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The Red Sea Conflict and Market Reactions: Examining the Role of Military Strength in Financial Markets

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Abstract: This study examines market reactions to the US-Houthi conflict on January 11, 2024, across various markets, regions, and industries within the financial sector, emphasizing the role of military strength in shaping global financial responses. An event study methodology is applied to a sample of 3,239 financial sector companies, observing market reactions over multiple event windows: a 15-day pre-event phase and a 15-day post-event phase surrounding the conflict announcement. Cross-sectional analysis is conducted to assess how military strength impacts financial market reactions. The results indicate significant market vulnerability to the US-Houthi conflict, particularly during the period from the event day on January 11, 2024, to the post-event phase, with developed markets experiencing the greatest impact. While American markets showed mixed responses, European, Middle Eastern, and African markets faced notable negative effects due to disrupted trade routes; Asian markets also showed negative reactions, though to a lesser extent. The banking industry recorded the most adverse reaction within the financial sector, and military strength emerged as a critical factor influencing investor behavior in response to the conflict. These findings highlight the need for policymakers to enhance financial market stability by considering military strength and trade route security in risk mitigation strategies, particularly in times of geopolitical uncertainty, such as the period surrounding the US-Houthi conflict in early 2024.

Keywords: US-Houthi conflict; market reaction; event study; financial sector; military strength

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1 Introduction

The world has experienced heightened geopolitical risks in the last decade compared to previous eras, and the intensity of these risks has become a significant concern for investors, especially in recent events such as the US-China trade war, the Israel-Hamas conflict, and the Russia-Ukraine war. Among these events, the financial sector is frequently negatively impacted by geopolitical risks (Boubaker et al. 2023; Chen and Sun 2024; Hunjra et al. 2024; Lesmana and Yudaruddin 2024a; Pandey et al. 2024; Polat et al. 2023; Polat, Başar, and Ekşi 2024; Shi, Wang, and Ke 2021; Vu et al. 2023; Yudaruddin et al. 2024a,b). Geopolitical risks are closely linked to the financial sector due to their significant impact on market stability and investor behavior. Events such as wars, trade conflicts, and political upheavals create uncertainty, leading to market volatility and disrupting financial markets. For instance, geopolitical conflicts can affect commodity prices, including crucial resources like oil and natural gas, which in turn influence inflation and economic growth (Babar, Ahmad, and Yousaf 2023; Yousaf et al. 2023; Yudaruddin and Lesmana 2024b; Yasmeen and Shah 2024). Additionally, these events often result in shifts in government policies and regulatory frameworks, further destabilizing financial markets. Investor sentiment tends to react negatively to geopolitical tensions, causing fluctuations in stock prices, foreign exchange rates, and bond yields (Assaf, Gupta, and Kumar 2023; Ngo, Nguyen, and Hoang 2024; Hassan et al. 2022; Jawadi et al. 2024). Consequently, the financial sector, including banking, investment, and insurance industries, becomes particularly vulnerable to the adverse effects of geopolitical risks, as seen in various recent global conflicts. This relationship underscores the importance of effective risk management strategies for financial institutions to mitigate the impacts of geopolitical uncertainties.

Recently, the US-Houthi conflict has intensified as the US and the UK have launched a series of strikes on Yemen, targeting the Iran-aligned Houthi rebels who have been attacking international shipping in the Red Sea. The Houthis, who support the Palestinian group Hamas, condemned these strikes as “barbaric” and issued a statement declaring that “all US and UK interests have become ‘legitimate targets’.”¹ This conflict is part of a broader regional power struggle, with the Houthis receiving backing from Iran, and it has significant implications for international maritime

¹ <https://www.aljazeera.com/news/2024/1/12/world-reacts-to-us-uk-attacks-on-houthi-targets-in-yemen> [Last accessed on March 25, 2025].

security and geopolitical stability.² The Houthis' threats underscore the potential for further escalation, impacting not only the region but also global trade routes and international relations. Considering the escalating conflict and the Houthis' threats against US and UK interests, it is crucial to understand the broader implications beyond immediate security concerns.

One significant aspect that warrants examination is the impact of such geopolitical tensions on the financial sector. Therefore, there are three main motivations in this study. First, several studies have indicated that the financial sector, particularly banking, is highly vulnerable to conflicts such as wars. Military deployments at border areas often serve as "bad" news for investors in the banking sector (Boubaker et al. 2023; Martins and Cró 2023; Vu et al. 2023; Yudaruddin and Lesmana 2024a). However, most of these studies focus on the Russia-Ukraine conflict, which involves financial sanctions between Russia and the European Union. This raises the question of how the financial sector market reacts to conflicts that do not involve financial sanctions, creating a research gap that needs to be addressed. Second, previous research has primarily concentrated on the banking industry, failing to provide a comprehensive view of the entire financial sector.

Additionally, factors such as military strength, which are pertinent to war, have not been thoroughly explored in previous studies. Third, the US-Houthi conflict is strategically significant due to its location along major trade routes between Asia, Africa, Europe, and America. Essallamy, Bari, and Kotb (2020) and Wu et al. (2022) highlighted the crucial role of the Red Sea route through the Suez Canal, analyzing its effectiveness and cost efficiency compared to the Cape of Good Hope route. Recently, however, tensions in the Red Sea have led companies in Asia to prefer the Cape of Good Hope route to avoid risks, resulting in a sharp decline in Suez Canal transit and an increase in Cape of Good Hope traffic. The Panama Canal has also experienced a decline, albeit less severe than the Suez Canal.³ Yudaruddin et al. (2025) showed that the US-Houthi conflict had a negative impact on the market in the consumer cyclical sector. This study thus seeks to assess the potential negative impact of the US-Houthi conflict on the financial sector's stock market.

To address this gap, our study is the first to investigate market reactions to the US-Houthi conflict within the financial sector. We analyze market reactions from 15 days before to 15 days after the event, using January 11, 2024, as the event day. Our research findings address the gap in previous research by demonstrating that investors in the financial sector exhibit a "negative" sensitivity to war. This is evident

2 <https://edition.cnn.com/middleeast/live-news/israel-hamas-war-gaza-news-01-11-24/index.html> [Last accessed on March 26, 2025].

3 <https://www.imf.org/en/Blogs/Articles/2024/03/07/Red-Sea-Attacks-Disrupt-Global-Trade> [Last accessed on March 25, 2025].

from the significant negative market reaction to the US-Houthi conflict and its aftermath. These results reinforce previous findings that the financial system is highly integrated and that macroeconomic shocks increase systemic risk. Furthermore, we find that the banking industry exhibits higher vulnerability compared to other industries. Our results confirm that the banking market reacts significantly negatively to global uncertainties, including geopolitical risks, even in the absence of financial sanctions. Our findings also provide insights for companies regarding the importance of military strength and company characteristics in managing geopolitical risks. We find that while military power is not a critical factor in the absence of war, it becomes vital during conflicts, influencing market reactions to geopolitical risks.

This paper is organized into five sections. The relevant literature is briefly discussed in Section 2. The methodology is presented in Section 3. In Section 4, the data and main empirical findings are displayed. The last section concludes.

2 Literature Review

In recent years, many academics and practitioners have analyzed the impact of geopolitical conflicts particularly war events have far-reaching effects across various sectors. Tajaddini and Gholipour (2023) found that stock markets declined more in countries with strong trade ties to Russia and Ukraine during the Russia-Ukraine war, though trade openness mitigated the impact. Similarly, Boubaker et al. (2022) and Bounboua and Yati'e (2022) reported that the Ukraine-Russia war caused global stock declines, hitting globalized economies, neighboring countries, and UN critics hardest, while NATO markets showed resilience. Martins and Cró (2023) illustrated this by highlighting the disruptions in flight routes caused by conflicts, which led airlines to avoid airspace near war-torn regions. Consequently, these limitations on flight routes have resulted in deteriorating aviation performance for companies operating in such areas. Similarly, Yudaruddin et al. (2023) identified a disruption in the agricultural supply chain in conflict-ridden nations like Ukraine, a significant exporter of wheat. This disruption triggered price hikes in various agricultural commodities, posing challenges for investors concerned about handling geopolitical risks. Furthermore, the real estate sector was not immune to these effects (Yudaruddin and Lesmana 2024c). Corsetti et al. (2012) emphasized that increasing sovereign risk adds new pressure to a country's economic stability amid geopolitical pressures. As a result, investors are concerned about the level of sovereign risk that affects their business operations. Country risk, which includes legal, economic, and institutional dimensions, increasingly deters investors from engaging

in business activities in that environment (Lestari et al. 2022). As a result, the level of country risk increases uncertainty, which has a major impact on financial markets in both developing and developed countries (Hoque and Zaidi 2020).

