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Effect of the Russian–Ukrainian Crisis on Borsa Istanbul Tourism Index

Rusya-Ukrayna Krizinin Borsa İstanbul Turizm Endeksine Etkisi

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ABSTRACT

The aim of this study was to examine how the crisis between Russia and Ukraine has affected the companies included in the Borsa Istanbul tourism index. To identify abnormal returns, the event study method was applied. The event day was determined as February 24, 2022. The event and estimation periods were specified as 21 and 210 trading days, respectively. Five of the companies indicated negative abnormal returns on February 24, 2022, but among the companies, PKENT was the company that was most adversely affected by the war. According to the cumulative average abnormal returns of the overall companies, there was a significant negative return only on the event day. Therefore, the tourism companies listed in Borsa Istanbul responded immediately to the Russian–Ukrainian war, but the impact quickly diminished. Investors and financial analysts could benefit from the results by developing hedging strategies through industry diversification, and policymakers could develop effective strategies to deal with similar political uncertainties.

JEL Codes: G10, G14, G15.

Keywords: Borsa Istanbul, efficient market hypothesis, event study, stock markets, tourism

ÖZ

Bu çalışmanın amacı, Rusya ve Ukrayna arasında yaşanan krizin Borsa İstanbul turizm endeksinde yer alan şirketleri nasıl etkilediğini incelemektir. Anormal getirileri tespit etmek için olay çalışması yöntemi uygulanmıştır. Olay günü 24 Şubat 2022 olarak belirlenmiştir. Olay ve tahmin dönemleri sırasıyla 21 ve 210 işlem günü olarak belirlenmiştir. Şirketlerin beşi 24 Şubat 2022 tarihinde negatif anormal getiri göstermiştir, ancak şirketler arasında savaştan en olumsuz etkilenen şirket PKENT olmuştur. Tüm şirketlerin kümülatif ortalama anormal getirilerine göre; sadece olay gününde negatif ve anlamlı bir negatif getiri söz konusudur. Dolayısıyla, Borsa İstanbul'da işlem gören turizm şirketleri Rusya-Ukrayna savaşına hemen tepki vermiş, ancak bu etki hızla azalmıştır. Yatırımcılar ve finansal analistler sektör çeşitlendirmesi yoluyla riskten korunma stratejileri geliştirerek bu sonuçlardan faydalanabilir ve politika yapıcılar da benzer siyasi belirsizliklerle başa çıkmak için etkili stratejiler geliştirebilirler.

JEL Kodları: G10, G14, G15.

Anahtar Kelimeler: Borsa İstanbul, etkin piyasa hipotezi, olay çalışması, hisse senedi piyasaları, turizm

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Introduction

Global events including political instability, financial crises, disasters, terrorist attacks, and pandemics negatively impact the financial markets. Wars are one of them, increasing market uncertainty and vulnerability not only in the war zone but also in nations having a close economic dependence on the sides. Particularly, investors become more risk-averse and pessimistic during these tough times which cause the stock market to fluctuate (Kamal et al., 2023; Kumari et al., 2023). Consequently, the recent crisis between Russia and Ukraine needs to be carefully examined in terms of how it may affect the global economy. February 24, 2022, is the day when Russia officially started to invade Ukraine.[1] Following that day, numerous countries put sanctions against Russia, raising the possibility of political

[1] Retrieved from https://www.euronews.com/2023/01/30/ukraine-war-a-month-by-month-timeline-of-the-conflict-in-2022 (Accessed on July 20, 2023).

turmoil and worsening financial market losses worldwide (Ahmed et al., 2022; Derindere Köseoğlu et al., 2023). Therefore, many researchers examined the effect of that conflict on various stock markets and generally found a negative impact (i.e., Ahmed et al., 2022; Kamal et al., 2023; Yousaf et al., 2022). However, the geopolitical proximity of the nation to the area of conflict and the degree of economic interdependence between these nations determine how war affects the global stock markets (Güneysu, 2022; Sun & Zhang 2022; Sun et al., 2022).

