

Was short selling embraced by participants in an emerging market during the COVID-19 pandemic?



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ABSTRACT

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The COVID-19 pandemic has put the financial system under considerable strain and triggered an unprecedented reaction in the financial market. To promote financial stability and strengthen the Malaysian financial market, the authorities banned regulated short selling activities in March 2020 and subsequently lifted the ban in January 2021. This study objectively examines the stock price reactions toward regulated short selling activities announcements and documents the most recent empirical study which examines the short selling related announcements in the emerging market. There are differing opinions on stock price reactions regarding short selling announcements, so to examine the stock price reactions, the event study methodology was employed. The event window for this study is -15 days, 0 (announcement day), +15 days. Interestingly, the findings showed that the stock prices responded negatively to the ban of regulated short selling activities and responded positively to the removal of the ban. This study supports the downward biased hypothesis which implies that the Malaysian market participants welcome regulated short selling activities.

Contribution/Originality: This study is among the first conducted in Southeast Asia, Malaysia, and the emerging market on short selling activities during the COVID-19 pandemic.

1. INTRODUCTION

There is no doubt that the COVID-19 pandemic had widespread social, economic, and financial effects. Emerging countries are the most vulnerable to the pandemic, not only from a health point of view but also due to social and economic crises in the months and years ahead (United Nations, 2021).

To stabilize the financial markets and preserve investor confidence, several European countries imposed a ban on short selling activities in response to the pandemic (Shearman & Sterling, 2020). Specifically, in the financial markets, short selling activities are a popular method to hedge a position and an effective arbitrage tactic that allows investors to benefit by selling stocks at a high price and then purchasing back at a lower cost to gain the difference in price without initially owning the stocks. However, several nations imposed a ban on short selling

activities in order to maintain financial stability. For instance, the 2008 global financial crisis compelled authorities worldwide to ban short selling activities to preserve the financial market's strength (Jain, Jain, McNish, & McKenzie, 2013). Additionally, Boehmer, Jones, and Zhang (2013) stated that several industrialized nations, such as the United States, had introduced new short selling regulations due to the financial crisis. Nonetheless, the impact of short selling activities on the stock price reactions still remains arguable between scholars and policymakers, particularly in times of financial crisis. Hence, this study aims to close the gap.

Locally, short selling activities are referred to as regulated short selling activities. According to Bursa Malaysia (2013), regulated short selling activities mean that only the stocks that met certain criteria set by the authorities will be allowed for short selling activities. Additionally, there is also a limitation in terms of the number of stocks eligible for short selling. Investors who are interested in any of the approved regulated short selling stocks have to open a designated regulated short selling trading account. Furthermore, investors have to adhere to the law under Section 3 of the Securities Industry Act 1983. Therefore, the short selling activities in Malaysia are regulated to ensure the stability of the financial market.

Despite the pandemic, the Malaysian capital market remains open and operational to support the capital flows and the economy. However, to minimize the possible risk from the high level of market volatility as a result of global uncertainty, regulated short selling activities were banned until the end of December 2020, and the ban was lifted in January 2021. According to Kana (2020), the purpose of lifting the ban was to promote product development and market-making activities in the Malaysian financial market. Empirically, this study aims to examine stock price performance, and the cumulative effects of the abnormal returns are observed on the regulated short selling related announcements. It also aims to study the perception among Malaysian market participants of regulated short selling activities which are reflected in stock price movement.

The findings show that stock price reacted positively to the announcement of the uplift of the ban of regulated short selling activities and also experienced positive abnormal returns. Hence, this study suggests that the market participants welcome regulated short selling activities as a part of market completeness.

This study is organized as follows: Section 2 reviews the previous studies on stock price reactions and event study methodology; the data collection method and the event study methodology are discussed in Section 3; Section 4 reports the findings; and Section 5 comprises the implications and conclusion of the study.

2. LITERATURE REVIEW

As mentioned by Luis (1978), short selling involves the borrowing of stocks for sale before owning them. These activities increase the number of sellers and lead to more efficient and liquid financial markets (Stanley, 2009). The activities also act as a stabilizer for short returns to balance excessive returns (Luis, 1978). The study by Frank and Sanati (2018) suggested that stock prices move positively and negatively to new available information in developed markets. They also found that stock prices tend to overreact to good news and underreact to bad news. Stock prices are expected to be more efficient with well-informed investors than closed financial markets (Figlewski, 1981). Figlewski (1981) also stated that when the information is unfavorable, investors are unable to take any positions to hedge against unfavorable information and thus the ban in short selling activities will cause stock prices to be biased upward. Nevertheless, Diamond and Verrecchia (1987) suggested that the ban of short selling activities impacted the distribution and speed of adjustment on the stock prices. The full discovery of stock prices can be found with the existence of short selling activities. Thus, stock prices were biased downward with the ban of short selling activities.

