

Geo-political Risks and Foreign Institutional Investors: Evidence from the Taiwan Stock Market

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Abstract

We examine the impact of geopolitical risks on the trading behavior of foreign institutional investors in the Taiwan stock market during the outbreak of the Russian-Ukrainian War. Defining firms with foreign ownership in the top (bottom) 30% as the treated (control) firms, we find that treated firms suffered larger losses in stock return compared to control firms following the outbreak of the war. Moreover, treated firms are associated with increased selling pressure, greater downside risk, and higher turnover than control firms after the shocks. In addition, this effect is also stronger for treated firms with lower operating performances, higher volatility, and higher market liquidity.

Motivation

The passage is motivated by the need to understand **how geopolitical tensions—particularly between China and Taiwan—affect financial markets and investor behavior**, especially in the context of global semiconductor dependence and recent international conflicts.

1. Real-World Trigger (Buffett's TSMC Sale)

Warren Buffett's decision to sell Berkshire Hathaway's stake in TSMC highlights how **geopolitical risk has become a crucial determinant of investment decisions**. Taiwan's central role in semiconductor production makes it a strategic and vulnerable node in global supply chains, especially amid U.S.–China rivalry.

2. Strategic and Economic Importance of Taiwan

With Taiwan manufacturing over 60% of the world's semiconductors, geopolitical instability around the island has **global economic implications**. The U.S. sees China's ambitions as a direct challenge to its influence, as outlined in the **2017 U.S. National Security Strategy**, leading to protective and military measures in Asia.

3. Financial Market Vulnerability to Political Shocks

The text situates these developments in the broader pattern of **exogenous shocks**—such as the Sino-U.S. trade war, COVID-19, and the Russia-Ukraine war—that cause abrupt global capital flows and stock price declines. It draws on literature linking **political uncertainty to reduced investment, increased volatility, and capital outflows (Kempf et al., 2023)**. The Foreign institutional investors sold out many holdings in Taiwan stock market, induces significantly Taiwan stock market index declines (See Figures 1 and 2).