Turkey is one of the countries that are neighbors to the region and has intimate economic and commercial relationships with both sides. The geopolitical position of Turkey and its status as an important emerging market make it attractive for researchers. As indicated by Doğan (2022), the BIST-100 index, Turkey's primary stock index, decreased by 8.17% at the beginning of the conflict. Although some studies investigated the effect of the Russian–Ukrainian crisis on Borsa Istanbul (i.e., Doğan, 2022; Güneysu, 2022; Keleş, 2023; Yürük, 2022), it seems that none of these studies examined its impact on the Turkish tourism sector. The tourism sector is particularly noteworthy because it reacts instantly to these types of political and geopolitical conflicts, and these events generally harm tourism expenditures (Erol, 2022). Pandey and Kumar (2023) investigated the tourism firms from 31 countries, and they found that the war affected those firms negatively on the initial day, but in the subsequent days, abnormal returns began to turn positive. On the day of the war, investors may have sold their stock holdings out of panic, but later on, they may have viewed the war as regional and bought back their shares, which produced higher profits. However, Pandey and Kumar (2023) recommended further investigation, particularly for the travel destinations that depend on Russia and Ukraine, including Turkey. Russia and Ukraine are two leading tourism markets for Turkey, but since the crisis started, their relative dominance has altered, worrying the industry (Demirkıran et al., 2022, Karabuğa et al., 2022).

Based on the abovementioned explanations, the aim of this study is to explore how the Russian–Ukrainian crisis has affected the Borsa Istanbul (BIST) tourism index. The event study approach is used to calculate any abnormal returns that may have occurred during the event period. In the following parts, first, the related literature is summarized. Second, the data and methodology are described. Third, the empirical findings are explained. The final section concludes with a discussion of the findings, their policy implications, and recommendations for future studies.

Literature Review

Every financial market in the world is susceptible to political uncertainties. There have therefore been numerous analyses on how the Russian–Ukrainian crisis has affected different financial markets. Although some of these studies used econometric models (i.e., Boungou & Yatie, 2022; Das et al., 2023; Derindere Köseoğlu et al., 2023; Gaio et al., 2022; Izzeldin et al., 2023), majority of them estimated the impact via event study methodology by calculating probable abnormal returns during the event window. Table 1 lists these studies chronologically and alphabetically along with their findings.

The majority of the studies examined the effect of the war in a multi-country context. Abbasi et al. (2022) investigated the G7 countries and found that the stock market indices of Japan, the United Kingdom, Germany, Canada, and Italy were significantly affected by the war. They also tested the relationship between abnormal returns and some firm-specific (i.e., return on assets, book-to-market) and country-level (i.e., geopolitical risk, GDP-scaled trade) variables. Consequently, they found a negative association between these variables and abnormal returns. Moreover, Yousaf et al. (2022) examined the G20 countries along with six other selected stock markets. Overall, they revealed that the conflict had a considerable and detrimental impact on the stock markets in Europe and Asia. Additionally, Ahmed et al. (2022), Mojanoski and Bucevska (2022), and Kumari et al. (2023) analyzed European stock markets. Ahmed et al. (2022) investigated the STOXX Europe 600 index as a representative of European stock markets and found a negative impact on the event and post-event days. Mojanoski and Bucevska (2022) included Southeastern European (Balkan) countries in their analyses and found that cumulative abnormal returns (CARs) of Croatia, Slovenia, North Macedonia, and Bosnia and Herzegovina stock markets are significantly affected by the war. Kumari et al. (2023) examined 25 European Union countries and concluded that most of the countries are negatively affected by the event, which also depends on the degree of proximity to the war area.