Ma, Xiong, and Feng (2021) conducted a study in China and found that the ban of short selling activities would affect the movement of stock prices in reflecting negative news. Thus, the ban may create extra demand for stocks, leading stocks prices to become overvalued. This may lead to an upward bias in stock prices if short selling activities were banned. Other studies were also consistent with the upward bias hypothesis (Chang, Cheng, & Yu,

2007; Li & Zhang, 2015). On the other hand, a study conducted by Sahin and Kuz (2021) found that banning short selling activities may lead to overvaluation and reduced liquidity, so they suggested that the authorities should avoid banning short selling activities because the ban may potentially outweigh the costs. With differing opinions, this study aims to fill the gap by examining the stock price reactions on the announcements of banning regulated short selling activities and the removal of the ban in the emerging market in Malaysia. Below reviews the previous studies on both the downward biased hypothesis and event study method.

2.1. Downward Biased Hypothesis

Diamond and Verrecchia (1987) have suggested that banning short selling activities tends to diminish the promptness of stock price adjustment toward negative information. The ban slowed the integration of stock prices with private information. Hence, a greater price movement is expected when private information is made public. The stock price adjustments to negative private information will be reflected in the stock price movement. Diamond and Verrecchia (1987) proposed a downward biased hypothesis because the ban of short selling activities is viewed as negative news.

Lamba and Ariff (2006) support the downward biased hypothesis in the event of short selling activities in Malaysia. Their paper focused on both announcements where the Malaysian regulators first removed and then re-imposed the restrictions on short selling during 1996–1997. Their findings showed that the removal of short selling restrictions is valued by market participants as a tool to better complete the financial market, particularly for the nine actively traded stocks. They found that market participants viewed the short selling restrictions as bad news and thus the findings also appeared to support the downward biased hypothesis (Diamond & Verrecchia, 1987).

Kolaskinski, Reed, and Thornock (2013) conducted a study to examine the ban of short selling activities based on the 2008 short selling regulations which comprised United States equities. They found that stock prices moved negatively to the announcement to ban short selling activities. Their findings also supported the downward biased hypothesis proposed by Diamond and Verrecchia (1987). Also, studies conducted in China found that the ban of short selling activities led to downward bias in the Chinese Stock Market (Hou, Meng, & Chan, 2021; Liu, Luo, & Zhao, 2020).

Moreover, Mazouz and Wu (2022) examined the relationship between fundamentals and future returns on short selling activities. Their sample includes the stocks listed on the New York Stock Exchange (NYSE), American Stock Exchange (AMEX) and National Association of Securities Dealers Automated Quotations (NASDAQ) over the period from 1972–2016. They found that short selling activities diminished the return predictability of fundamentals and accelerated the price adjustments to negative fundamental signals. Therefore, a downward movement was found. In line with previous studies, this study examines stock price movement in response to the recent announcements regarding regulated short selling activities. Empirically, it also aims to determine the reaction of stock prices in the Malaysian financial market to the announcements related to regulated short selling activities and whether the findings support the downward biased hypothesis proposed by Diamond and Verrecchia (1987).

2.2. Previous Studies Employing the Event Study Methodology

Fama, Fisher, Jensen, and Roll (1969) proposed the event study methodology to examine stock price performance in response to a particular event. The primary goal of their method was to examine the process by which stock prices adjust to information. In order to examine stock price performance, they focused on the cumulative effects of abnormal returns in the months surrounding time '0' of the event. The evidence in their paper showed that the stock market is efficient because stock prices adjusted rapidly to the new information. According to Wells (2004), event study methodology is more frequently used as a research tool to measure the impact of regulatory events. There are extensive studies, such as Brown and Warner (1985); Campbell and Wesley (1993);

Corrado and Truong (2008); Kočenda and Moravcová (2018) and Nerger, Huynh, and Wang (2021), that also adopted the event study methodology.