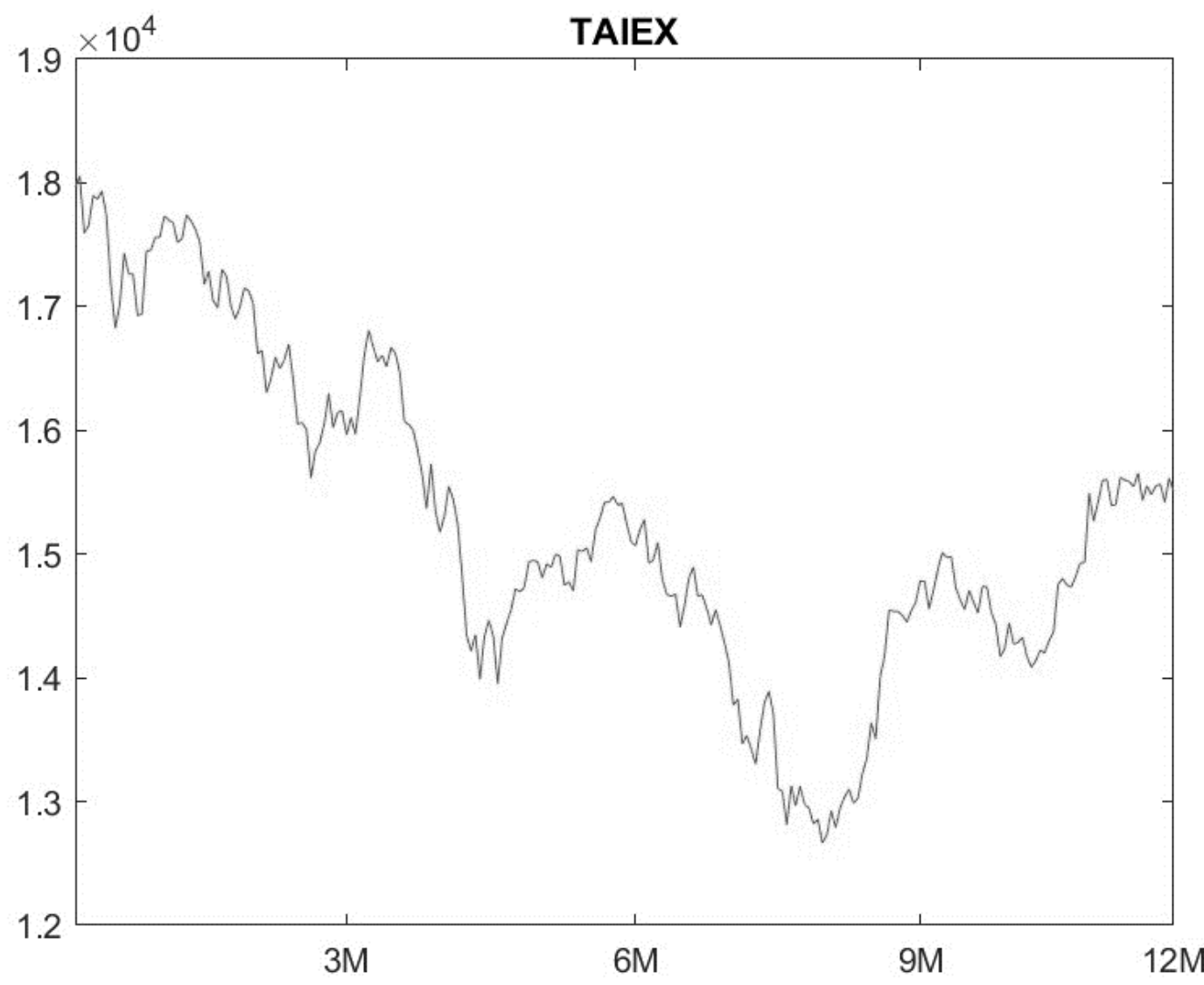


Figure 1. Performance of the Taiwan Stock Market Index 12 Months Following the Outbreak of the Russian-Ukrainian War