Furthermore, Sun and Zhang (2022) and Sun et al. (2022) conducted research using large data sets (86 and 95 countries' stock exchanges, respectively). Both studies indicated that the impact of war is greater in nations that are more dependent on Russian commerce and located near the area of conflict. Also, Sun et al. (2022) concluded that the war had more detrimental consequences on the manufacturing, banking, and services industries as well as Russian oil and gas enterprises. Besides, Martins et al. (2023) and Pandey and Kumar (2023) conducted sectoral analyses. Martins et al. (2023) investigated the banking industry including the 100 largest European banks and found a significantly adverse influence on the day of the event and in the days that followed the beginning of the conflict. Pandey and Kumar (2023), on the other hand, examined the tourism sector with 134 firms from 31 countries, and they found a significant negative impact for the firms located in Europe, the Middle East, and Africa.

The remaining studies in Table 1 focused on the single market. Dwijaya et al. (2023) analyzed the Indonesian Kompas100 index and found that only the mining sector was negatively affected by the conflict. Thus, the result indicates that the Indonesian market is more resilient than the European markets. Additionally, focusing on the Australian stock market, Kamal et al. (2023) discovered that while there was a noticeable negative impact on the event day, the effect disappeared in the days after the event occurred. Moreover, Pandey et al. (2023) discovered that the Indian stock market experienced negative effects before and on the day of the event, but that these effects changed to positive ones after the event.

A few studies examined the effect of invasion on Borsa Istanbul. Doğan (2022) investigated the 209 listed companies and encountered that abnormal returns are positive on the first day and the day before the conflict, and negative on the remaining days. Yürük (2023) and Keleş (2023) focused on the BIST-100 index. They both concluded that the BIST-100 index reacted negatively to the war. Additionally, Keleş (2023) conducted a cross-sectional analysis and proposed that the effect is stronger for non-financial institutions and that it is reduced for larger and more profitable companies. Lastly, Güneysu (2022) examined the impact of war sectoral, for the BIST Food Beverage Index, and although negative average abnormal returns (AARs) are observed before and after an event, it is not significant on the day of the event. On the other

Table 1.
Literature Summary

Author(s)	Country/Index	Results
Abbasi et al. (2022)	G7 Countries	Insignificant for France and the US. However, they found a significant and negative effect on Japan, the UK, and Germany, as well as a significant and positive effect on Canada during the event period. In addition, they noted a significant and positive effect on Italy on the second day after the event.
Ahmed et al. (2022)	STOXX Europe 600 index	The adverse effect on the event day and subsequent days.
Doğan (2022)	Turkey (BIST)	Significant and positive on the first day before and the first day of the event, but negative for the remaining days (before and after the event).
Güneysu (2022)	Turkey (BIST Food Beverage Index)	Insignificant on the event day, but significant and negative effects for the event windows (0,5) and (0,15).
Mojanoski and Bucevska (2022)	Balkan countries	CAR is significant for Croatia, Slovenia, North Macedonia, and Bosnia and Herzegovina
Sun and Zhang (2022)	86 countries	Lower ARs for countries with higher trade relationships with Russia.
Sun et al. (2022)	95 countries	Lower CARs for countries closer to Russia and Ukraine. The study also revealed that the negative effects of war are more prominent in the manufacturing, finance, and services sectors are more prominent.
Yousaf et al. (2022)	G20 countries, Romania, Hungary, Netherlands, Slovakia, Poland, and Ukraine	The adverse effect on the event day and subsequent days.
Yürük (2022)	Turkey (BIST100 Index)	Significant ARs and CAARs for the event period.
Dwijaya et al. (2023)	Indonesia	Insignificant for the Kompas100 index.
Kamal et al. (2023)	Australia	Adverse effect on the event day in Australia, but insignificant for the subsequent days.
Keleş (2023)	Turkey (BIST100 Index)	Significant and negative effects for the event period.
Kumari et al. (2023)	25 EU countries	Adverse effect on the event day and significant and positive CARs for Poland, Denmark, and Portugal in the post-event period.
Martins et al. (2023)	100 largest European listed banks	The adverse effect at the beginning of the event.
Pandey and Kumar (2023)	134 tourism firms from 31 countries	Significant and negative effects for the firms in Europe, the Middle East, Africa, and the Pacific. However, the impact was insignificant for the firms in the Americas and Asia on the event day.
Pandey et al. (2023)	India	Adverse effect on the pre-event period and the event day, but positive effect on the subsequent days.