Geopolitical risks are also closely linked to the financial sector due to their significant impact on market stability and investor behavior. Investor sentiment tends to react negatively to geopolitical tensions, causing fluctuations in stock prices, sovereign wealth funds, foreign exchange rates, and bond yields (Assaf, Gupta, and Kumar 2023; Ngo, Nguyen, and Hoang 2024; Balestra et al. 2024; Hassan et al. 2022; Jawadi et al. 2024). Consequently, the financial sector often experiences adverse effects as a result of these geopolitical risks (Shi, Wang, and Ke 2021; Chen and Sun 2024; Pandey et al. 2024; Lesmana and Yudaruddin 2024b; Boubaker et al. 2023; Vu et al. 2023; Vuong et al. 2024). Shapiro, Switzer, and Mastroianni (1999) examined the response of a portfolio of defense contractors to war- and peace-related events, finding that the defense portfolio responds positively to war-related announcements and negatively to peace-related announcements. Moreover, research by Yudaruddin and Lesmana (2024a) and Boubaker et al. (2023) underscores the vulnerability of the global banking sector to geopolitical uncertainties. Past conflicts have led to the imposition of banking access sanctions on warring nations, amplifying risks within the banking. This vulnerability is also triggered by the highly integrated financial system throughout the world, the presence of external disturbances creates increased systemic risk. In addition, the existence of geopolitical risks also raises the level of bank risk which can reduce banking performance (Hunjra et al. 2022).

Moreover, several studies have examined the repercussions of war on financial markets across different regions. Abbassi, Kumari, and Pandey (2023) and Kamal, Ahmed, and Hasan (2023) focused on developed countries, while Lesmana and Yudaruddin (2024b), Yousaf, Patel, and Yarovaya (2022), Oubani (2024), Sayed (2024), Basnet, Blomkvist, and Galariotis (2022), and Oyadeyi, Arogundade, and Biyase (2024) studied emerging and frontier markets, with specific attention to Asia (Lesmana and Yudaruddin 2024b), Europe, and America (Boubaker et al. 2022). Kumari, Kumar, and Pandey (2023) found the impact of war on financial markets on the EU stock markets. Aslam et al. (2021) found that terrorist attacks, especially on certain weekdays, increased stock market volatility and negatively impacted returns in Pakistan. These investigations collectively illuminate the multifaceted impact of war on global economic systems and underscore the need for comprehensive strategies to mitigate such disruptions. Meanwhile, Rigobon and Sack (2005) Gurdgiev, Henrichsen, and Mulhair (2022), and Tee Wong, and Hooy (2023) also found a negative effect of war on US financial markets.

Recently, the US-Houthi conflict has become a focus of attention, especially for countries that use trade routes via the Suez Canal, which connects the Red Sea and the Mediterranean Sea to the European and American continents.^{4,5,6} The conflict has impacted the gateway to the Suez Canal, disrupting trade routes and forcing vessels to switch to the Cape of Good Hope route. This shift affects the ships' condition and longevity. Specifically, using the Suez Canal is more time-effective, reducing sailing time to Europe by approximately 42 % and to the US by 30 % from the Middle East. In contrast, the Cape of Good Hope route results in higher damage rates, with 13 % for Europe and 5 % for America (Essallamy, Bari, and Kotb 2020). Similar research by Wu et al. (2022) analyzed the integration of trade between the Suez Canal and the Cape of Good Hope, focusing on time and fuel cost effectiveness. Their findings indicate that the Suez Canal plays a much more effective and efficient role compared to the Cape of Good Hope route. In addition, Yap and Yang (2024) found that geopolitical risks disrupted shipping networks connecting the Asia-Europe and Asia-Mediterranean trade routes. The disruption of the Suez Canal due to the US-Houthi conflict forced the service company to use an alternative Cape route with a longer route, so the company added additional ships to maintain the frequency of stops.

The US-Houthi conflict has an impact on increasing costs and shipping times, which is a "bad" signal for investors. Yudaruddin et al. (2023) stated that the impact of war can lead to an increase in commodity prices, which raises production costs and subsequently affects a company's performance, potentially leading to a reduction in dividends. Dividends play a crucial communication role for companies and investors during crises (Hasan 2021). Subsequently, Tayachi et al. (2023) states that dividend policy also looks at several aspects other than institutional ownership and company performance. A decrease in dividends sends a negative signal to investors during times of war (Yudaruddin and Lesmana 2024c). The reaction to this can also vary based on the company's scale, as the impact of geopolitical risk is closely associated with medium and large-scale companies engaged in international trade (Kamal, Ahmed, and Hasan 2023). Additionally, Chesney, Karaman, and Reshetar (2011) and Corbet, Gurdgiev, and Meegan (2017) demonstrated that terrorist activities drive stock market volatility.

The economic repercussions of the US-Houthi conflict extend beyond disrupted trade routes and increased shipping costs, affecting various sectors and influencing investor behavior. The conflict's impact on maritime trade and commodity prices

4 <https://www.theguardian.com/world/2024/jan/03/what-is-the-red-sea-crisis-and-what-does-it-mean-for-global-trade> [Last accessed on March 25, 2025].

5 <https://www.theguardian.com/business/2023/dec/19/red-sea-shipping-crisis-bp-oil-explained-what-is-happening-and-what-does-it-mean-for-global-trade> [Last accessed on March 26, 2025].

6 <https://iea.blob.core.windows.net/assets/0a3c8da7-43ad-4511-a0ff-932fd8d0825a/SuezCanal-Fact-sheet.pdf> [Last accessed on March 26, 2025].

sends negative signals to investors, highlighting the broader implications of geopolitical tensions on financial stability. Therefore, military strength plays a crucial role in shaping investor sentiment and market reactions across various financial sectors, including banking services, collective investments, insurance, investment banking and investment services, and investment holding companies. Gurdgiev, Henrichsen, and Mulhair (2022) analyzed the effects of US military participation in both direct and indirect foreign conflicts and found that defense budget announcements have a complex and dynamic positive impact that is statistically significant on defense company stock performance.

However, military spending presents two contrasting aspects for investors depending on the prevailing situation. Tutuncu, Bayraktar, and Khan (2024) found that a bidirectional relationship between military expenditures and geopolitical risk, where both influence each other and contribute to an arms race and regional instability. Saba and Ngepah (2019) found that, in African countries, most arms expenditures do not have a causal link to economic growth, with only two countries showing a significant relationship. In contrast, Tsitouras and Tsounis (2024) indicated that arms spending exacerbates inequality in conflict-affected countries like Greece, leading to negative investor sentiment toward military expenditures in stable conditions. Corsetti et al. (2012) observed that substantial military power reinforces national sovereignty, thereby easing investor concerns and boosting economic stability amid geopolitical tensions. Lowering geopolitical risk can raise stock returns in both emerging and developed economies (Hoque and Zaidi 2020). Indeed, military strength heavily influences investor perceptions by fostering a sense of stability and security. A country with robust military capabilities is often perceived as better equipped to defend its interests, reassuring investors and helping to mitigate negative impacts on stock prices during conflicts. Additionally, strong military capabilities usually translate into greater geopolitical influence, deterring adversaries and reducing the likelihood of prolonged conflicts. This stabilizing effect can lead to more favorable cumulative abnormal returns (CARs), as investors anticipate quicker conflict resolutions and lower risks of escalation. Conversely, Rigobon and Sack (2005) noted that rising war risks in U.S. financial markets lead to declines in treasury yields and equity prices, widening spreads on low-rated companies, dollar depreciation, and increases in oil prices. Schneider and Vera (2006) also found that conflicts adversely impact core financial markets in the Western world, specifically affecting stock indices in Paris, London, and the United States.

Geopolitical risks (GPR) play a crucial role in shaping military expenditure policies and their subsequent impact on stock market reactions. The link between GPR and military expenditure not only affects economic stability but also triggers negative stock market reactions due to increased uncertainty and pressure on investment. For instance, Tran and Vo (2024) found that local GPR exerts a greater

influence on military spending behavior than global GPR, indicating that countries adjust their defense policies based on regional threats. Menla and Dimitraki (2014) highlighted that the impact of military expenditure on economic growth is state-dependent, where increased defense spending can negatively affect growth during periods of slow expansion and high volatility. Furthermore, Khraiche, Boudreau, and Chowdhury (2023) show that GPR has a strong negative effect on stock market development, with a more pronounced impact in North America and Europe than in Asia, indicating that geopolitical uncertainty hinders investment and capital market growth.

