Impact of China and US Exposure and ESG Channels: When Thailand Stock Market Meets COVID-19

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Abstract

This study investigates the factors that affected the Thai stock market during the COVID-19 outbreak. It explores the effects of ESG and China and US exposure to the returns of the Thailand's stock market. This study employed the data of listed companies in the ESG100 by Thaipat as the sample**.** For China and US exposure, the sample includes data gathered by companies with offices, branches, and subsidiaries in China and the US. Through an event study, The data includes abnormal returns from May to December 2020. The study examines how cumulative abnormal returns related to ESG and China and US exposure using cross-sectional analysis. The result reveals that there is no relationship between ESG and cumulative abnormal returns during the COVID-19 pandemic period. The empirical result shows that a firm with China exposure in the first wave has positive abnormal returns when the COVID-19 situation is getting better in China. However, there is no relationship between US exposure and cumulative abnormal returns during the COVID-19 pandemic period.

Keywords: COVID-19, Event study, Thai stock market, ESG, International exposure

Introduction

The World Health Organization (WHO) declared the outbreak of a new coronavirus as a global health emergency on January 30, 2020. WHO characterized COVID-19 as a pandemic on March 11, 2020. Moreover, the International Monetary Fund reported that the COVID-19 pandemic has impact on the global economy. This pandemic crushed the global stock market,

especially the US and Japanese stock markets. Thailand was the first country after China to report a confirmed COVID-19 case on January 12, 2020. The number of detected new cases in Thailand has increased over time in the third wave from June to August 2021.

Thailand's stock market is also moving in the same direction as the global stock market. Guiso et al. (2008) found that trust in the stock market derived from social capital, as measured by a world value survey, has a positive effect on the stock market among large participants. When the financial market is faced with turbulence, the need for a well-functioning market and financial stability is important. Moreover, more social capital means more trust in the company while the financial markets are facing turbulence from a stakeholder point of view. The higher the trust in the company, the more stakeholders are likely to help the firms in the crisis event, which is the idea of "I will be good to you because I believe you will be good to me at some point in the future" (Lins et al., 2017).

We focus on the performance of the financial market, especially the equity market, which is the leading indicator of the economy's activity. The stock price can rapidly respond to good or bad circumstances. When we study the stock market reaction or investment decisions to the crisis, one of the factors is the trust of the company represented by its social capital. In this study, we use the environment, social, and governance (ESG) rating.

Corporate social responsibility (CSR) is a business framework that outlines how a company should play a role in the society in which it operates. It is to run a business by capturing the most important concerns of the public regarding business and social relations (Carroll, 1999). According to McWilliams and Siegel (2001), the relationship between CSR and a firm's profit is best understood using a supply and demand theory within the firm framework. They suggest a level of CSR investment maximizes profit while satisfying stakeholder demand for CSR. Other research on CSR activities and financial performance studies the relationship between CSR and financial performance. Busch and Friede (2018) documented the strong positive relationship between corporate social/environmental performance and operational corporate financial performance.

Several studies find a correlation between CSR and stock returns. Positive CSR reflects investors' expectations for the long-term welfare of society much as it will be a long-term wealth for shareholders (Chen and Gavious, 2015). Moreover, Kempf and Osthoff (2007) found abnormal returns exist when investors form portfolios using CSR in prescreening stocks by buying high socially responsible ratings and selling low socially responsible ratings.

The other factors that we incorporate are China and US exposure because the top trading partners (export and import value) of Thailand are the US, Japan, China, Malaysia, and Vietnam. In the early stages of the COVID-19 pandemic, China seemed to be the first country to confirm cases of COVID-19. However, in June 2020, the situation changed in the US, where the confirmed cases continued to grow very fast and peaked in January 2021. A recent study on the short-run stock market reaction to the COVID-19 pandemic discovers that firms with Chinese subsidiaries are in the top five COVID-affected economies (i.e., China, Hong Kong, Thailand, Japan, and Singapore)

On the assumption that the important trading partners of Thailand are the countries that have more confirmed cases in each period, we should consider whether the factors of the two countries impact Thailand's stock return during the COVID-19 pandemic period and focus only on the short-term when financial turbulence or a crisis exists. This study has two objectives. The first is to investigate the factors that impact Thailand's stock market, that is, the relationship between different ESG ratings and abnormal returns of Thailand's stock market in the COVID-19 pandemic period. The second is to examine the exposure to China and the US using the information at the firm level. The firm with exposure to China and the US is expected to have a lower abnormal return than the firm without exposure.