Note: CAR = Cumulative Abnormal Return.

hand, they concluded that cumulative average abnormal returns (CAARs) for the (0, 5) and (0, 15) event windows are statistically significant and negative.

Methods

This study investigates the effect of the Russian–Ukrainian crisis on the BIST tourism index (XTRZM), which is comprised of 11 companies. However, for the specified period, due to the data availability, only 10 of them are included in the analyses.[2] The list of the companies in XTRZM with their codes and full names can be found at https://www.kap.org.tr/tr/Endeksler.

Additionally, the BIST-100 index is chosen as a benchmark for the market. Daily closing prices of each stock and the BIST-100 index are retrieved from www.investing.com for the period April 07, 2021–March 10 2022. The logarithmic returns of each stock and the BIST-100 index are calculated using the following formula:

$$R_{i,t} = \ln\left(\frac{P_{i,t}}{P_{i,t-1}}\right). \quad (1)$$

$R_{i,t}$ is the logarithmic return of stock i on day t, $P_{i,t}$ and $P_{i,t-1}$ are the closing prices of stock *i* on day *t* and the previous day, respectively.

This study employs the event study methodology to determine how the Russian–Ukrainian challenge has affected the tourism index. The event studies are useful methods to determine the instant reaction of an unexpected event on the stock market and prices. Additionally, they are widely used in financial analyses for investigating the effectiveness of the stock market and the effect of a particular event on returns. According to Fama's (1970) efficient market hypothesis, if a market is efficient, there should be an immediate reaction on the day of the event and no reactions in the days that follow. If the abnormal returns continue after the event, it may be determined that the market is not entirely efficient (Brooks, 2014; Kothari & Warner, 2007). Hence, by the event studies it is possible to detect the market's responses to new information.

First, the day of the event is determined as February 24, 2022, when the president of Russia declared an invasion of Ukraine. Second, the event and the estimation periods have to be specified. According to Peterson (1989), the daily dataset's estimation

[2] Since BIGCH became a part of the BIST tourism index as of May 11, 2023, it is not considered in the analysis.

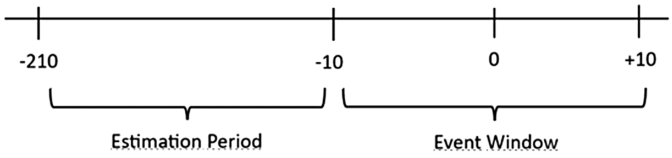

Figure 1.
Event and Estimation Periods.

period could be between 100 and 300 days, while the event window could be between 21 and 121 days. The event window—or the time frame in which an event's consequences are evaluated—is typically set as a short run, such as the 10 days before and after the trading days (Brooks, 2014). Hence, following these suggestions, the event window is specified as 10 days before (anticipation period) and after (adjustment period) the event day (total 21 trading days), and the estimation period is 210 days prior to the event period. Figure 1 shows the event and estimation periods where 0 indicates the event day.

For the next step, to compute the abnormal returns, the return subject to the event must be subtracted from the expected return that is not subject to the event (Kothari & Warner, 2007). Hence, initially, the expected returns have to be estimated. Accordingly, the OLS market model is followed to determine each stock's expected returns which is formulated as follows (Brown and Warner, 1985):

$$ER_{i,t} = \alpha_i + \beta_i R_{m,t} \quad (2)$$

$ER_{i,t}$ indicates the expected return of stock i on day t; $R_{m,t}$ denotes the BIST-100 index return on day t; α_i and β_i are the intercept and slope respectively, which are estimated by regressing the daily stock returns with the market returns covering the estimation period (−10, −210). After determining the expected returns, the abnormal returns are calculated using the following formula:

$$AR_{i,t} = R_{i,t} - ER_{i,t} \quad (3)$$

$AR_{i,t}$ denotes the abnormal return, $R_{i,t}$ is the logarithmic return, and $ER_{i,t}$ is the expected return of company i on day t.