3 Data and Methodology

We collected the daily closing prices of the leading stock indices sample firms in each country from The Wall Street Journal (WSJ) and the investing.com website (www.investing.com) for the period 1 December 2022 through 29 February 2024. We also collect daily closing composite stock price indexes of the markets from their constituent companies. We include all firms that we can match with the stock market and financial reports. After screening sample firms, the sample in this study comprised 2,339 companies in the financial sector's stock market. The distribution of sample companies by country is presented in Table A1.

We utilized the event study approach by Fama et al. (1969). Recent studies on market reactions to the announcement of war also use the event study method (Lesmana and Yudaruddin 2024b; Yudaruddin et al. 2023; Yudaruddin and Lesmana, 2024c; Pandey et al. 2024; Boubaker et al. 2023). We also utilized multiple event windows, including 15 days prior to the invasion announcement as a pre-invasion event and 15 days after the invasion announcement as a post-invasion event. In addition, we also used the 250 trading days prior to the event window in formulating a benchmark for normal returns to improve accuracy and reduce bias in the results of this study. This research takes place at the time of the US-Houthi conflict on January 11, 2024^{7,8,9} as an event day. We measured the market reaction using the normal, abnormal and cumulative abnormal rates of return.

7 <https://www.nytimes.com/2024/01/11/us/politics/us-houthi-missile-strikes.html> [Last accessed on March 26, 2025].

8 <https://edition.cnn.com/2024/01/11/politics/us-strikes-houthis-yemen/index.html> [Last accessed on March 26, 2025].

9 <https://www.aljazeera.com/news/2024/1/11/any-us-attack-on-yemens-houthis-will-not-go-without> [Last accessed on March 26, 2025].

The normal rate of return is defined as:

$$R_{i,t} = \alpha_i + \beta_i R_{i,M_{i,t}}$$

The abnormal rate of return:

$$AR_{i,t} = R_{i,t} - (\alpha_i + \beta_i R_{i,M_{i,t}})$$

The cumulative abnormal rate of return:

$$CAR_{i(t_1,t_2)} = \sum_{t=t_1}^{t_2} AR_{i,t}$$

for stock i on the trading day t . α_i and β_i are the regression coefficients. The expected normal return of individual stock i can be calculated when α_i and β_i remain stable during the estimation period. Furthermore, $AR_{i,t}$ is the abnormal return rate of stock i on the trading day t , obtained by subtracting the expected from the actual return, and $CAR_{i(t_1,t_2)}$ is the cumulative abnormal return rate of stock i in the event window period (t_1, t_2) . To test the statistical significance of cumulative abnormal returns (CAR), we employ a one-sample t -test, which assesses whether the mean CAR is significantly different from zero. The null hypothesis (H_0) assumes that CAR has no significant impact, i.e. $CAR = 0$.

The objective of this study is to explore the market response to the US-Houthi conflict. To achieve this, the analysis is conducted in several stages. First, we examine the reaction of the financial sector on a global scale, stratifying the data into developed, emerging, and frontier markets. The markets are further segmented into several regions, including the Americas, Europe, the Middle East & Africa, and Asia & Pacific. Additionally, in-depth examinations are carried out based on specific industries, including Banking Services, Collective Investments, Insurance, Investment Banking & Investment Services, and Investment Holding Companies.

Additionally, we conducted a cross-sectional analysis to understand how military strength impacts market reactions in the financial sector, as represented by Equation (1):

$$\begin{aligned} CAR_{i,c,t} = & \alpha_{i,c,t} + \beta_1 NPI_{i,c,t} + \beta_2 ROA_{i,c,t} + \beta_3 DIV_{i,c,t} + \beta_4 SIZE_{i,c,t} + \beta_5 LEV_{i,c,t} \\ & + \beta_6 LIQ_{i,c,t} + \varepsilon_{i,c,t} \end{aligned} \quad (1)$$

where $CAR_{i,c,t}$ is the cumulative abnormal return of the company (i) in country (c) for the event window t . Military strength is proxied by the Nation Power Index (NPI), with data collected from Global Fire Power (GFP). We also incorporated firm characteristic control variables, including profitability measured using return on assets (ROA), dividends measured by a dummy variable (0 for firms that do not pay dividends and 1 for those that do), firm size measured using

the logarithm of total assets, leverage (LEV) measured using the ratio of total liabilities to total equity, and liquidity (LIQ) measured using the ratio of total current assets to total assets.

4 Empirical Result

4.1 The Impact of the US-Houthi Conflict on Market Reactions by Market

In this section, we investigate the impact of the US-Houthi conflict on market reactions in the financial sector by market. In Table 1, global markets reacted significantly positively before the event, but after the event, the reaction changed to significantly negative regarding the US-Houthi conflict. This result indicates that investors have significant concerns related to geopolitical risk, as evidenced by the negative market reaction following the event of the US-Houthi conflict. The strategic location of the conflict area, specifically the Red Sea which connects to the Suez Canal, underscores the economic implications for global trade. Before the event, there was a significant positive market reaction, likely influenced by the prolonged Israel-Hamas conflict. This observation is supported by Oubani (2024), who found that the impact of geopolitical risk on financial markets tends to be short-term rather than long-term. However, the financial sector exhibited negative sentiment and concerns about systemic risk, as noted by Yudaruddin and Lesmana (2024a).

Our analysis further explores market reactions across various market types, including developed, emerging, and frontier markets, which consistently showed a negative trend post-event. Beyond geopolitical risk concerns, there are also risks related to disrupted distribution channels across Asia, Europe, Africa, and America. Due to the conflict, the Cape of Good Hope has become an alternative route for companies to distribute their products. This shift has resulted in increased costs and slower shipping times, heightening investor concerns. These findings align with Essallamy, Bari, and Kotb (2020), who stated that the Suez Canal is approximately 42 % more time-effective for sailing to Europe and 30 % to the US from the Middle East, with damage rates of 13 % for Europe and 5 % for America. Wu et al. (2022) also highlighted the trade integration between the Suez Canal and the Cape of Good Hope, emphasizing its effectiveness in terms of time and fuel costs. Such disruptions significantly affect company performance, potentially impairing their ability to meet financial obligations and increasing the risk of non-performing loans, thus threatening banking stability. Moreover, Our results corroborate previous studies on

Table 1: Cumulative abnormal returns for pre-event, the event day, and post-event windows by markets.

Markets	Number of company	Pre-event days			Event days		Post-event days		
		(-15, 0)	(-10, 0)	(-5, 0)	(-1, 0)	(0, +1)	(0, +5)	(0, +10)	(0, +15)
Global markets	3,239	0.0017	0.0060	0.0043**	-0.0005	-0.0010	-0.0059***	-0.0086***	-0.0160***
Developed markets	2,027	0.0063	0.0060	0.0050***	-0.0011	-0.0029***	-0.0052***	-0.0018	-0.0137***
Emerging markets	880	-0.0109	0.0030	0.0015	0.0012	-0.0004	-0.0085**	-0.0153*	-0.0146
Frontier markets	332	0.0075	0.0136**	0.0078*	-0.0015	0.0085***	-0.0030	-0.0326***	-0.0333***

Notes: CAR stands for cumulative abnormal return. The ordinate represents the event window. ***, **, and * are significant at 1 %, 5 %, and 10 % confidence levels, respectively, based on a one-sample t-test against the null hypothesis that CAR equals zero. Source: Authors' calculation.

market reactions across developed, developing, and frontier countries, aligning with findings related to market responses to the Russia-Ukraine war in developed countries (Abbassi, Kumari, and Pandey 2023), developing countries (Yousaf, Patel, and Yarovaya 2022), and frontier countries (Yudaruddin and Lesmana 2024a; Lesmana and Yudaruddin 2024b).