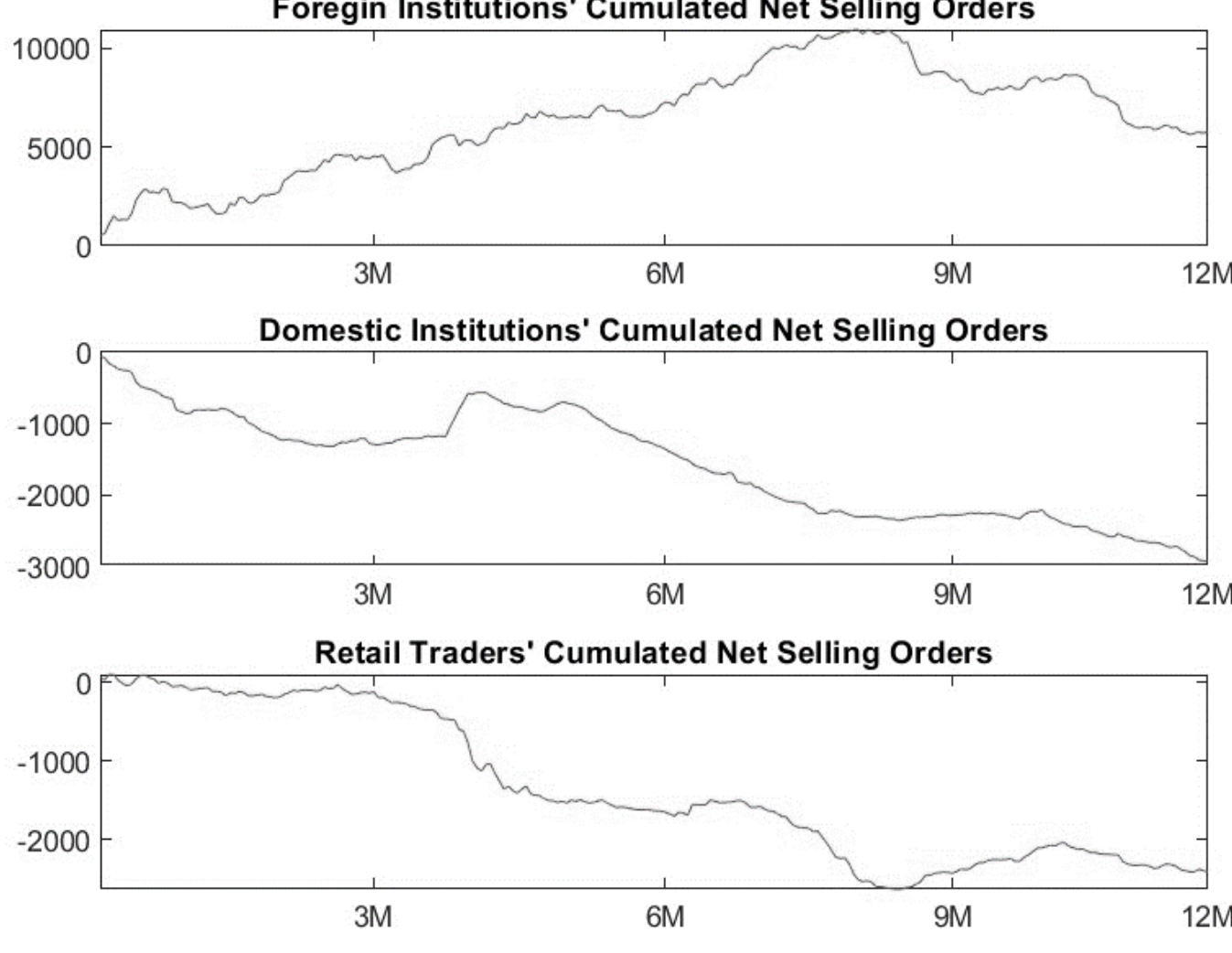


Figure 2. The Cumulated Net Selling Orders for Three Types of Traders for 12 Months

Data and Model

Data:

Our data is collected from the Taiwan Economic Journal (TEJ). The data spans from January 1, 2018, to February 24, 2023. The day of the outbreak of the Russian-Ukrainian War is February 24, 2022, and is defined as the event day. One day before and after the war are regarded as pre- and post-event days, respectively.

Model: Difference-in-Difference

$$Ret_{i,t} = \alpha_{i,t} + \beta_1 Treat_{t-1} \times War_outbreaking_{t-1} + \beta X_{t-1} + \eta_{Firm} + \eta_{Time} + \varepsilon_{it},$$

Dependent variable: $Ret_{i,t}$ is the daily return of firm i at time t .

Independent Variable:

Treat: is a dummy variable equal to one if the foreign institutional ownership is in the top 30% and zero otherwise before the outbreak of the war.

War_Outbreak: is a dummy variable equal to one after the war breaks out.

Control Variable X: Market-to-book equity (MB), $Cash$, $Foreign\ Institutional\ Ownership\ Ratio$ (FIO), PPE_Ratio , Systemic risk ($Rolling_Beta$), idiosyncratic risk ($Rolling_IVOL$), and market crash risk ($Rolling_NCSKEW$).

Fixed Effect: η_{Firm} and η_{Time}

Based on these models setting, we also explore various outcome variables, including Parkinson Volatility, Turnover Ratio, and Trading Volume.

Main Results

	(1) <i>Return</i>	(2) <i>Trading_Volume</i>	(3) <i>Parkinson_Volatility</i>	(4) <i>Turnover_Ratio</i>
$Treat_{t-1}$	-0.0041***	0.2830***	0.2166***	0.3051**
$\times War_outbreak_{t-1}$	(-2.59)	(3.56)	(3.19)	(2.21)
Full Controls	Y	Y	Y	Y
Fixed Effect				
Time	Y	Y	Y	Y
Firm	Y	Y	Y	Y
Adj. R ²	0.4694	0.8915	0.9061	0.7607
Obs.	1503	1503	1503	1503

Heterogenous Analysis

- Firm with **lower operation performances**: firms with lower sale-to-price, inventory turnover, and total asset turnover ratios are prone to have lower future returns or poor profitability.
- Firm with **higher volatility**: the higher volatility and idiosyncratic risk induce lower future returns.
- Firm with **higher liquidity**: stock prices of the firm with higher institutional ownership prone possess the manifestly noise, resulting in creating higher trading volume. High turnover firms have low expected returns because they have high uncertainty, and the high uncertainty makes them a hedge against aggregate volatility risk.