Due to the rapid spread of COVID-19, governments from various countries took preventive actions. Among them was to lock down the whole country with the aim of limiting social contact and preventing the spread of the virus. Xie, Wang, and Huynh (2022) studied the effects of the stock market reactions to the announcements regarding lockdowns and the subsequent lifting of restrictions. The country-level analysis used a sample of 44 countries, and the findings showed that the government announcements to contain the spread by imposing a lockdown negatively impacted most of the stock markets. On the other hand, the stock markets reacted with a marginal positive negative bias to the announcement related to the reopening of society.

Most of the studies related to short selling activities were conducted in the American and Chinese financial markets (Kolasinski et al., 2013; Liu et al., 2020; Mazouz & Wu, 2022). Thus, this study aims to fill the gap by examining stock price reactions to the regulated short selling announcements in Malaysia's emerging market. Lamba and Ariff (2006) studied the Malaysian financial market with regard to the short selling announcements on October 3, 1996, and August 28, 1997, but this study fills the research gap because it examines the stock price reactions to the announcements of the imposition and lifting of the ban of regulated short selling activities in more recent times due to the COVID-19 pandemic.

3. RESEARCH METHODOLOGY AND SAMPLE CONSTRUCTION

Previous studies have indicated that the event study method is commonly used when it comes to examining stock market reactions toward announcements (Kočenda & Moravcová, 2018; Nerger et al., 2021; Xie et al., 2022). Hence, this study employed the event study methodology proposed by Brown and Warner (1985). There are two significant events (announcements) related to regulated short selling activities. The first event was on March 23, 2020, when regulated short selling activities were banned. This was followed by the second event (announcement) on December 16, 2020, to lift the ban on regulated short selling activities.

As of November 19, 2019, there were 215 stocks allowed for regulated short selling activities. Thus, data were extracted for these 215 stocks to examine the stock price reactions to the first event (March 23, 2020). The daily closing prices were gathered for 218 stocks for the second event (December 16, 2020), to allow regulated short selling activities to resume on January 1, 2021.

Both lists are available on the Bursa Malaysia website and the daily closing prices were collected through the Bloomberg Terminal following the event period designed below.

3.1. Event Period

Both March 23, 2020, and December 16, 2020, were designated as day '0' in this study. To get the estimation period for both events, a total of 131 daily returns on the selected stocks were calculated. The first 100 days (-115 days to 16 days) before the event window was treated as the estimation period, and the event window is the 15 days prior and after the public announcements (March 23, 2020, and December 16, 2020) on regulated short selling activities. The time frame for the event study in this study is exhibited in Figure 1.

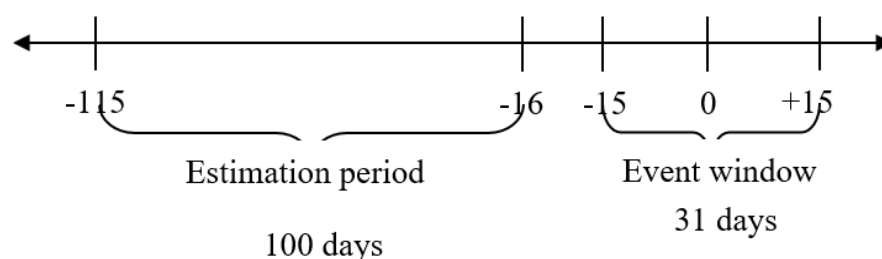


Figure 1. Event study time frame.

3.2. Abnormal Returns Measures

To calculate the actual return, $R_{i,t}$, the natural logarithm of P_0 (closing price on day 0) was divided by P_{-1} (closing price on day -1), as per Equation 1 below. The expected return of the stocks was calculated based on the adoption of the Capital Assets Pricing Model (CAPM), as presented in Equation 2.

$$R_{i,t} = \ln \frac{P_0}{P_{-1}} \quad (1)$$

$$R_{i,t} = R_f + \beta_i(R_{mt} - R_f) + \varepsilon_{it} \quad (2)$$

R_{mt} is the market return on the FTSE Bursa Malaysia Kuala Lumpur Composite Index (FBMVKLCI) at time t .

3.3. Simple Market Model

As proposed by Scholes and Williams (1977), this study employed the simple market model, which assumed a linear relationship between the stock price return and the market return (Return of FBMVKLCI, R_{mt}). The expected return was calculated as follows:

$$\widehat{R}_{i,t} = \widehat{\alpha}_i + \widehat{\beta}_i R_{mt} \quad (3)$$

Note: $\widehat{\alpha}_i$ is the estimated intercept for stock, and i and $\widehat{\beta}_i$ are the estimated slope coefficients in a regression of stock i . Both of the figures were calculated from the estimation period.