Related literature

As the government announced measures to limit the issue, such as lockdown, when the pandemic spread, the impact of COVID-19 is an unpredictable event that goes beyond what is often expected of a situation. According to Ozili and Arun (2020), the propagation of COVID-19 promoted social estrangement, which caused the closure of financial markets, corporate offices, businesses, and events. We start by reviewing the research on how COVID-19 impacts stock market volatility and returns. The news surrounding the COVID-19 pandemic, according to Haroon and Rizvi (2020), has a greater impact on volatility in the industries thought to be most negatively impacted by the coronavirus outbreak. Huang and Liu (2021) documented how COVID-19 affected stock price crashes for energy companies on the Chinese stock market and found that the risk of stock price crashes for energy companies significantly decreased after COVID-19.

However, Baig et al. (2021) found that an increase in confirmed cases and fatalities owing to COVID-19 is related to a large rise in market illiquidity and volatility. Al-Awadhi et al.

(2020) found that daily increases in confirmed cases and total mortality cases due to COVID-19 have significant negative effects on stock returns.

We focus on ESG as represented by the ESG rating on the basis that ESG firms or businesses that engage in CSR will build and employ social capital and trust as proxies. Investor confidence in the company will decline during the COVID-19 pandemic period, increasing market uncertainty. Investors will, however, have more faith in businesses with strong ESG scores in the belief that they will be successfully managed through times of crisis. The high-ESG firm can be compared with an insurance policy in a crisis that pays off when investors and the economy as a whole experience a severe crisis of confidence (Lins et al., 2017).

We review the research on ESG factors that influence stock performance during the COVID-19 outbreak. The global financial crisis is the setting in which Cornett et al. (2016) explored the relationship between banks' CSR and financial performance. They concluded that banks' financial success is positively and significantly connected to CSR score. Together with Lins et al. (2017), another study finds that during the 2008–2009 global financial crisis, high social capital firms (CSR score) outperformed poor social capital enterprises (CSR score) in terms of stock returns. Recent research on the beneficial association between ESG and stock performance (Albuquerque et al., 2020; Hoepner et al. 2021) revealed that companies with high ES ratings have significantly higher returns, lower volatility, and higher trading volumes and that companies with shareholder engagement regarding ESG topics can lower downside risk.

Moreover, the literature related to multinational exposure during a financial turbulence period. The research is conducted during the global financial crisis, which began in the US and spread to the European Union market. According to a study by Zhao et al. (2015), multinational firms can benefit from their flexibility in internationalization throughout the recent US and Euro crises.

On the contrary, according to Yong and Laing (2021), enterprises with more Chinese subsidiaries and the top five COVID-affected economies (China, Hong Kong, Thailand, Japan, and Singapore) have a negative association with returns in the short term (SCAR). China is the first country to have confirmed a case of COVID-19 and the rapid transmission of the coronavirus based on the situation we characterized as the first wave of the pandemic period and the second wave of the situation spotlight on the US using the confirmed case of COVID-19.

Considering the likelihood that the COVID-19 pandemic will have a greater impact on the company with greater exposure to the US and China, firms with exposure to China and

the US have lower abnormal returns than firms without exposure. This is according to Takahashi and Yamada's study from 2021, which examines the factors that have an impact on stock market returns utilizing exposure to these two countries.

Methodology and variables

Event study analysis

The difference between actual returns and expected returns, or the return generated by a stock being higher than the return projected by an equilibrium model (i.e., we follow the market model), is what is known as an abnormal return. The performance of a securities or portfolio in terms of risk-adjusted return is frequently measured by abnormal returns.