Because abnormal returns could vary throughout the event window, it might be challenging to detect the overall patterns (Brooks, 2014). Furthermore, abnormal returns (ARs) demonstrate how investors reacted instantly to the event, and CARs can be calculated to assess the market's resilience throughout the chosen time periods (Mojanoski & Bucevska, 2022). Therefore, to observe the cumulative market reactions before and after the event day, CARs are calculated for each firm for the anticipation period (−10, 0), adjustment period (0, +10), event day (0, 0), and total event window (−10, +10). The CAR is calculated by summing up daily ARs over the period (p, q), or from time p to time q.

$$CAR_{i,p-q} = \sum_{t=p}^{q} AR_{i,t} \quad (4)$$

The statistical significance of the return averaged over all firms is usually of higher importance than whether this is present in any

Table 2.
Cumulative Abnormal Returns of Individual Companies

Codes	Statistics	Anticipation Period (−10, 0)	Event Day (0,0)	Adjustment Period (0, +10)	Total Period (−10, +10)
AVTUR	CAR	0.0182	**−0.0627**	−0.0294	−0.0739
	t-stat	0.1903	**−2.0723****	−0.03071	−0.5328
AYCES	CAR	−0.0687	−0.0382	−0.0672	−0.1741
	t-stat	−0.5238	−0.9213	−0.5126	−0.9162
DOCO	CAR	−0.0405	−0.0160	**−0.1467**	**−0.2033**
	t-stat	−0.4842	−0.6061	**−1.7529***	**−1.6759***
ETILR	CAR	0.0891	**−0.1057**	−0.0272	−0.0438
	t-stat	0.9266	**−3.4785*****	−0.2826	−0.3147
MAALT	CAR	−0.1421	−0.0394	−0.0248	−0.2063
	t-stat	−1.1944	−1.0461	−0.2087	−1.1965
MARTI	CAR	0.1403	**−0.0591**	−0.0231	0.0582
	t-stat	1.5275	**−2.0338****	−0.2511	0.4370
MERIT	CAR	0.2891	−0.0016	−0.0145	0.2731
	t-stat	0.6228	−0.0108	−0.0312	0.4058
PKENT	CAR	−0.2111	**−0.1094**	**−0.3465**	**−0.6670**
	t-stat	−1.6226	**−2.6598*****	**−2.6632*****	**−3.5379*****
TEKTU	CAR	0.0556	−0.0268	−0.1039	−0.0750
	t-stat	0.7337	−1.1168	−1.3709	−0.6834
ULAS	CAR	−0.0788	**−0.0563**	−0.0035	−0.1386
	t-stat	−0.8423	**−1.9016***	−0.0374	−1.0220

The values in bold indicate the statistically significant cumulative abnormal returns (CARs).
Note: CAR = Cumulative Abnormal Return.
*Significance level of p-value at 10%.
**Significance level of p-value at 5%.
***Significance level of p-value at 1%.

particular individual firm (Brooks, 2014). Hence, for the last step, the common reaction of firms in the XTRZM index to the Russian–Ukrainian crisis is investigated by calculating the average abnormal returns on each day with the following equation:

$$AAR_t = \frac{1}{N}\sum_{i=1}^{N} AR_{i,t} \quad (5)$$

N indicates the number of stocks (i.e., 10). The CAARs, which are calculated over the period (p, q) by adding up AARs, are used to determine whether the abnormal returns for all companies throughout the aggregated period are statistically significant. The statistical significance of the results is evaluated by using t-statistics. All calculations are performed using Microsoft Office Excel.