3.4. Abnormal Returns Estimates

To determine the abnormal returns for each of the selected stocks, the abnormal return ($AR_{i,t}$) was calculated based on the difference between the expected return and the actual return as per Equation 4 below:

$$AR_{i,t} = R_{i,t} - \widehat{R}_{i,t} \quad (4)$$

Equation 4, also can be written as:

$$\widehat{AR}_{i,t} = R_{i,t} - (\widehat{\alpha}_i + \widehat{\beta}_i R_{mt}) \quad (5)$$

Lastly, to measure the excess return employing a simple market mode, Equation 5 is presented. The intercept, $\widehat{\alpha}_i$, and slope, $\widehat{\beta}_i$, are the constants of the regression between the individual selected stock against the corresponding market returns during the first 100 days (estimation period).

During and after the public announcement regarding the short selling activities, the market movement was being studied with the computation of cumulative standardized abnormal return (CSAR) during the event windows (-15 day, 0, +15 day) for both events. Equation 6 was used to calculate the cumulative total standardized abnormal returns (CTSAR).

$$CTSAR_{i,t} = \sum_{t=T_1}^{T_2} TSAR_{i,t} \quad (6)$$

3.5. Test Statistics

To test the significance level of the two events (March 23, 2020, and December 16, 2020), the test statistic of the event periods at day t was computed using Equation 7.

$$T_t = \frac{1}{\sqrt{N}} \sum_{i=1}^N SAR_{i,t} \quad (7)$$

Where N is the number of stocks in the sample.

3.6. Hypothesis Testing

Hypothesis 1 was tested to determine if there was a significant difference when the abnormal returns were computed.

$$H_1: \sum_{t=-115}^{t=15} AR_{i,t} \neq 0$$

4. DATA ANALYSIS

The stock price reactions for the event window (-15 days to +15 days) to the first event (March 23, 2020) are detailed in Table 1. The total standardized abnormal returns (TSAR) and the cumulative total standardized abnormal returns (CTSAR) show the total effects of the stock price movements of the sample. Both the TSAR and CTSAR show that the stock prices moved negatively for the first announcement on March 23, 2020 (prohibition of regulated short selling activities) at the statistically significant level of 1%. On day 0, the TSAR is -824.7656 (t-value = -56.2485) and the CTSAR is -6260.4048 (t-value = -426.9561). The graph in Figure 2 depicts the TSAR and CTSAR values. The findings show that the stock prices reacted negatively to the announcement to ban the regulated short selling activities. This implies that banning regulated short selling activities reduces the market's efficiency. In other words, the market perceived it as negative news. Hence, the findings support the downward biased hypothesis proposed by Diamond and Verrecchia (1987).

Subsequently, on December 16, 2020, the Malaysian regulators announced the lifting of the prohibition on regulated short selling activities. In Table 2, the TSAR and CTSAR show that the stock prices moved positively. The TSAR is 52.03094 (t-value = 3.5240) and the CTSAR is 531.6039 (t-value = 36.0048) on day 0 at the statistically significant level of 1%. Figure 3 shows the respective TSAR and CTSAR values for the event on December 16, 2020. The findings imply that the market reacted positively to the removal of the ban on regulated short selling activities, which may mean that regulated short selling activities speed up the stock price reactions to the available information. Therefore, the second announcement was welcomed by the market participants, who treated it as positive news.

Table 1. Results of stock price movements on March 23, 2020.