We follow Takahashi and Yamada (2021) to calculate the abnormal return. We first use a market model, which is an equilibrium model, to determine the expected return (market model). We use Equation (1) to regress the time series for each stock on the list using the daily logarithmic return from January to December 2019, the market return using the valued-weighted return of all the listed businesses in the SET, and the beta used in estimating the projected return. The discrepancy between the daily logarithmic return and the expected return according to a market model is known as an abnormal return.

we only track the first and second waves and utilize 244 trading days—or one year—as the estimating period. Using two events from the second wave and six events from the first wave of the COVID-19 pandemic in Thailand, we separate the first wave into six events. Each event's specifics are listed in Table 1 event calendar for COVID-19, which is used in this work.

Event window

We choose the event window based on the research of Liu et al., 2020 that the COVID-19 outbreak has a detrimental short-term influence on the Asian stock, and the research of Liu et al., 2020 explores that a short event window demonstrates that Thailand had a significant negative CARs. Thus, in the event-study analysis, we choose the event window (0,+5) rather than (-5,+5), which is 5 trading days before the event day. But the main event window (0,+5) follows the prior literature.

Market Model:

$$r_{i,t} = \alpha_j + \beta_{1,i}(r_m) + \varepsilon_{i,t} \quad (1)$$

We are looking at Thailand's stock market performance during the COVID-19 outbreak to see if our factor has a substantial impact on individual firms' abnormal returns. We use an event-based study to determine the influence during the period of interest. The event date is divided into two waves.

$$\boldsymbol{AR_{i,t} = R_{i,t} - \alpha_i + \beta_{i,t}(r_m)} \quad (2)$$

$$\boldsymbol{CAR_{i,t1,t2} = \sum_{t1}^{t2} AR_i} \quad (3)$$

$AR_{i,t}$ is the abnormal return.

$CAR_{i,t1,t2}$ is the cumulative abnormal return.

Cross-sectional analysis

We regress based on event-study the equation that cumulative abnormal return (Broadstock et al., 2021).

The model to estimate:

$$\boldsymbol{CAR_{i,t1,t2} = \alpha + \beta X + \gamma Control_i + u_i} \quad (4)$$

Where :

$CAR_{i,t1,t2}$ is a cumulative abnormal return.

X are independent variables we study, which consist of

1. ESG dummy (a value of 1 for a firm listed in the ESG100 by Thaipat ESG100 data list).
2. Exposure to the US dummy (a value of 1 for a company whose plants, offices, subsidiaries, and branches are in the US)
3. Exposure to China dummy (a value of 1 for a company whose plants, offices, subsidiaries, and branches are in China)

Control variables contain

1. Size (logarithmic of a firm's equity market capitalization)
2. Market-to-book ratio (logarithmic of the market value of equity divided by book value of equity)
3. Momentum (firm' s raw return over the period of January to December 2019)
4. Profitability (operating income divided by total assets (ROE))
5. Beta (market risk, using a market model to estimate beta)
6. Net debt (total liabilities minus cash divided by total assets)

7. Liquidity (Amihud illiquidity is the average daily ratio of absolute stock return to its trading volume.)

Control variables

We calculate beta using daily log returns from January to December 2019 to include beta, which the market model estimates in the first event, to control market risk. The second event is when we estimate beta from December 18, 2019 to December 18, 2020 using daily log returns.

The natural logarithm of a firm's equity market capitalization and the natural logarithm of the market value of equity divided by the book value of equity is added to calculate size and growth/value effects.

The return for each stock after a one-year lag is used to evaluate momentum. Amihud (2002) defined liquidity as the absolute stock return divided by the average daily volume of trading from January to December of that year. The profitability of a company is determined by its return on equity and net debt, which is calculated as total liabilities minus cash divided by total assets and used to control financial liquidity.