Results

First, the abnormal returns of each company are calculated. However, because it is hard to evaluate overall patterns with the individual abnormal returns, the CARs of each stock are evaluated for the anticipation period (–10, 0), adjustment period (0, +10), event day (0, 0), and total event window (–10, +10). The results are presented in Table 2, and the statistically significant results are shown in bold. When the anticipation periods (pre-event) are evaluated, it is observed that none of the countries have significant cumulative abnormal returns. Moreover, while the following companies experienced statistically significant and negative abnormal returns on the event day—AVTUR, ETILR, MARTI, PKENT, and ULAS—the other companies did not have any significant abnormal returns at all. These companies reacted to war immediately on the day of the event. The PKENT has the greatest negative abnormal return of the entire set with –0.109 on the event day. Additionally, DOCO shows significant CARs on the whole period and adjustment period (post-event), but there is no statistically significant result on the event day. Therefore, it could be stated that DOCO reacted to the event after it had already begun. On the other hand, PKENT shows statistically significant CARs for all periods except the anticipation period, suggesting that it may be considered the most affected company by the war.

To capture the overall index reaction to an event, the average abnormal returns (AARs) for each day are calculated, including the stocks in the XTRZM index. The results of the AARs of XTRZM are shown in Table 3. Although there is a statistically significant abnormal return seven days before the event, it is observed that the results on the remaining days are not statistically significant. Additionally, there is a statistically significant AAR of –0.0515 on the event day. However, only the second and seventh days after the event are statistically significant in the post-event period.

The CAARs are calculated for the anticipation, adjustment, total periods, and event day at the last stage since the findings of the AARs cannot depict the general pattern of the tourism industry. The results are presented in Table 4. The results show that an abnormal return is only statistically significant on the event day. For the remaining periods, the results are not statistically significant. Therefore, the companies in the tourism industry reacted to the Russian–Ukrainian war instantly; however, its effect has recovered very soon.

Discussion

Global economics and financial markets are severely impacted by war and other forms of worldwide political turmoil. The ongoing battle between Russia and Ukraine, which started on February 24, 2022, is a recent example of these uncertainties. Due to Turkey's popularity as a travel destination, Russia and Ukraine are the two largest sources of revenue for the country's tourism sector. Therefore, the present paper aims to investigate the effect of the Russian–Ukrainian conflict on the BIST tourism index in order to fill the gap in the literature. Applying the event study method enables the detection of abnormal returns.

Table 3.
Average Abnormal Returns of XTRZM

		XTRZM	
	Day	**AAR**	***t*-Test**
Anticipation period (the pre-event)	t – 10	0.0034	0.1456
	t – 09	0.0024	0.1034
	t – 08	–0.0058	–0.2491
	t – 07	**0.0498**	**2.1463****
	t – 06	0.0163	0.7043
	t – 05	0.0036	0.1552
	t – 04	–0.0027	–0.1185
	t – 03	–0.0186	–0.8032
	t – 02	–0.0297	–1.2826
	t – 01	–0.0135	–0.5808
	0	**–0.0515**	**–2.2218****
Adjustment period (the post-event)	t+01	0.0168	0.7228
	t+02	**–0.0414**	**–1.7854***
	t+03	–0.0014	–0.0623
	t+04	–0.0142	–0.6109
	t+05	0.0245	1.0570
	t+06	–0.0016	–0.0687
	t+07	**–0.0398**	**–1.7157***
	t+08	–0.0113	–0.4871
	t+09	0.0014	0.0587
	t+10	–0.0116	–0.5008

The numbers in bold indicate the statistical significant average abnormal returns (AARs).
Note: The "0" in the day column indicates the event day.
AAR = Average abnormal returns.
*Significance level of p-value at 10%.
**Significance level of p-value at 5%.
***Significance level of p-value at 1%.

The findings demonstrate that five companies—AVTUR, ETILR, MARTI, PKENT, and ULAS—responded to an event immediately and produced statistically significant CARs which were negative on the day of the event. The one with the greatest CAR among them, PKENT, continued to demonstrate statistically significant abnormal returns throughout the post-event period, indicating that it may be the company most adversely affected by the war. Petrokent Turizm (PKENT) has a hotel in Antalya which is primarily chosen by Russians and Ukrainians as their vacation destination. Furthermore, the firm disclosed in its first-period financial statements for 2022 that timeshare holiday owners continue to file lawsuits against it.[3] Therefore, the succession of these cases, the COVID-19 pandemic, and

[3] Retrieved from http://www.petrokent.com.tr/uploads/documents/230213121124_petrokent-2022-1.donem-rapor.pdf (Accessed on December 12, 2023).