4.2 The Impact of the US-Houthi Conflict on Market Reactions by Region

Next, we examine the market reactions to the US-Houthi conflict across different regions, including America, Europe, the Middle East and Africa, and Asia, as presented in Table 2. Our findings reveal varied responses: the American market initially exhibited a significant positive reaction, which shifted to a significant negative response on the event day, and then reverted to a significantly positive reaction after the event. These results suggest that while the American market is geographically distant from the conflict, it remains sensitive to war-related news. This sensitivity is particularly evident in banking investors, who were notably impacted during previous conflicts such as the Russia-Ukraine war, where financial sanctions heightened systemic risks. However, the absence of similar sanctions in the current conflict led to a positive market reaction post-event (Yudaruddin and Lesmana 2024a; Boubaker et al. 2023).

The discrepancy in reactions between the Russia-Ukraine war and the US-Houthi conflict is also influenced by differing financial policies. The Russia-Ukraine conflict involved EU sanctions on Russia and energy sector transactions in Russian exchange rates, contributing to systemic risk and investor concerns about financial instability (Tee, Wong, and Hooy 2023). Basnet, Blomkvist, and Galariotis (2022) noted that such sanctions often lead to investor withdrawal from the financial sector, creating selling pressure and driving down stock prices.

In contrast, the European, Middle Eastern, and African markets initially responded positively but later showed a significant negative reaction to the US-Houthi conflict. This shift highlights the conflict's impact on the European region, particularly given its reliance on the Red Sea trade route through the Suez Canal. The negative sentiment observed in these regions is consistent with previous instances of investor pessimism during conflicts.

The MENA region, directly bordering the conflict area, experienced strong geopolitical risk pressures, leading to heightened investor concerns about global uncertainty and a tendency to “exit” their markets. Similar patterns were observed in African markets such as Morocco, Tunisia, and Egypt (Oyadeyi, Arogundade, and Biyase 2024), and the Saudi Arabian market (Sayed 2024). Additionally, concerns

Table 2: Cumulative abnormal returns for pre-event, the event day, and post-event windows by region.

Region	Number of company	Pre-event days			Event days		Post-event days		
		(-15, 0)	(-10, 0)	(-5, 0)	(-1, 0)	(0, +1)	(0, +5)	(0, +10)	(0, +15)
Americas	401	0.0061	-0.0007	0.0039*	-0.0037***	-0.0066***	0.0073***	0.0159***	0.0039
Europe	1,128	0.0154***	0.0150***	0.0035**	0.0013	-0.0001	-0.0048***	0.0010	-0.0106***
Middle East & Africa	403	-0.0019	-0.0005	0.0206***	0.0011	0.0052***	-0.0012	-0.0205***	-0.0284***
Asia & Pacific	1,307	-0.0103	0.0022	0.0001	-0.0017	-0.0020	-0.0123***	-0.0208***	-0.0228**

Notes: CAR stands for cumulative abnormal return. The ordinate represents the event window. ***, **, and * are significant at 1 %, 5 %, and 10 % confidence levels, respectively, based on a one-sample t-test against the null hypothesis that CAR equals zero. Source: Authors' calculation.

about infrastructure damage in the region further impacted investor confidence in banking stability (Yudaruddin and Lesmana 2024b).

In the Asian and Pacific markets, the reaction was also negative following the announcement, though less pronounced than in Europe and MENA. This response underscores the strategic importance of the Red Sea in Asian trade routes. The US-Houthi conflict disrupted these routes, leading to increased costs and slower shipping times due to alternative routes like the Cape of Good Hope (Essallamy, Bari, and Kotb 2020; Wu et al. 2022). War events thus present significant risks to investors in the financial sectors of Asian countries (Lesmana and Yudaruddin 2024b; Vuong et al. 2024).

4.3 The Impact of the US-Houthi Conflict on Market Reactions by Industry

In this section, we analyze the market reactions to the US-Houthi conflict across various financial industries, including banking, collective investment, insurance, investment banking and investment services, and investment holding companies, as detailed in Table 3. Our findings reveal a consistent pattern in the reactions of these financial industries: an initial significant positive response followed by a significant negative reaction after the event. However, a notable exception is observed in the banking sector, which exhibited a significant negative reaction one day before the event and continued to respond negatively thereafter. This pre-event negative reaction may be attributed to the deployment of the US Navy, which investors perceived as a “bad signal,” leading to adverse market responses.

The banking sector’s heightened sensitivity to geopolitical risks is consistent with previous research by Yudaruddin and Lesmana (2024a), which found that the sector is particularly vulnerable to such risks. Investor concerns in the banking industry often precede conflicts, as evidenced by the negative sentiment surrounding military activity at the border. This finding underscores the systemic risks faced by the banking sector, influenced by external shocks such as the Russia-Ukraine war (Lesmana and Yudaruddin 2024a, 2024b; Yudaruddin and Lesmana 2024a; Abbassi, Kumari, and Pandey 2023; Yousaf, Patel, and Yarovaya 2022).

Our results also corroborate those of Schneider and Vera (2006), who found that conflicts adversely affect core financial markets in the Western world, particularly impacting stock market indices in Paris, London, and the US. Conversely, Gurdgiev, Henrichsen, and Mulhair (2022) analyzed the effects of US military involvement in both direct and indirect foreign conflicts and found that announcements regarding defense budgets have a complex and dynamically positive impact on the stock

Table 3: Cumulative abnormal returns for pre-event, the event day, and post-event windows by industry.

Industry	Number of company	Pre-event days			Event days		Post-event days		
		(-15, 0)	(-10, 0)	(-5, 0)	(-1, 0)	(0, +1)	(0, +5)	(0, +10)	(0, +15)
Banking Service	1,333	0.0102***	0.0137***	0.0065***	-0.0021**	-0.0021**	-0.0057***	-0.0063	-0.0141***
Collective Investments	186	0.0202***	0.0192***	0.0073***	0.0027*	-0.0029*	-0.0046*	0.0031	-0.0099
Insurance	517	-0.0302	-0.0199	-0.0007	-0.0028	0.0006	-0.0010	-0.0083	-0.0209
Investment Banking & Investment Services	1,039	-0.0004	0.0042	0.0031	0.0018	-0.0001	-0.0086***	-0.0141***	-0.0173*
Investment Holding Companies	164	0.0267***	0.0207**	0.0071	0.0005	-0.0015	-0.0071	-0.0065	-0.0133*

Notes: CAR stands for cumulative abnormal return. The ordinate represents the event window. ***, **, and * are significant at 1 %, 5 %, and 10 % confidence levels, respectively, based on a one-sample t-test against the null hypothesis that CAR equals zero. Source: Authors' calculation.

performance of defense companies, which is statistically significant. In the same vein, Kumari, Kumar, and Pandey (2023) demonstrate that while developed markets and NATO nations exhibit positive returns, abnormal returns during the post-event window are negatively influenced by economic sanctions and the fear of reduced exports.

4.4 The Impact of the US-Houthi Conflict on Market Reactions by Region and Industry

Table 4 presents the cumulative abnormal returns (CARs) across different event windows for various industries in the Americas, Europe, Middle East & Africa, and Asia & Pacific regions. The results indicate distinct market reactions before, during, and after the event. In the Americas, the banking sector experienced significant negative CARs on the event day, followed by a partial recovery post-event, while the insurance sector showed a strong positive response post-event. In Europe, the banking and collective investment sectors had significant positive pre-event CARs, but negative reactions post-event. In the Middle East & Africa, the investment banking sector showed strong pre-event gains but declined significantly in the post-event window. Finally, in Asia & Pacific, investment banking and insurance sectors experienced negative CARs post-event, suggesting a weaker market response compared to other regions.

The findings of this study indicate that market reactions to the US-Houthi conflict vary by region and industry sector, reflecting previous empirical evidence on the impact of geopolitical risk on financial stability and global investment. In the Americas, the results align with the studies of Hassan et al. (2022) and Jawadi et al. (2024), which found that the banking sector tends to experience significant pressure on the event day due to heightened uncertainty but partially recovers as investors have time to process information. Meanwhile, the positive post-event response in the insurance sector suggests that investors may anticipate increased demand for insurance products due to rising geopolitical risks, as highlighted in Chen and Sun (2024), which emphasizes how geopolitical crises can drive growth in the financial sector.

In Europe, the positive pre-event reaction in the banking and collective investment sectors, followed by negative post-event performance, indicates initial market speculation that later undergoes correction as the conflict's impact becomes clearer. This finding supports the study by Vuong et al. (2024), which shows that early expectations of geopolitical tensions often lead to spikes in abnormal returns, followed by adjustments as real risks materialize. Similarly, in the Middle East & Africa, the strong pre-event gains in the investment banking sector, followed by a significant

Table 4: Cumulative abnormal returns for pre-event, the event day, and post-event windows by region and industry.