Data

The data sets are made up of the daily equity market indexes for Thailand's stock exchange. Firms with fewer than 200 trading days are not included in the market model's estimation window, which is used to estimate beta. We utilize the ESG dummy for the stocks listed in the Thaipat ESG100 data as the ESG index for the model. The annual reports of each company are also used to gather data for the US and China exposure dummies, which are based on information concerning facilities, subsidiaries, offices, and branches in either China or the US.

The sample includes 487 companies listed on Thailand's stock exchange, with more than 200 trading days in 2019. ESG data are acquired from companies listed in the ESG100 by Thaipat. This study covers 89 firms as ESG companies listed in the Thaipat ESG100. ESG companies account for 18.3% of the whole sample. The data of a company with plants, offices, branches, and subsidiaries in China are used to create the China dummy data. the China dummy firms are 50 out of 487 enterprises that have opened exposure to China. The US dummy firms compose 31 out of 487 firms. Figure 1 shows the consistency of AARs and

CAARs across the 61 days leading up to the first death case in Thailand on March 2, 2020, or the event window (*t*−30 to *t*+30 days). As we can see, the first wave event for the event research analysis spans 61 days, from March 2, 2020 to March 28, 2020. Although the CAARs are in the negative, the AARs and CAARs are consistently around 0% before the event's 15th day.

The descriptive statistic for the control variable in Table 2 is net debt, which is total liabilities minus cash divided by a total asset. For the size of the firm, we use in the regression, we employ market capitalization. We control the market-to-book ratio for growth or value stocks effects and use return on equity to control profitability. To control for the liquidity elements, we use the Amihud illiquidity. Momentum is computed as raw return from the previous year, and beta is used to control for risk. We estimate beta using a market model. The estimating period for the first wave is January 02, 2019–December 30, 2019, and that of the second wave is December 18, 2019–December 18, 2020.

Empirical results

ESG

According to the conceptual framework, the first hypothesis is that during the introduction of COVID-19, stocks listed in the ESG100 by Thaipat will have a higher abnormal return than companies that are not on the list. We estimate the regression model of cumulative abnormal return based on Equations (4) to test the first hypothesis. The results of the first hypothesis, which involves regressing the returns (CAR[0,+5]) on an ESG dummy that we acquire from a company listed on Thaipat ESG100.

In Table 3 , the ESG dummy coefficients are all statistically insignificant, which contradicts the results of earlier studies by Lins et al. (2017) and Broadstock et al. (2021). Regarding the impact of ESG on the stock market's returns to COVID-19, we should use the cumulative average abnormal return over the six trading days around the event day or CAR [0,+5] to represent the effect of COVID-19 on the stock market's returns because CAR [0,+5] shows the effect at the event date and five days after the event day to represent the effect of COVID-19 on the stock market's returns.

The event study in the Thai stock market follows the preceding literature of Liu et al., 2020 that the Asian stock market was promptly and badly impacted by the event during the COVID-19 pandemic because we choose an event window that is suited for study. As a result,

no correlation is noted between ESG and cumulative abnormal returns, according to the results of the regression CAR [0,+5] on the ESG dummy

China and US exposure

Table 3 provides the regression findings for the China dummy. The China dummy has a positive and statistically significant coefficient in (2)–(5), indicating that the company has open exposure to China. This dummy is gathered by companies with offices, branches, and subsidiaries in China. We may deduce that in the first wave, which occurs in March 2020, the Chinese government quickly dealt with the COVID-19 crisis. However, the negative coefficient of the China dummy in (7), which is a Delta variant period with a negative abnormal return, indicates that people are concerned about the COVID-19 situation in China during this period, resulting in negative returns for stocks with open China exposure, but they are statistically insignificant.

Table 4 shows the regression results, which reveal the insignificant coefficient of the US dummy in (1) to (4). It represents the situation of the new COVID-19 in the United States, that it, it has an insignificantly negative relationship, implying that the firm with US exposure has a negative effect on its returns during the first wave, but the effect is statistically insignificant.

Conclusion

This paper investigates the effect of ESG activities and China and the US exposure on abnormal returns and cumulative abnormal returns of Thai stocks using an event study during the COVID-19 pandemic period. We draw two main conclusions.

