ATVA). These findings indicate that stock prices of large and liquid companies remained relatively stable, but investor trading behavior shifted as market participants became more cautious in response to global uncertainty.

Theoretically, this research contributes to the development of knowledge in two important ways. First, it reinforces the relevance of the Efficient Market Hypothesis by demonstrating that prices may not always adjust strongly to geopolitical events when information is already anticipated or deemed less relevant to firm fundamentals. Second, it adds to signaling theory by showing that market liquidity reflected in trading volume that can serve as a more sensitive indicator of investor reactions than price movements alone. This dual perspective provides a more comprehensive understanding of market behavior in emerging economies.

The study concludes that while stock prices remained largely unaffected, trading volumes significantly declined following the Russia–Ukraine war announcement. This divergence suggests that geopolitical shocks affect liquidity more than prices in emerging markets. The findings contribute theoretically by reinforcing both the Efficient Market Hypothesis and signalling theory, and practically by offering insights for policymakers and investors about liquidity risks during crises.

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