Industry	Number of company	Pre-event days			Event days		Post-event days			
		(-15, 0)	(-10, 0)	(-5, 0)	(-1, 0)	(0, +1)	(0, +5)	(0, +10)	(0, +15)	
Americas										
Banking Service	166	-0.0021	0.0159***	0.0006	-0.0060***	-0.0115***	0.0049	0.0150***	-0.0317**	
Collective Investments	22	0.0542	0.0484	0.0132*	-0.0102	-0.0161**	-0.0044	0.0080	-0.0076	
Insurance	85	0.0037	0.0129	0.0046	0.0025	-0.0004	0.0161***	0.0278***	0.0012	
Investment Banking & Investment Services	106	0.0096	0.0005	0.0076*	-0.0040*	-0.0022	0.0087*	0.0117**	0.0645	
Investment Holding Companies	22	0.0143	0.0055	0.0001	-0.0041	-0.0049	-0.0038	0.0041	0.0044	
Europe										
Banking Service	371	0.0203***	0.0168***	0.0041*	0.0001	-0.0020	-0.0079***	-0.0018	-0.0142***	
Collective Investments	147	0.0155***	0.0153***	0.0052**	0.0048***	-0.0013	-0.0064***	0.0021	-0.0050	
Insurance	147	0.0123*	0.0219***	0.0058	0.0011	0.0018	0.0030	0.0180***	0.0042	
Investment Banking & Investment Services	391	0.0131**	0.0118**	0.0033	0.0009	0.0011	-0.0039	-0.0031	-0.0143***	
Investment Holding Companies	72	0.0087	0.0084	-0.0069	0.0036	0.0005	-0.0073	0.0019	-0.0147	
Middle East & Africa										
Banking Service	171	0.0220***	0.0237***	0.0159***	-0.0009	0.0043**	-0.0050	-0.0229**	-0.0275***	
Collective Investments	3	0.0121	-0.0046	0.0025	0.0050	0.0001	-0.0064	-0.0416	-0.0782	
Insurance	91	-0.0903	-0.0882	0.0304***	-0.0043	0.0065	0.0113	-0.0218**	-0.0346***	
Investment Banking & Investment Services	111	0.0203***	0.0217***	0.0163***	0.0075**	0.0060	-0.0067	-0.0158	-0.0238**	
Investment Holding Companies	27	0.0515*	0.0497	0.0368	0.0058	0.0035	0.0032	-0.0181	-0.0272	
Asia & Pacific										
Banking Service	625	0.0043	0.0171***	0.0069**	-0.0028***	-0.0014	-0.0074*	-0.0101	-0.0057	
Collective Investments	14	0.0177	0.0196	0.0212	-0.00003	0.0008	0.0147	0.0157	-0.0508	
Insurance	194	-0.0493	-0.0340	-0.0226	-0.0076	-0.0025	-0.0175	-0.0378	-0.0435	
Investment Banking & Investment Services	431	-0.0206	-0.0062	-0.0015	0.0027	-0.0024	-0.0178***	-0.0300***	-0.0386***	
Investment Holding Companies	43	0.0475**	0.0307**	0.0154	-0.0055	-0.0066	-0.0150	-0.0191	-0.0115	

Notes: CAR stands for cumulative abnormal return. The ordinate represents the event window. ***, **, and * are significant at 1 %, 5 %, and 10 % confidence levels, respectively, based on a one-sample t-test against the null hypothesis that CAR equals zero. Source: Authors' calculation.

decline post-event, reflect trends similar to those found in Boubaker et al. (2023), which observed that banks in politically unstable regions are more vulnerable to volatility due to rapidly shifting investor expectations. In Asia & the Pacific, the weak post-event response in the investment banking and insurance sectors suggests that the impact of the US-Houthi conflict was not as pronounced as in other regions. This is consistent with the findings of Oubani (2024) and Lesmana and Yudaruddin (2024b), which suggest that Asia’s more diversified economic structure may help mitigate the direct effects of geopolitical shocks.

4.5 Cross Sectional Analysis

Additionally, we conduct a cross-sectional analysis the impact of military strength on market reactions in the financial sector. We also analysis the impact of firm charateristic on market reaction. Table 5 presents the descriptive statistics and the correlation matrix in Table 6 to overcome the multicollinearity problem. In Table 7, our analysis reveals that prior to the onset of the war, military strength did not significantly influence investor concerns. However, once the conflict began, military strength emerged as a crucial factor shaping market reactions. The data presented in Table 7 indicate a significant negative relationship between military strength, as proxied by the Nation Power Index (NPI), and market reactions within the financial sector on both the event day and the post-event day. This suggests that, while military strength was previously a minor consideration, it became a prominent factor influencing investor behavior during the conflict.

Table 5: Summary statistics of variables (*N* = 3,239).

Variables	Mean	p25	Median	p75	Std. dev.
CAR (−15, 0)	0.0017	−0.0254	0.0047	0.0392	0.2748
CAR (−10, 0)	0.0060	−0.0156	0.0079	0.0362	0.2370
CAR (−5, 0)	0.0044	−0.0147	0.0027	0.0209	0.1021
CAR (−1, 0)	−0.0006	−0.0119	−0.0006	0.0097	0.0423
CAR (0, +1)	−0.0011	−0.0124	−0.0003	0.0101	0.0386
CAR (0, +5)	−0.0059	−0.0212	−0.0016	0.0164	0.0838
CAR (0, +10)	−0.0086	−0.0277	0.0006	0.0271	0.1616
CAR (0, +15)	−0.0160	−0.0414	−0.0024	0.0311	0.2574
NPI	0.3847	0.1435	0.2567	0.3956	0.4328
ROA	−0.0224	0.0009	0.0042	0.0133	2.5130
SIZE	9.9068	6.8754	9.7723	12.865	4.0721
LEV	6.3161	0.3783	3.0476	9.3127	14.186
LIQ	0.8669	0.1233	0.2842	0.7404	16.897

CAR, cumulative abnormal returns; NPI, the Nation’s Power Index or PwrIndx; ROA, net income before taxes to total asset; DIV, dummy variable, 1 for firms that pay dividends and 0 for no pay. A total of 2,277 companies (70.3 %) pay dividends, while 962 companies (29.7 %) do not. SIZE, logarithm of total asset; LEV, total liabilities total equity; LIQ, total current assets to total asset. Source: Authors’ calculation.

Table 6: Pearson’s correlation and variance inflation factor.

Variables	MSI	ROA	DIV	SIZE	LEV	LIQ	Variance inflation factor (VIF)
NPI	1.0000						1.00
ROA	0.0141	1.0000					1.00
DIV	0.0241	0.0207	1.0000				1.05
SIZE	−0.0109	0.0190	0.2157***	1.0000			1.13
LEV	0.0031	0.0162	0.1199***	0.2850***	1.0000		1.09
LIQ	−0.0081	0.0020	−0.0065	−0.0468***	−0.0113	1.0000	1.00

NPI, the Nation’s Power Index or PwrIndx; ROA, net income before taxes to total asset; DIV, dummy variable; 1 for firms that pay dividends and 0 for no pay; SIZE, logarithm of total asset; LEV, total liabilities total equity; LIQ, total current assets to total asset. ***, **, and * are significant at 1 %, 5 %, and 10 % confidence levels, respectively. Source: Authors’ calculation.

The findings demonstrate that stronger military capabilities are associated with more positive investor reactions. This relationship underscores the role of military strength in shaping investor perceptions of stability and security. Countries with robust military forces are perceived as better equipped to safeguard their interests, which can instill confidence among investors and mitigate the adverse effects on stock prices during periods of conflict. Consequently, the presence of a strong military can reassure investors by reducing perceived risks associated with geopolitical instability.

These results align with the work of Corsetti et al. (2012), who highlighted the importance of military power in maintaining economic stability. Their research suggests that a country’s military strength plays a significant role in fostering a favorable business environment, thereby enhancing investor confidence and comfort in operating within the country. Similarly, Gurdgiev, Henrichsen, and Mulhair (2022) discovered that announcements regarding defense budgets have a statistically significant influence on the performance of defense company stocks when US military participation in both direct and indirect foreign conflicts. Thus, our findings reinforce the notion that military power is a key determinant of economic stability and investor sentiment during conflicts.