	Lower Operation <i>Return</i>	(1) <i>Return</i>	(2) <i>Return</i>	(3) <i>Return</i>
$Treat_{t-1} \times War_outbreak_{t-1}$	-0.0008 (-0.46)	-0.0012 (-0.69)	-0.0015 (-0.87)	
$Sale/Market50 \times Treat_{t-1} \times War_outbreak_{t-1}$	-0.0067*** (-2.93)			
$INVTR50 \times Treat_{t-1} \times War_outbreak_{t-1}$		-0.0071*** (-2.94)		
$DIV50 \times Treat_{t-1} \times War_outbreak_{t-1}$				-0.0070*** (-2.67)
	Higher volatility			
$Treat_{t-1} \times War_outbreak_{t-1}$		0.0021 (1.09)	0.0020 (1.22)	0.0025 (1.13)
$Volume50 \times Treat_{t-1} \times War_outbreak_{t-1}$	-0.0081*** (-3.75)			
$Turnover50 \times Treat_{t-1} \times War_outbreak_{t-1}$			-0.0096*** (-4.60)	
$Amihud50 \times Treat_{t-1} \times War_outbreak_{t-1}$				-0.0085*** (-3.54)
	Higher liquidity			
$Treat_{t-1} \times War_outbreak_{t-1}$		0.0026 (1.65)	0.0024 (1.46)	0.0023 (1.62)
$Rolling_Beta50 \times Treat_{t-1} \times War_outbreak_{t-1}$	-0.0130*** (-5.81)			
$Rolling_IVOL50 \times Treat_{t-1} \times War_outbreak_{t-1}$			-0.0125*** (-5.67)	
$GK50 \times Treat_{t-1} \times War_outbreak_{t-1}$				-0.0119*** (-5.46)

Stochastic Dominance

Table 9. The Results of Comparison of Buy-and-Hold Return Between the Treated and Control Firms

Buy-and-Hold Return	3 Months	6 Months
	$H_0^1: Treat > Control$	$H_0^2: Control > Treat$
FSD	0.0000***	1.0000
SSD	0.0000***	1.0000
TSD	0.0000***	0.6667

Treat and Control represents the BHR of treated firms and that of corresponding control firms, respectively. Applying the LMW test, proposed by Linton et al. (2005), the p-values are shown on panel (b). Two null hypotheses, including the $H_0^1: Treat > Control$ and the $H_0^2: Control > Treat$, are respectively shown above. Standing for the SD decision rule, three possible conclusions are as follows: First, no dominant relationship can be obtained while both null hypotheses are accepted or rejected. Next, treated firms outperform the control firms while the $H_0^1: Treat > Control$ is accepted and $H_0^2: Control > Treat$ is rejected. Finally, the observation that accepting $H_0^2: Control > Treat$ and rejecting the $H_0^1: Treat > Control$ occurs, indicates that the control firms dominate the treated firms. The ***, **, and * represent significance at the 1%, 5%, and 10% levels, respectively.

Conclusions

We find that foreign institutional ownership of the treated firms declines by approximately **14.65%** following the outbreak of the Russian-Ukrainian War, reflecting large-scale capital withdrawals under heightened geopolitical risk. Triggered by these tensions, foreign investors sell their holdings, leading to **larger losses, higher volatility, trading volume, and turnover** for treated firms compared with control firms. The firms most affected by foreign divestment tend to exhibit **poorer operating performance, higher risk, and greater market liquidity**, suggesting that investors selectively withdraw from financially weaker yet easily tradable firms. Furthermore, **buy-and-hold return (BHR)** comparisons over three- and six-month horizons reveal that treated firms **significantly underperform** control firms, underscoring the persistent adverse impact of geopolitical shocks on market performance and investor behavior.

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