Table 4.
Cumulative Average Abnormal Return of XTRZM

Codes	Statistics	Anticipation Period (−10, 0)	Event Day (0,0)	Adjustment Period (0, +10)	Total Period (−10, +10)
XTRZM	CAAR	0.0051	−0.0515	−0.0787	−0.1251
	t-stat	0.0698	−.2219**	−1.0728	−1.1769

Note: CAAR = Cumulative average abnormal return.
*Significance level of *p*-value at 10%.
**Significance level of *p*-value at 5%.
***Significance level of *p*-value at 1%.

the war may have made the company more vulnerable to such conflicts.

Additionally, since DOCO only exhibited statistically significant CARs in the post-event period, it demonstrates the firm's reaction to the war after it had already begun. Overall tourism index reaction to an event was measured with the average abnormal returns (AARs) for each day. On the day of the event, a negative and significant abnormal return was observed; however, on the days before and following the event, the majority of the results were not significant. To obtain a comprehensive abnormal return pattern for the BIST tourism index, the cumulative average abnormal return (CAAR) was calculated for the last step. The results show that the event day was the only period when an abnormal return was statistically significant and negative. Therefore, to sum up, tourism companies listed in BIST responded immediately to the Russian–Ukrainian war, but the impact quickly subsided. These findings are in line with those of Pandey and Kumar (2023), who hypothesized that while stockholders may have panicked-sold their assets on the day of the conflict, they may have later seen the conflict as a regional one. The results are also consistent with the efficient market hypothesis, which proposed that if a market is efficient, there should be a quick response on the day of the event and no responses on the following days (Fama, 1970).

Turkey, according to Karabuğa et al. (2022), has a strong chance of overcoming the negative impacts of the Russian–Ukrainian war since, with the appropriate policies, it could differentiate its tourism market and offer a competitive advantage in the industry. At this point, many steps have been taken to prevent the war from causing a crisis in the Turkish tourism sector and to minimize the impact of the crisis. As indicated by Demirkıran et al. (2022), one of the political actions conducted in this direction was the interaction with Russian and Ukrainian government officials through meetings, contacts, and mediatory positions by the Turkish Presidency and later the Ministry of Foreign Affairs. Moreover, the Ministry of Culture and Tourism had promoted Turkish tourism to acquire new markets and attract tourists from other countries (Demirkıran et al., 2022). The finding that the companies in the tourism index turn negative just on the event day and thereafter recover themselves is also in line with these arguments.

Conclusion and Recommendations

This study may provide great insight for investors, financial analysts, and policymakers. Investors and financial analysts could benefit from the results by developing hedging strategies through industry diversification. Moreover, although the effect of the war was only temporary, investors may favor alternative stock markets that are less dependent on the economies of the conflicting nations, or they may prefer alternative investment tools such as cryptocurrencies to diversify their risks. Policymakers, on the other hand, could develop effective strategies to deal with similar political uncertainties. Since it seems that the negative effects of the conflict were effectively handled in this instance, policymakers may choose to adopt similar strategies in these kinds of occasions. Nevertheless, to make more accurate decisions for diversification, further studies could employ similar research for different industries. Besides, in this study, only the significance level of the abnormal returns is evaluated by the event studies, but further research could additionally examine the factors (firm size, volatility, performance, etc.) that drive the abnormal returns through the use of various econometric techniques (e.g., regressions or ARCH models).