First, ESG is represented by the ESG grade, based on the theory that ESG enterprises or businesses that engage in CSR build and deploy social capital and trust as proxies. During the COVID-19 pandemic, ESG variables had an impact on stock performance. We find no relationship between the cumulative abnormal returns and the ESG100 listed by Thaipat because Thai investors are not concerned about the effect of engaging in ESG activity on the returns when the shock occurs.

Second, when the COVID-19 situation is getting better in China, the company with exposure to China in the first wave experiences positive cumulative abnormal returns, but there is no correlation for the company with exposure to the US in the first and second waves.

References

Al-Awadhi, Abdullah M., Alsaifi, K., Ahmad Al-Awadhi, and Alhammadi, S. (2020). Death and contagious infectious diseases: Impact of the COVID-19 virus on stock market returns. *Journal of Behavioral and Experimental Finance, 27*, 100326.

Albuquerque, Rui, Yrjo, Koskinen, Yang, Shuai, and Zhang, Chendi. (2020). Resiliency of Environmental and Social Stocks: An Analysis of the Exogenous COVID-19 Market Crash. *The Review of Corporate Finance Studies, 3*, 593–621.

Amihud, Y. (2002). Illiquidity and stock returns: cross-section and time-series effects. *Journal of Financial Markets*, *5*, 31-56.

Baig, Ahmed S., Butt, H. A., Haroon, O., and Syed Aun R. Rizvi, (2021). Deaths, panic, lockdowns, and US equity markets: The case of COVID-19 pandemic. *Finance Research Letters, 38*, 101701.

Broadstock, David C., Chan, Kalok., Louis T.W. C, and Wang, X. (2021). The role of ESG performance during times of financial crisis: Evidence from COVID-19. *Finance Research Letters*, *38*, 101716.

Busch, Timo, and Gunnar Friede. (2018). The Robustness of the Corporate Social and Financial Performance Relation: A Second-Order Meta-Analysis. *Corporate Social Responsibility and Environmental Management*, *25*, 583-608.

Carroll, Archie B. (1999). Corporate social responsibility: Evolution of a Definitional Construct. *Business & Society*, *38,* 268-295.

Chen, Ester, and Ilanit Gavious. (2015). Does CSR have different value implications for different shareholders?. *Finance Research Letters*, *14*, 29-35.

Cornett, Marcia M., Otgontsetseg Erhemjamts, and Hassan Tehranian. (2016). Greed or good deeds: An examination of the relation between corporate socials responsibility and the financial performance of U.S. commercial banks around the financial crisis. *Journal of Banking & Finance, 70,* 137-159.

Guiso, Luigi, Paola Sapienza, and Luigi Zingales. (2008). Trusting the Stock Market. *Journal of finance, 63*, 2557-2600.

Haroon, Omair, Syed Aun R. Rizvi. (2020). COVID-19: Media coverage and financial markets behavior—A sectoral inquiry. *Journal of Behavioral and Experimental Finance*, *27*, 100343.

Hoepner, Andreas G. F., Ioannis Oikonomou, Zacharias Sautner, Laura T. Starks, and Xiaoyan Zhou. (2021). *ESG Shareholder Engagement and Downside Risk, Working Paper*. European Corporate Governance Institute

Huang, Shoujun, and Hezhe Liu. (2021). Impact of COVID-19 on stock price crash risk: Evidence from Chinese energy firms. *Energy Economics*, *101*, 105431.

Kempf, Alexander , and Peer Osthoff. (2007). The Effect of Socially Responsible Investing on Portfolio Performance. *European Financial Management, 13*, 908-922.

Lins, Karl V., Henri Servaes, and Ane Tamayo. (2017). Social Capital, Trust, and Firm Performance: The Value of Corporate Social Responsibility during the Financial Crisis. *Journal of finance, 72*, 1785 – 1824.