Regarding control variables, our analysis reveals that Return on Assets (ROA) has a significant negative effect on market reactions before the announcement of the US-Houthi conflict. This finding suggests that despite high levels of profitability, companies are unable to mitigate the concerns associated with geopolitical risk, indicating persistent investor apprehension. This result is consistent with Pessarossi, Thvenon, and Weill (2020), who found that banks with high profitability do not necessarily experience reduced financial distress during crises. Moreover, Basnet, Blomkvist, and Galarotis (2022) argue that high profitability might even exacerbate

Table 7: Cross-sectional regression analysis of cumulative abnormal returns.

Variables	Pre-event days			Event days		Post-event days		
	(-15, 0)	(-10, 0)	(-5, 0)	(-1, 0)	(0, +1)	(0, +5)	(0, +10)	(0, +15)
NPI	-0.4217 (-1.30)	-0.0251 (-0.15)	-0.1696 (-1.31)	-0.3577** (-2.05)	-0.2474*** (-2.86)	-0.4481** (-2.22)	-0.5971** (-2.45)	-0.4611* (-1.95)
ROA	-0.0002 (-0.42)	0.00003 (0.07)	-0.0004** (-1.98)	0.0001 (0.91)	-0.0001 (-0.65)	-0.0002 (-0.91)	-0.0008 (-1.30)	-0.0003 (-0.46)
LIQ	0.0001*** (3.33)	0.0001*** (2.62)	0.00003*** (2.75)	0.00001*** (2.97)	0.00001 (0.93)	-0.00003 (-0.64)	0.00003 (0.60)	0.00007 (0.80)
LEV	0.0003** (2.18)	0.0001 (0.79)	0.0001* (1.79)	-0.00006 (-0.37)	-0.00007 (-1.39)	-0.00007 (-1.15)	-0.00008 (-0.85)	-0.0003 (-0.78)
DIV	-0.0107 (-1.01)	-0.0120 (-1.35)	-0.0037 (-0.72)	0.0007 (0.36)	0.0045** (2.49)	0.0083** (2.17)	0.0119 (1.60)	0.0160 (1.56)
SIZE	-0.0036*** (-2.93)	-0.0025** (-2.47)	-0.0013* (-1.79)	-0.0001 (-0.52)	-0.00009 (-0.34)	0.0003 (0.66)	0.0014* (1.73)	0.0041* (1.79)
Constant	0.3430* (1.71)	0.0867 (0.86)	0.1362* (1.72)	0.2194** (2.04)	0.1482*** (2.80)	0.2504** (2.04)	0.3316** (2.23)	0.2152 (1.43)
Country dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R square	0.0420	0.0369	0.0437	0.0567	0.0661	0.0501	0.0704	0.0601
Obs.	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239

NPI, the Nation's Power Index or PwrIndex; ROA, net income before taxes to total asset; DIV, dummy variable; 1 for firms that pay dividends and 0 for no pay; SIZE, logarithm of total asset; LEV, total liabilities total equity; LIQ, total current assets to total asset. ***, **, and * are significant at 1 %, 5 %, and 10 % confidence levels, respectively. Source: Authors' calculation.

negative sentiment related to “human rights” issues in conflict situations, thereby failing to alleviate geopolitical risks. Conversely, our results show that leverage has a significant positive effect on market reactions before the announcement. This suggests that a high leverage ratio, combined with expanded banking operations, contributes to perceived banking stability. This is supported by Acosta-Smith, Grill, and Lang (2020) and Kiema and Jokivuelle (2014), who noted that banks with a non-risk-weighted leverage ratio requirement (LRR) tend to adopt low-risk lending strategies due to their diversified loan portfolios.

Additionally, liquidity demonstrates a significant positive effect on market reactions. Banks with substantial liquid assets are more likely to elicit positive market responses. This aligns with Musneh, Karim, and Arokiadasan Baburaw (2021), who found that companies with high liquidity benefit during market downturns, as they can effectively design investment strategies and manage liquid assets. Regarding dividends, we observe a negative but non-significant impact before the announcement, with a significant positive effect afterward. This indicates that while dividend distribution initially has minimal effect, it becomes an effective tool for reducing geopolitical risk following the announcement. Hasan (2021) supports this by highlighting the crucial role of dividends in mitigating risk during crises.

Finally, the variable SIZE exhibits different impacts before and after the announcement. Prior to the announcement, SIZE has a significant negative effect on market reactions, suggesting that smaller companies are more vulnerable to external shocks such as conflicts (Vu et al. 2023). In contrast, after the announcement, SIZE shows a significant positive effect. This shift indicates that larger companies, with their extensive international integration, are better positioned to handle disturbances like geopolitical risks and global uncertainties, which aligns with Kamal, Ahmed, and Hasan (2023) on the increased risk to international financial stability for companies engaged in global transactions.

In the next stage, we also analysis the impact of military strength on market reactions by market (Table 8) and region (Table 9). Our analysis reveals that the Nation Power Index has a significant positive effect on market reactions in developed markets before and during the announcement of the conflict. This suggests that investors in developed countries perceive an increase in military power as a negative signal, associating it with a higher risk of potential conflict. This reaction can be attributed to heightened geopolitical tensions, which amplify fears of an escalating conflict or prolonged instability. A robust military signal can suggest an increased likelihood of further hostilities, leading to greater uncertainty and risk in the financial markets. The potential for extended conflicts often results in economic sanctions and trade disruptions, which can adversely impact businesses and financial institutions, further exacerbating investor concerns. In contrast, in frontier markets, the NPI demonstrates a significant negative effect on market reactions prior

Table 8: Cross-sectional regression analysis of cumulative abnormal returns by market.

Variables	Pre-event days			Event days		Post-event days		
	(-15, 0)	(-10, 0)	(-5, 0)	(-1, 0)	(0, +1)	(0, +5)	(0, +10)	(0, +15)
Panel A: Developed markets								
NPI	0.1317 (1.07)	0.1865* (1.87)	0.1157* (1.66)	0.0514** (2.26)	0.0338* (1.69)	-0.0439 (-1.30)	-0.0821 (-1.34)	0.0282 (0.32)
Constant	0.0372 (1.58)	0.0067 (0.31)	0.0004 (0.05)	-0.0091** (-2.02)	-0.0138*** (-3.21)	-0.0081 (-1.15)	-0.0149 (-1.21)	-0.0707*** (-4.61)
Country dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R square	0.0199	0.0184	0.0180	0.0307	0.0497	0.0393	0.0486	0.0294
Obs.	2027	2027	2027	2027	2027	2027	2027	2027
Panel B: Emerging markets								
NPI	0.0140 (0.27)	-0.0109 (-0.26)	-0.0111 (-0.29)	-0.0094 (-0.56)	-0.0173 (-1.07)	-0.0895*** (-2.68)	-0.0679 (-1.44)	-0.9273 (-0.67)
Constant	0.0748 (1.54)	0.1078*** (2.73)	0.0578* (1.90)	0.0205* (1.75)	0.0138 (1.29)	0.0332* (1.67)	0.0290 (0.82)	0.4407 (0.56)
Country dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R square	0.0635	0.0637	0.0519	0.0732	0.0691	0.0645	0.0667	0.0632
Obs.	880	880	880	880	880	880	880	880
Panel C: Frontier markets								
NPI	-0.1796** (-2.22)	-0.1044 (-1.55)	-0.0716** (-2.21)	-0.0692*** (-2.80)	-0.0253 (-1.01)	-0.0453 (-0.93)	-0.0224 (-0.15)	0.0642 (0.30)
Constant	0.2706** (2.07)	0.1550* (1.75)	0.1196* (1.95)	0.0656 (1.11)	0.0364 (1.12)	0.2229*** (2.96)	0.2987** (2.57)	0.2899* (1.74)
Country dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 8: (continued)

Variables	Pre-event days		Event days		Post-event days		
	(-15, 0)	(-10, 0)	(-5, 0)	(-1, 0)	(0, +1)	(0, +5)	(0, +15)
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R square	0.2344	0.2816	0.2159	0.1469	0.1395	0.0954	0.1925
Obs.	332	332	332	332	332	332	332

NPI, the Nation's Power Index or PwrIndx. ***, **, and * are significant at 1 %, 5 %, and 10 % confidence levels, respectively. Source: Authors' calculation.

Table 9: Cross-sectional regression analysis of cumulative abnormal returns by region.