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Genişletilmiş Özet

Siyasi istikrarsızlık, finansal krizler, felaketler, terör saldırıları ve salgın hastalıklar gibi küresel olaylar finansal piyasaları olumsuz etkilemektedir. Savaşlar da bunlardan biridir ve sadece savaş bölgesinde değil, taraflara yakın ekonomik bağımlılığı olan ülkelerde de piyasa belirsizliğini ve kırılganlığını artırmaktadır. Dolayısıyla, Rusya ile Ukrayna arasında yaşanan son krizin küresel ekonomiyi nasıl etkileyebileceğinin dikkatle incelenmesi gerekmektedir. 24 Şubatcar 2022, Rusya'nın Ukrayna'yı resmi olarak işgal ettiği tarihtir. O günü takiben, çok sayıda ülke Rusya'ya karşı yaptırımlar uygulamaya başlamış, bu da küresel finansal piyasa getirilerinin düşüş olasılığını artırmıştır (Ahmed ve ark., 2022; Derindere Köseoğlu ve ark., 2023). Türkiye, bölgeye komşu olan ve her iki tarafla da yakın ekonomik ve ticari ilişkileri olan ülkelerden biridir. Türkiye'nin jeopolitik konumu ve gelişmekte olan önemli bir pazar olması onu araştırmacılar için cazip kılmaktadır. Bazı çalışmalar Rusya-Ukrayna krizinin Borsa İstanbul üzerindeki etkisini araştırmış olsa da (örneğin, Doğan, 2022; Güneysu, 2022; Keleş, 2023; Yürük, 2022), bu çalışmaların hiçbirinin Türk turizm sektörü üzerindeki etkisini incelemediği görülmektedir. Bu çalışma, Rusya-Ukrayna krizinin 11 şirketten oluşan BIST-Turizm endeksi (XTRZM) üzerindeki etkisini araştırmaktadır. Ancak, veri mevcudiyeti nedeniyle belirtilen dönem için sadece 10 tanesi analizlere dahil edilmiştir. Ayrıca, BIST-100 endeksi piyasa için bir karşılaştırma ölçütü olarak seçilmiştir.

Şirketlerin bireysel tepkilerini ölçmek için her bir firma için anormal getiriler (AR) ve kümülatif anormal getiriler (CAR), endeksteki tüm şirketlerin genel tepkisini ölçmek için ise ortalama anormal getiriler (AAR) ve kümülatif ortalama anormal getiriler (CAAR) hesaplanmıştır. CAR'lar ve CAAR'lar beklenti dönemi (-10, 0), düzeltme dönemi (0, +10), olay günü (0, 0) ve toplam olay penceresi (-10, +10) için hesaplanmıştır. Bulgular, beş şirketin -AVTUR, ETILR, MARTI,CAR PKENT ve ULAS- olaya hemen tepki verdiğini ve olay günü negatif olan istatistiksel olarak anlamlı CAR'ler ürettiğini göstermektedir. Bunlar arasında en yüksek anormal getiriye sahip olan PKENT, olay sonrası dönem boyunca istatistiksel olarak anlamlı anormal getiriler göstermeye devam etmiş ve bu da savaştan en olumsuz etkilenen şirket olabileceğini göstermiştir. Turizm endeksinin bir olaya verdiği genel tepki, her gün için ortalama anormal getiriler (AAR) ile ölçülmüştür. Olay günü negatif ve önemli bir anormal getiri gözlemlenmiş, ancak olaydan önceki ve sonraki günlerde sonuçların çoğu anlamlı çıkmamıştır. BIST Turizm endeksi için kapsamlı bir anormal getiri modeli elde etmek amacıyla son adımda kümülatif ortalama anormal getiri (CAAR) hesaplanmıştır. Sonuçlar, anormal getirinin istatistiksel olarak anlamlı ve negatif olduğu tek dönemin olay günü olduğunu göstermektedir. Dolayısıyla, özetle, BIST'te işlem gören turizm şirketleri Rusya-Ukrayna savaşına hemen tepki vermiş, ancak bu etki hızla azalmıştır.

Bu çalışma yatırımcılar, finansal analistler ve politika yapıcılar için önemli bilgiler sağlayabilir. Yatırımcılar ve finansal analistler endüstri çeşitlendirmesi yoluyla riskten korunma stratejileri geliştirerek sonuçlardan faydalanabilir ve politika yapıcılar da benzer siyasi belirsizliklerle başa çıkmak için etkili stratejiler geliştirebilir.