Liu, HaiYue, Aqsa Manzoor, CangYu Wang, Lei Zhang, and Zaira Manzoor. (2020). The COVID-19 Outbreak and Affected Countries Stock Markets Response. *International Journal of Environmental Research and Public Health, 17*, 2800.

Liu, HaiYue, Yile Wang, Dongmei He, and Cangyu Wang. (2020). Short term response of Chinese stock markets to the outbreak of COVID-19. *Applied Economics*, *52*, 5859-5872.

McWilliams, Abagail, and Donald Siegel, 2001, Corporate Social Responsibility: A Theory of the Firm Perspective , *The Academy of Management Review*, *26*,117-127

Ozili, Peterson K., and Thankom Arun. (2020). *Spillover of COVID-19: Impact on the Global Economy, Working Paper*. Retrieve frome: https://ssrn.com/abstract=3562570 or http://dx.doi.org/10.2139/ssrn.3562570.

Takahashi, Hidenori, and Kazuo Yamada. (2021). When the Japanese stock market meets COVID-19: Impact of ownership, China, and US exposure, and ESG channels. *International Review of Financial Analysis, 74*, 101670.

Yong, Hue H. A., and Elaine Laing. (2021). Stock market reaction to COVID-19: Evidence from U.S. Firms' International exposure. *International Review of Financial Analysis, 76*, 101656.

Zhao, Xin, Xianling Jiang, and Zhaoyang Li. (2015). The impact of the economic crisis on the financial performance of multinational corporations, *International Review of Economics & Finance*, *37*, 55-68.

Table 1

COVID-19's Event Schedule

Table 1 shows the important event schedule used in an event study during the COVID-19 pandemic in Thailand.

Event no.	Event date	Important evidence	Estimation period
First wave			
1	Mar 2, 2020	Thailand's first death case.	Jan 2, 2019 – Dec 30, 2019
2	Mar 9, 2020	Muay Thai and Pub Cluster	Jan 2, 2019 – Dec 30, 2019
3	Mar 11, 2020	The WHO declared the pandemic.	Jan 2, 2019 – Dec 30, 2019
4	Mar 17, 2020	The governor declared Lockdown Bangkok.	Jan 2, 2019 – Dec 30, 2019
5	Mar 23, 2020	government declared Lockdown.	Jan 2, 2019 – Dec 30, 2019
6	Mar 26, 2020	The Prime Minister declared a state of emergency.	Jan 2, 2019 – Dec 30, 2019
Second wave			
7	Dec 21, 2020	Samut Sakhon cluster.	Dec 18, 2019 - Dec 18, 2020
8	Dec 28, 2020	Gambling cluster in Rayong province	Dec 18, 2019 - Dec 18, 2020

Figure 1 shows the AARs and CAARs plot for the Event window (t_{-30} to t_{+30} days)