Variables	Pre-event days			Event days		Post-event days		
	(-15, 0)	(-10, 0)	(-5, 0)	(-1, 0)	(0, +1)	(0, +5)	(0, +10)	(0, +15)
Panel A: Americas								
NPI	-0.3447* (-1.88)	-0.1154 (-1.33)	-0.0805 (-0.92)	-0.1930** (-2.23)	-0.2139*** (-3.99)	-0.1366 (-0.99)	-0.3888*** (-2.82)	-0.3238 (-1.34)
Constant	0.2285 (1.57)	0.0308 (0.41)	0.0661 (1.13)	0.1475** (2.06)	0.1315*** (3.43)	0.1357 (1.45)	0.2855*** (2.67)	0.0899 (0.33)
Country dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R square	0.1184	0.1263	0.1086	0.1717	0.2690	0.1071	0.0807	0.0511
Obs.	401	401	401	401	401	401	401	401
Panel B: Europe								
NPI	-0.0041 (-0.80)	0.0000 (0.02)	-0.0069** (-2.00)	-0.0040* (-1.66)	0.0026 (1.39)	0.0002 (0.09)	-0.0008 (-0.17)	-0.0114 (-1.09)
Constant	0.0563*** (3.61)	0.0395*** (2.96)	0.0169 (1.62)	0.0049 (0.83)	-0.0107 (-1.54)	-0.0219*** (-2.74)	-0.0336** (-2.18)	-0.0415** (-2.33)
Country dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R square	0.0306	0.0417	0.0344	0.0307	0.0456	0.0480	0.0390	0.0342
Obs.	1,128	1,128	1,128	1,128	1,128	1,128	1,128	1,128
Panel C: Middle East & Africa								
NPI	-0.1143 (-0.47)	0.0069 (0.03)	-0.1455* (-1.67)	-0.0804*** (-2.87)	0.0368 (0.52)	0.0697 (0.56)	0.2393 (0.54)	0.5177 (0.82)
Constant	0.4163 (1.38)	0.2625 (0.94)	0.2784** (2.12)	0.1435*** (3.39)	-0.0496 (-0.45)	-0.0804 (-0.44)	-0.3401 (-0.53)	-0.7741 (-0.84)
Country dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 9: (continued)

Variables	Pre-event days			Event days		Post-event days		
	(-15, 0)	(-10, 0)	(-5, 0)	(-1, 0)	(0, +1)	(0, +5)	(0, +10)	(0, +15)
R square	0.0566	0.0577	0.1527	0.1775	0.0995	0.0500	0.2423	0.2879
Obs.	403	403	403	403	403	403	403	403
Panel D: Asia & Pacific								
NPI	-0.0372	-0.0216	-0.0308	-0.0118	-0.0025	-0.0565	-0.0635	-0.0624
	(-0.52)	(-0.40)	(-0.78)	(-0.69)	(-0.16)	(-1.54)	(-1.24)	(-1.07)
Constant	0.1034*	0.0906*	0.0643*	0.0052	-0.0036	0.0012	-0.0191	-0.0690
	(1.81)	(1.89)	(1.70)	(0.47)	(-0.37)	(0.07)	(-0.59)	(-1.54)
Country dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R square	0.0501	0.0497	0.0398	0.0524	0.0651	0.0527	0.0614	0.0658
Obs.	1,307	1,307	1,307	1,307	1,307	1,307	1,307	1,307

NPI, the Nation's Power Index or PwrIndx. ***, **, and * are significant at 1 %, 5 %, and 10 % confidence levels, respectively. ***, **, and * are significant at 1 %, 5 %, and 10 % confidence levels, respectively. Source: Authors' calculation.

to the announcement. This indicates that in frontier markets, military strength is a crucial factor that influences investor sentiment, often driving market reactions due to concerns about security and stability in business operations. This perspective supports Corsetti et al. (2012), who argued that in such markets, military power is viewed as a key element that enhances business security. Furthermore, in developing markets, military strength appears to serve as a stabilizing factor, mitigating negative market reactions to conflicts after the announcement.

4.6 Robustness Test

To ensure the robustness of our results, we conducted additional tests using the Wilcoxon signed-rank test and cross-sectional regression analysis with Winsorization at the 1% level. The Wilcoxon signed-rank test was employed as a non-parametric alternative to assess market reactions across different market types, regions, and industry categories. As shown in Table A2, the results are consistent with our baseline findings, confirming that the majority of post-event market reactions to the US–Houthi conflict were significantly negative. Additionally, we performed a cross-sectional regression analysis of cumulative abnormal returns (CARs) with Winsorization to mitigate the influence of extreme values that could distort the results. The findings, presented in Table A3, demonstrate that the key explanatory variables remain statistically significant, reinforcing the robustness of our conclusions regarding the heterogeneous market responses to geopolitical risks.

5 Conclusions

This study investigates the market reaction to the US-Houthi conflict within the financial sector, utilizing a sample of 3,239 companies across various sub-sectors: 1,333 in banking services, 186 in collective investment, 517 in insurance, 1,039 in investment banking and investment services, and 164 in investment holding companies. Employing the event study method, a widely accepted approach for analyzing market responses to global events, including previous conflicts such as the Russia-Ukraine war (Yudaruddin and Lesmana 2024a; Yousaf, Patel, and Yarovaya 2022; Abbassi, Kumari, and Pandey 2023), this study finds that the market experienced a significant negative reaction following the event of the US-Houthi conflict. This suggests that the financial sector is particularly susceptible to geopolitical risks associated with warfare.

The study reveals that developed markets are more adversely affected by the conflict compared to developing or frontier markets. A deeper analysis of industry-

specific reactions shows that the banking industry and investment banking and investment services are the most vulnerable to the conflict, underscoring a heightened sensitivity to recent wars (e.g. Russia-Ukraine, Israel-Hamas, US-Houthi Conflict). Additionally, the study examines how company characteristics and military strength influence market reactions before and after the announcement. Key findings include the significant role of company size and dividend distribution policies in shaping post-announcement market reactions, with dividends playing a crucial role in mitigating investor concerns related to geopolitical risks.

The findings of this study have significant economic and financial implications for policymakers, managers, and investors. For policymakers, the US-Houthi conflict underscores the vulnerability of financial markets to geopolitical risks, particularly in regions heavily reliant on disrupted trade routes. The additional costs and delays associated with such disruptions can lead to inflationary pressures and reduced economic growth. Therefore, beyond considering military strength, policymakers should implement risk mitigation strategies, such as diversifying trade partnerships and enhancing financial market resilience through regulatory frameworks that account for geopolitical shocks. For managers, the study highlights the importance of adaptive financial strategies, such as adjusting capital structure, liquidity management, and dividend policies to stabilize investor confidence post-conflict. Implementing strategic dividend distributions and maintaining financial flexibility can help firms navigate periods of heightened uncertainty while mitigating investor concerns over geopolitical risks. For investors, these findings emphasize the need for comprehensive risk assessment frameworks that integrate geopolitical risk factors into investment decision-making. Identifying firms with robust risk management strategies and diversified supply chains can enhance portfolio resilience in the face of geopolitical instability. By incorporating these insights, stakeholders can develop more informed strategies to safeguard financial stability and investment performance amid global conflicts.

Appendix

See Tables A1–A3.

Table A1: Distribution of the sample companies by country.

No	Country	Index	Num. of companies	%
1	Argentina	S&P Merval (MERV)	7	0.22
2	Australia	S&P/ASX 200 (AXJO)	140	4.32
3	Austria	ATX (ATX)	56	1.73
4	Bahrain	Bahrain All Share (BAX)	3	0.09

Table A1: (continued)