Event day	TSAR	T-Test	CTSAR	T-Test
-15	-836.9944	-57.0825***	-836.9944	-57.0825***
-14	-48.3319	-3.2962***	-885.3263	-60.3788***
-13	-470.4731	-32.0860***	-1355.7994	-92.4648***
-12	707.2120	48.2315***	-648.5874	-44.2333***
-11	-614.7318	-41.9244***	-1263.3193	-86.1577***
-10	-1291.7699	-88.0980***	-2555.0892	-174.2556***
-9	-279.6189	-19.0698***	-2834.7081	-193.3255***
-8	333.3513	22.7344***	-2501.3568	-170.5911***
-7	-321.1645	-21.9032***	-2822.5213	-192.4944***
-6	869.9554	59.3305***	-1952.5659	-133.1639***
-5	-1732.1363	-118.1307***	-3684.7021	-251.2946***
-4	-342.2747	-23.3429***	-4026.9768	-274.6375***
-3	-667.0856	-45.4949***	-4694.0624	-320.1324***
-2	-1207.6408	-82.3604***	-5901.7032	-402.4928***
-1	466.0640	31.7853***	-5435.6392	-370.7075***
0	-824.7656	-56.2485***	-6260.4048	-426.9561***
1	164.9450	11.2492***	-6095.4598	-415.7069***
2	321.0750	21.8971***	-5774.3848	-393.8098***
3	288.9285	19.7048***	-5485.4563	-374.1050***
4	398.2953	27.1635***	-5087.1611	-346.9415***
5	-78.8607	-5.3783***	-5166.0218	-352.3198***
6	132.3787	9.0282***	-5033.6431	-343.2916***
7	328.6155	22.4114***	-4705.0276	-320.8802***
8	177.9698	12.1374***	-4527.0578	-308.7428***
9	-166.1627	-11.3322***	-4693.2205	-320.0750***
10	401.5743	27.3871***	-4291.6462	-292.6878***
11	106.3481	7.2529***	-4185.2981	-285.4350***
12	-135.5401	-9.2438***	-4320.8382	-294.6787***
13	424.5351	28.9531***	-3896.3031	-265.7257***
14	556.2739	37.9376***	-3340.0293	-227.7881***
15	101.0721	6.8931***	-3238.9572	-220.8950***

Note: *** p-value < 0.001.

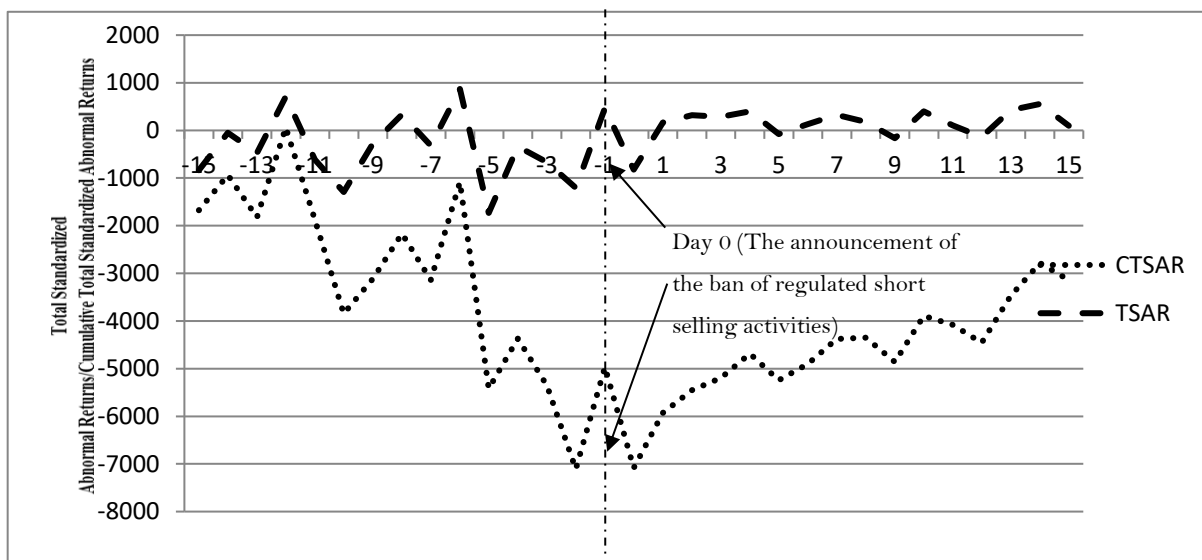


Figure 2. Total standardized abnormal returns (TSAR) and cumulative total standardized abnormal returns (CTSAR) on March 23, 2020.

Table 2. Results of stock price movements on December 16, 2020.

Event day	TSAR	T-test	CTSAR	T-test
-15	-26.8952	-1.8216*	-26.8952	-1.8216*
-14	62.3608	4.2236***	33.9596	2.3000**
-13	56.3011	3.8132***	90.2423	6.1120***
-12	268.184	18.1637***	362.4125	24.5457***
-11	-22.3256	-1.5121	341.0085	23.0960***
-10	45.2476	3.0646***	387.3193	26.2326***
-9	49.1077	3.3260***	434.8214	29.4498***
-8	115.014	7.7897***	552.9815	37.4526***
-7	138.0287	9.3485***	690.4299	46.7618***
-6	-25.1927	-1.7063*	663.1039	44.9111***
-5	-112.188	-7.5983***	553.5131	37.4886***
-4	-38.5485	-2.6108*	512.8419	34.7340***
-3	-52.9289	-3.5848***	459.8841	31.1473***
-2	28.6604	1.9411*	490.6529	33.2312***

Note: * p-value < 0.1.
 ** p-value < 0.05.
 *** p-value < 0.001.