Event date: March 2, 2020 **-** Thailand's first death case

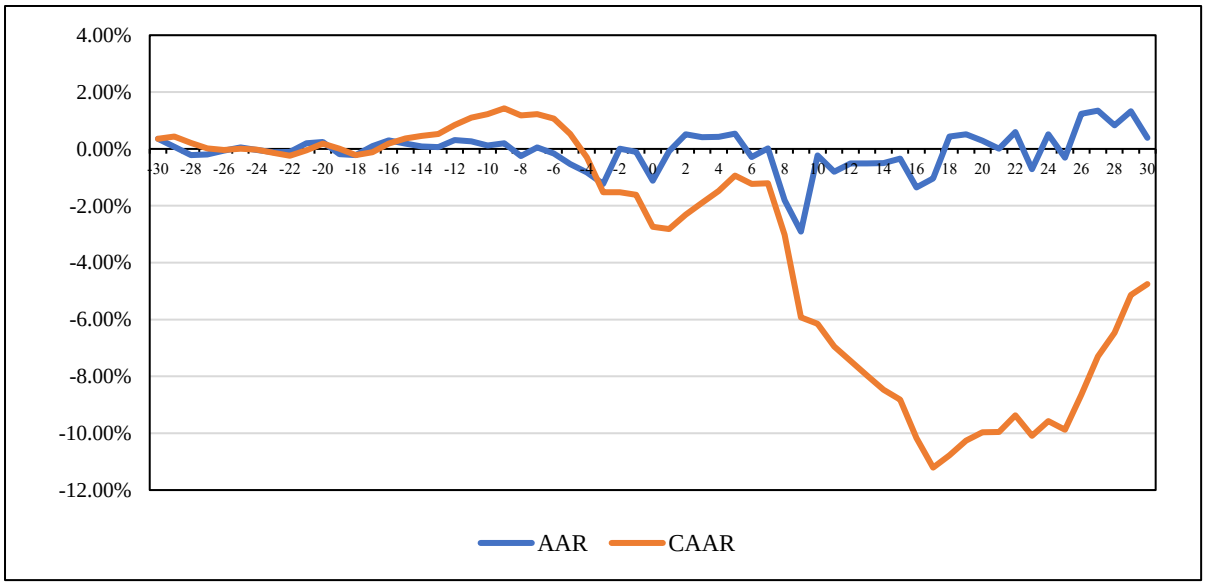

Figure 1 A (-30,+30) event window's cumulative and average abnormal return

Source: Author's calculation

Table 2

Descriptive Statistics

Table 2 reports the descriptive statistics. Panel A reports the summary statistics of dependent variables. Panel B reports the summary statistics of control variables.

	Obs.	Mean	Median	SD	Max	Min
Panel A. Dependent Variables						
First wave						
[1] CAR[0,+5] Event date 02-03-2020	487	0.009***	0.011	0.084	-0.307	0.436
[2] CAR[0,+5] Event date 09-03-2020	487	-0.039***	-0.041	0.134	-0.528	0.535
[3] CAR[0,+5] Event date 11-03-2020	487	-0.057***	-0.055	0.114	-0.382	0.392
[4] CAR[0,+5] Event date 17-03-2020	487	-0.039***	-0.029	0.102	-0.404	0.283
[5] CAR[0,+5] Event date 23-03-2020	487	-0.014***	-0.011	0.071	-0.315	0.321
[6] CAR[0,+5] Event date 26-03-2020	487	0.010***	0.003	0.072	-0.305	0.319
Second wave						
[7] CAR[0,+5] Event date 21-12-2020	487	-0.016***	-0.018	0.059	-0.232	0.407
[8] CAR[0,+5] Event date 28-12-2020	487	0.009***	0.001	0.061	-0.262	0.379
Panel B. Control Variables						
Net Debt	487	0.338	0.331	0.255	0.895	-0.288
Market Cap. (billion)	487	31.468	4.040	98.777	1260.000	0.148
Market/Book value	487	1.652	1.090	1.629	9.950	0.190
Profitability	487	0.079	0.079	0.110	0.492	-0.369
Amihud illiquidity	487	0.577	0.014	1.541	9.746	0.00004
Momentum	487	-0.039	-0.075	0.306	1.895	-0.755
Beta Estimation period 20/01/2019 – 30/12/2019	487	0.660	0.558	0.543	2.566	-0.392
Beta Estimation period 18/12/2019 – 19/12/2020	487	0.653	0.603	0.389	1.759	-0.197
legend: * p<0.1; ** p<0.05; *** p<0.01						

Table 3 Cumulative average abnormal return over 6-trading days around the event day and China dummy

This table presents the results of estimating the following regression model:

The regression model: $CAR_i = \beta_0 + \beta_1 China\ dummy_i + \beta_2 Net\ Debt_i + \beta_3 ln(Market\ Cap.)_i + \beta_4 Ln(Market/Book)_i + \beta_5 Profitability_i + \beta_6 Amihud\ illiquidity_i + \beta_7 Momentum_i + \beta_8\ Beta_i + \in_i$

where CAR_i is the cumulative abnormal return which event window (0,+5) and China dummy is a dummy variable set to one for a company whose plants, offices, subsidiaries, and branches are in China.