No	Country	Index	Num. of companies	%
5	Bangladesh	Dhaka Stock Exchange 30 (DS30)	57	1.76
6	Belgium	BEL 20 (BFX)	10	0.31
7	Brazil	Bovespa (BVSP)	14	0.43
8	Bulgaria	BSE SOFIX (SOFIX)	6	0.19
9	Canada	S&P/TSX Composite (GSPTSE)	84	2.59
10	Chile	S&P CLX IPSA (SPIPSA)	13	0.40
11	China	Shanghai Composite (SSEC)	76	2.35
12	Colombia	COLCAP (COLCAP)	7	0.22
13	Cote d'Ivoire	BRVM Composite (BRVMCI)	14	0.43
14	Croatia	CROBEX (CRBEX)	2	0.06
15	Czech Republic	PX (PX)	7	0.22
16	Denmark	OMX Copenhagen (OMXCGI)	27	0.83
17	Egypt	S&P/ESG Egypt (SPESEGUP)	32	0.99
18	Finland	OMX Helsinki (OMXHPI)	16	0.49
19	France	CAC All Shares (PAX)	34	1.05
20	Germany	DAX (GDAXI)	214	6.61
21	Greece	Athens General Composite (ATG)	13	0.40
22	Hong Kong	Hang Seng (HSI)	202	6.24
23	Hungary	Budapest SE (BUX)	5	0.15
24	Iceland	ICEX Main (OMXIPI)	5	0.15
25	India	S&P BSE ALLCAP (SPBSAIP)	107	3.30
26	Indonesia	JSE Composite Index (JKSE)	79	2.44
27	Ireland	ISEQ Overall (ISEQ)	3	0.09
28	Israel	TA Allshare (TAALLSHARE)	110	3.40
29	Italy	FTSE Italia All Share (FTITLMS)	47	1.45
30	Japan	Nikkei 225 (N225)	156	4.82
31	Jordan	Amman SE AllShare (AMMAN)	27	0.83
32	Kazakhstan	KASE (KASE)	5	0.15
33	Kuwait	All Share – Market Cap W. PR (BKA)	50	1.54
34	Lebanon	BLOM Stock (BLSI)	5	0.15
35	Malaysia	FTSE Malaysia KLCI (KLSE)	30	0.93
36	Malta	MSE (MSE)	20	0.62
37	Namibia	FTSE NSX Overall (FTN098)	7	0.22
38	Netherlands	AEX (AEX)	17	0.52
39	New Zealand	NZX All (NZCI)	15	0.46
40	Nigeria	NSE All Share (NGSEINDEX)	40	1.23
41	Norway	Oslo All Share (OSEAX)	39	1.20

Table A1: (continued)

No	Country	Index	Num. of companies	%
42	Oman	MSM 30 (MSX30)	4	0.12
43	Pakistan	FTSE Pakistan (FTWIPAKL)	44	1.36
44	Peru	S&P Lima General (SPBLPGPT)	4	0.12
45	Philippines	PSEi Composite (PSI)	19	0.59
46	Poland	WIG (WIG)	49	1.51
47	Portugal	PSI (PSI20)	1	0.03
48	Qatar	QE General (QSI)	17	0.52
49	Russia	RTSI (IRTS)	16	0.49
50	Saudi Arabia	Tadawul All Share (TASI)	42	1.30
51	Singapore	FTSE Singapore (FTWISGPL)	19	0.59
52	South Africa	FTSE South Africa (FTWIZAFL)	31	0.96
53	South Korea	KOSPI (KS11)	93	2.87
54	Spain	IBEX 35 (IBEX)	9	0.28
55	Sri Langka	CSE All-Share (CSE)	59	1.82
56	Sweden	OMX Stockholm (OMXSPI)	71	2.19
57	Switzerland	SMI (SSMI)	38	1.17
58	Taiwan	Taiwan Weighted (TWII)	50	1.54
59	Tanzania	Tanzania All Share (DSEI)	4	0.12
60	Thailand	SET Index (SETI)	71	2.19
61	Tunisia	Tunindex (TUNINDEX)	11	0.34
62	United Arab Emirates	FTSE ADX General (FTFADGI)	28	0.86
63	United Kingdom	FTSE 100 (FTSE)	443	13.68
64	United State	NASDAQ Composite (IXIC)	249	7.69
65	Venezuela	Bursatil (IBC)	3	0.09
66	Vietnam	HNX (HNXI)	58	1.79
67	Zambia	LSE All Share (LASILZ)	2	0.06
68	Zimbabwe	ZSE All Share (ALSZI)	3	0.09
Total			3,239	100

Table A2: Robustness test using nonparametric tests (Wilcoxon signed-rank test).

Markets/region/industry	Number of company	Pre-event days			Event days		Post-event days			
		(-15, 0)	(-10, 0)	(-5, 0)	(-1, 0)	(0, +1)	(0, +5)	(0, +10)	(0, +15)	
Global markets	3,239	7.010***	12.052***	6.105***	-2.914***	-2.423**	-4.785***	-0.225	-4.219***	
Developed markets	2,027	6.689***	9.748***	5.189***	-3.737***	-5.559***	-3.988***	3.074***	-4.607***	
Emerging markets	880	4.071***	8.245***	4.689***	0.192	0.929	-1.903*	-0.953	0.971	
Frontier markets	332	-0.549	1.016	-0.446	-0.436	3.892***	-1.739*	-5.448***	-3.383***	
Americas	401	0.175	-2.166**	1.479	-5.425***	-6.561***	4.676***	6.841***	-2.164***	
Europe	1,128	7.530***	9.672***	2.622***	0.312	0.027	-3.386***	2.528**	-2.492***	
Middle East & Africa	403	5.317***	6.006***	5.222***	0.791	2.321**	-2.887***	-4.494***	-4.606***	
Asia & Pacific	1,307	1.035	8.051***	3.325***	-2.354**	-1.509	-5.058***	-3.238***	-0.469	
Banking Service	1,333	4.586***	9.133***	5.043***	-6.139***	-4.900***	-3.658***	-0.307	-2.726***	
Collective Investments	186	4.061***	5.543***	3.614***	3.861***	-0.617	-2.653***	-0.273	-2.283***	
Insurance	517	2.917***	6.723***	1.547	-1.641	1.205	2.515**	3.961***	2.003***	
Investment Banking & Investment Services	1,039	2.523***	3.096***	2.257**	1.494	0.845	-4.160***	-2.764***	-4.348***	
Investment Holding Companies	164	2.799***	2.906***	1.079	0.936	0.315	-2.551**	-0.337	-1.532	

Notes: CAR stands for cumulative abnormal return. The ordinate represents the event window. ***, **, and * are significant at 1 %, 5 %, and 10 % confidence levels, respectively. Source: Authors' calculation.

Table A3: Cross-sectional regression analysis of cumulative abnormal returns with Winsorization (at level 1 %).

Variables	Pre-event days			Event days		Post-event days		
	(-15, 0)	(-10, 0)	(-5, 0)	(-1, 0)	(0, +1)	(0, +5)	(0, +10)	(0, +15)
NPI	-0.3590 (-1.39)	-0.0320 (-0.20)	-0.1573 (-1.25)	-0.2506** (-2.59)	-0.2220*** (-3.41)	-0.3615*** (-2.77)	-0.5197*** (-2.83)	-0.4980** (-2.20)
ROA	0.0876 (1.54)	-0.0039 (-0.09)	-0.0201** (-0.63)	-0.0203 (-1.11)	0.0163 (0.95)	0.0485 (1.54)	0.0972** (1.97)	0.1803*** (3.13)
LIQ	0.0028 (0.56)	0.0029 (0.71)	0.0039 (1.33)	0.0003 (0.21)	-0.0017 (-1.10)	-0.0021 (-0.81)	0.0010 (0.24)	0.0030 (0.54)
LEV	0.0001 (0.64)	-0.00002 (-0.11)	0.00003 (0.24)	-0.00008 (-0.95)	-0.0001** (-2.11)	-0.0002 (-1.46)	-0.0004* (-1.95)	-0.0005* (-1.90)
DIV	-0.0095** (-2.20)	-0.0070* (-1.94)	-0.0049** (-2.00)	0.0010 (0.74)	0.0035** (2.55)	0.0066*** (2.81)	0.0073** (2.05)	0.0084* (1.74)
SIZE	-0.0024*** (-3.06)	-0.0012* (-1.93)	-0.0005 (-1.07)	-0.0005 (-0.21)	-0.00005 (-0.21)	0.0004 (1.08)	0.0021*** (3.27)	0.0034*** (4.05)
Constant	0.2768* (1.74)	0.0626 (0.65)	0.1174 (1.54)	0.1511** (2.56)	0.1335*** (2.80)	0.1956** (2.53)	0.2765** (2.49)	0.2464 (1.78)
Country dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R square	0.0885	0.0938	0.0657	0.0861	0.0976	0.0623	0.1256	0.1278
Obs.	3,239	3,239	3,239	3,239	3,239	3,239	3,239	3,239

Notes: NPI, the Nation's Power Index or PwrIndx; ROA, net income before taxes to total asset; DIV, dummy variable; 1 for firms that pay dividends and 0 for no pay; SIZE, logarithm of total asset; LEV, total liabilities total equity; LIQ, total current assets to total asset. ***, **, and * are significant at 1 %, 5 %, and 10 % confidence levels, respectively. Source: Authors' calculation.

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