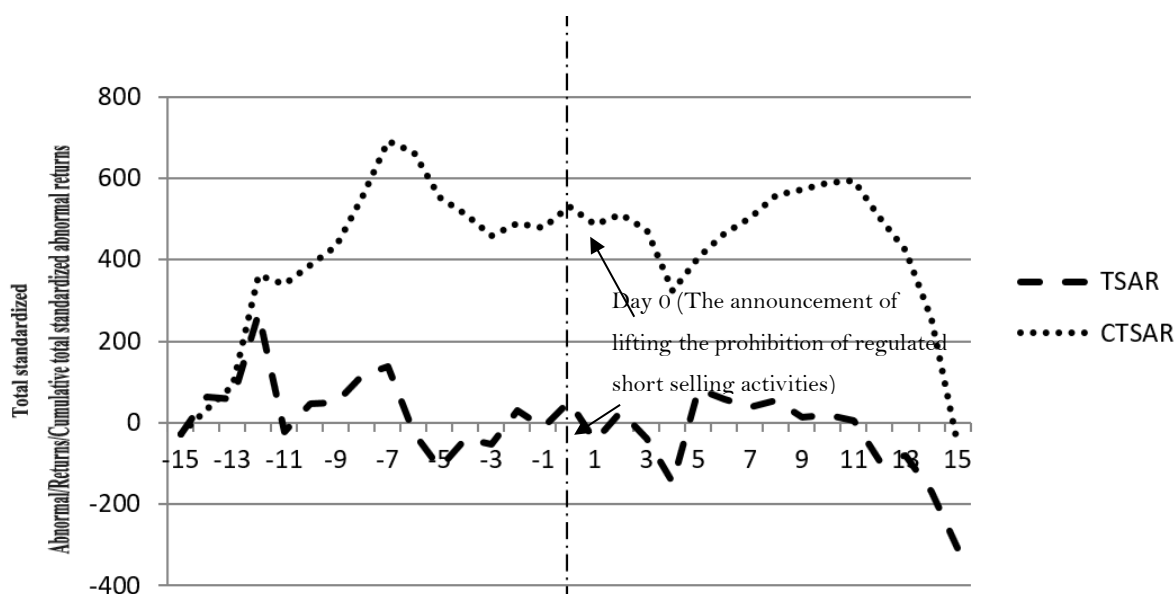


Figure 3. Total standardized abnormal returns (TSAR) and cumulative total standardized abnormal returns (CTSAR) on December 16, 2020.

5. CONCLUSIONS AND IMPLICATIONS

This study examined the stock price reactions to the announcements regarding regulated short selling activities for the approved stocks listed on Bursa Malaysia. The findings showed that stock prices moved negatively in response to the ban of regulated short selling activities on March 23, 2020. At the same time, the findings also showed the greatest negative effects occurred on the announcement date. Market participants viewed the ban as negative news.

The second announcement on December 16, 2020, to remove the ban of regulated short selling activities led to the positive movement of stock prices. The findings showed a positive effect on stock price movement. In other words, the announcement was viewed as positive news and was welcomed by the market participants. Similar results were found by Lamba and Ariff (2006).

Based on the events examined, the results support the downward biased hypothesis proposed by Diamond and Verrecchia (1987). The cumulative effect of the imposed ban on short selling activities led to a constant decrease in their observed returns. Hence, the findings imply that market participants welcome short selling activities as an essential tool to complete the financial market (Diamond & Verrecchia, 1987).

This study filled the gaps by conducting an empirical study of an emerging market (Malaysia) and concluded that the stock prices reacted negatively in response to the ban on regulated short selling activities. This means that the financial market welcomes regulated short selling activities.

However, the ban was not welcomed by investors, even during the COVID-19 pandemic, as it could potentially lead to short-term instability. Based on the findings, it is suggested that the authorities find alternative solutions to ensure the financial stability of the market because banning regulated short selling activities was not seen by market participants as an effective way to stabilize the financial markets and preserve investor confidence during the crisis.

Due to the importance of investor confidence, it is recommended that further research be carried out to examine investors' confidence and provide valuable insight to the authorities.

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