Dependent variable : Cumulative abnormal return (CAR[0,+5])

	First wave						Second Wave	
Event no.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
China dummy	0.024	0.028*	0.044***	0.036**	0.042***	0.021	-0.010	0.003
Net Debt	0.008	-0.047**	-0.051***	-0.038**	0.002	-0.005	-0.006	0.008
Ln(Market Cap.)	-0.007**	-0.005	0.003	0.007*	0.0003	-0.0002	0.003	0.001
Ln(Market/Book)	0.015*	0.018*	0.020**	-0.007	-0.008	-0.007	-0.007	0.004
Profitability	0.087	0.045	-0.068	-0.002	0.054	0.026	-0.007	-0.114**
Amihud illiquidity	0.002	0.004	0.011	0.007*	0.0002	-0.001	0.001	-0.001
Momentum	-0.037**	-0.031*	-0.058***	-0.030	-0.043***	-0.012	0.029***	-0.007
Beta	0.051***	0.161***	0.098***	0.004	0.005	-0.010	-0.004	-0.001
Constant	0.121	-0.031	-0.179**	-0.184**	-0.034	0.020	-0.070	-0.018
Observations	487	487	487	487	487	487	487	487
RMSE	0.079	0.104	0.099	0.101	0.069	0.072	0.059	0.060
F-test	10.84***	40.31***	17.94***	2.26	5.20***	1.45	1.80*	1.33
R-squared	0.136	0.405	0.248	0.040	0.080	0.023	0.025	0.036

legend: * p<0.1; ** p<0.05; *** p<0.01

Note: This table reports the regression results where the China dummy is the main explanatory variable, and the dependent variable is cumulative abnormal return.

Table 4

Cumulative average abnormal return over 6-trading days around the event day and US dummy.

This table presents the results of estimating the following regression model:

The regression model: $CAR_i = \beta_0 + \beta_1 US\ dummy_i + \beta_2 Net\ Debt_i + \beta_3 ln(Market\ Cap.)_i + \beta_4 Ln(Market/Book)_i + \beta_5 Profitability_i + \beta_6 Amihud\ illiquidity_i + \beta_7 Momentum_i + \beta_8\ Beta_i + \in_i$

where CAR_i is the cumulative abnormal return which event window (0,+5) and US dummy is a dummy variable set to one for a company whose plants, offices, subsidiaries, and branches are in the US.

Dependent variable : Cumulative abnormal return (CAR[0,+5])

	First wave						Second wave	
Event no.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
US dummy	-0.020	-0.020	-0.004	-0.013	0.001	0.004	0.014	-0.013
Net Debt	0.009	-0.045**	-0.047**	-0.035*	0.005	-0.003	-0.007	0.008
Ln(Market Cap.)	-0.005	-0.003	0.005	0.009**	0.002	0.001	0.002	0.002
Ln(Market/Book)	0.012	0.014	0.016*	-0.011	-0.011**	-0.008	-0.005	0.003
Profitability	0.083	0.041	-0.071	-0.005	0.052	0.025	-0.005	-0.116**
Amihud illiquidity	0.002	0.004	0.011***	0.007*	0.001	-0.001	0.001	-0.001
Momentum	-0.038***	-0.033*	-0.061***	-0.032	-0.045	-0.013	0.030***	-0.007
Beta	0.053***	0.164***	0.102***	0.007	0.008	-0.008	-0.005	0.0001
Constant	0.078	-0.079	-0.231***	-0.234***	-0.078***	-0.0004	-0.047	-0.031
Observations	487	487	487	487	487	487	487	487
RMSE	0.079	0.105	0.100	0.102	0.070	0.073	0.059	0.060
F-test	10.96***	38.17***	16.68	1.70*	3.61***	1.19	1.79*	1.51
R-squared	0.133	0.403	0.236	0.031	0.051	0.016	0.025	0.039

legend: * p<0.1; ** p<0.05; *** p<0.01

Note: This table reports the regression results where the US dummy is the main explanatory variable, and the dependent variable is cumulative abnormal return.