Effects of the COVID-19 Pandemic and Firm Size on Hotel, Resort, and Cruise Ship Sub-Industry Firms' Stocks

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Anisah Firli*
Telkom University, Indonesia

Dendha Rizky Nugraha
Telkom University, Indonesia

ABSTRACT

With special reference to the hotel, resort, and cruise ship industry, this study examines the impact of the declaration of COVID-19 as national disaster on the stock market by comparing the stock market conditions prior and following the declaration and investigates the existence of the firm size effect. An event study was employed using abnormal returns and trading volume activities. The findings reveal that abnormal returns were significantly different before and after the declaration of COVID-19 as a national disaster. However, trading volume activities and abnormal returns of large-cap stocks are not significantly different from those of small-cap stocks before and after the declaration.

Keywords: Abnormal Return, Trading Volume Activity, Event Study, Size Effect.

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1. INTRODUCTION

The COVID-19 which spread widely throughout the world prompted countries to formulate regulations with the aim of breaking the chain of spread, including enforcing a lockdown, limiting large-scale business activities, and banning national and international departures (Kementrian Pariwisata dan Ekonomi Kreatif, 2020). This situation obstructed economic growth throughout the countries. Indonesia's economic growth also plummeted, as in the first quarter of 2020 it grew by 2.97%, which was lower than the first quarter of 2019 with a growth of 5.07%, implying a slowdown in economic growth by 2.1% (Badan Pusat Statistik, 2020).

One of the causes of the hampered state of Indonesia's economy was the decline in the number of foreign and domestic tourists, as well as the closure of tourist destinations, entertainment, and access to and from Indonesia which resulted in the shortage of visitors to hotels and restaurants. In 2020, approximately 4.05 million foreign tourists visited Indonesia, showing a decrease by -78.84% from 2019 with around 16.11 million tourists. This situation brought an impact on the state revenue from the tourism sector in form a decrease worth of Rp. 20.7 billion (Kementrian Pariwisata dan Ekonomi Kreatif, 2020).

This decline in the number of foreign tourists had a direct impact on hotel occupancy rates in Indonesia. The occupancy rate in Indonesia reached 49.17% in January and 49.22% in February, before it fell to 32.24% in March. The pandemic also resulted in reduced

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working hours, in fact approximately 939 thousand people were temporarily out of work, which in turn had an impact on job opportunities and hampered operational activities of firms in the tourism sector (Kementrian Pariwisata dan Ekonomi Kreatif, 2020).

The domino effect of COVID-19 prompted the implementation of policies regulated by the Government of Indonesia, including the announcement on Saturday, March 14, 2020 regarding the declaration of COVID-19 outbreak as a National Disaster. This sparked alarm in the capital market, triggering a downward trend in the average share price movement of the resort hotel and cruise ship sub-industry.

Based on this phenomenon, this study was initiated to understand how significant the changes brought about by the COVID-19 pandemic, measured using abnormal returns and trading volume activity, as well as the firms' size effect, measured using abnormal returns of large-cap and small-cap stocks before and after the declaration of COVID-19 outbreak as a national disaster on Saturday, March 14, 2020. This study is expected to be able to foresee the impact of an event in the capital market and anomalies that may emerge, as well as to test the consistency of results from previous event studies.

2. LITERATURE REVIEW

The significant role of the capital market in a country, particularly in the economic sector, makes it easier for occurring events to influence the market that they can have an impact on security price movements in forming new equilibrium prices and trading volume activities (Sambuari et al., 2020). The impact experienced by a firm may differ depending on its stock market capitalization. Firms with large market capitalization will have a lower level of risk and sensitivity to market index movement, resulting in lower price fluctuation compared to firms with small market capitalization (Tjandra et al., 2018).

The capital market is strongly influenced by information for that information is used by investors to make judgments and considerations prior to making decisions (Sambuari et al., 2020). Events with strong information will produce returns that exceed investors' expectations, called abnormal returns, as a proof of reaction to these events (Hartono, 2017). In addition, trading volume activity also plays a role in measuring the impact of events that occur (Ameici et al., 2021). The high trading volume activity surrounding an event is considered as a proof that an event can encourage investors to be actively involved in trading so as to create a good market condition (Febriyanti, 2020).

A good market is supported by an efficient market condition. An efficient market refers to a condition in which securities being traded are reflecting the information content quickly and accurately (Fama, 1970). This concept implies that the price of a security may fluctuate in response to certain events to attain a new security price. However, a number of studies have found market anomalies that serve as means to test the validity of the efficient market hypothesis (Hendrawaty & Huzaimah, 2019).

The firm size effect is a portion of the firm anomaly, in which a small size firm will have a higher rate of return than a large size firm, despite the risk adjustment (Gumanti, 2011). The size of a firm can be measured by various factors, one of which is its market capitalization (Tjandra et al., 2018).

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Febriyanti (2020) found significant differences in abnormal returns and trading volume activity before and after the COVID-19 outbreak in Indonesia. On the other hand, a study conducted by (Hendrawaty & Huzaimah, 2019) on the effect of firm size concluded that that large firms have lower returns. This shows that the Indonesian capital market is experiencing an anomaly in the firm size effect.

3. METHODOLOGY

This study employed event study as the approach to observe changes in stock market conditions and testing the validity of the efficient market hypothesis before and after the declaration of COVID-19 as a National Disaster for 10 days. The sample data used involved historical prices and volumes from 13 hotel, resort, and cruise ship sub-industry firms on each date around the event, while the expected returns were calculated using market-adjusted model with data in form of historical prices from the Composite Stock Price Index obtained through the official website of Indonesia Stock Exchange, Yahoo Finance, Investing.com, and SahamU.

4. FINDING AND DISCUSSION

A normality test of the COVID-19 pandemic effect (abnormal returns and trading volume activities) using the Shapiro-Wilk test resulted in the values below.

Table 1. Normality Test of Pandemic COVID-19 Effect

Events		Saphiro-Wilk		
		Statistic	df	Sig.
Result	AR before	0.821	13	0.012
	AR after	0.644	13	0.000
	TVA before	0.616	13	0.000
	TVA after	0.601	13	0.000

In Table 1, the significance values of the normality test before and after the event for abnormal returns and trading volume activity were below 0.05, for abnormal returns were 0.012 and 0.000, and trading volume activities were both worth 0.000. This result implies that the distribution of data for returns was not normal, neither was trading volume activity, hence the Wilcoxon test was used as a method to test the hypothesis.

Table 2. Normality Test of Firm Size Effect

Events		Saphiro-Wilk		
		Statistic	df	Sig.
Result	Large Firm	0.949	10	0.653
	Small Firm	0.943	10	0.582

According to Table 2., the significance values of the firm size effect normality test were above 0.05, for both large and small stocks, with values of 0.653 and 0.582. This implies that large and small stock data were normally distributed, hence the hypothesis was tested by independent sample t-test.

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Table 3. Wilcoxon Test of Abnormal Average Return

Test Statistics[a]	
	After - Before
Z	-1.992
Asymp. Sig. (2-tailed)	0.046

Hypothesis testing with the Wilcoxon test produced a Z value of -1.992 and a significance value of 0.046, or above 0.05. This signifies that H_0 was rejected, hence it can be concluded that there were significant differences in abnormal returns before and after the declaration of COVID-19 as a national disaster in the shares of the hotel, resort, and cruise ship sub-industry firms. This implies that the declaration of COVID-19 as a national disaster holds sufficient information to change stock price movements that the market provides abnormal returns during this period as a form of reaction. The hypothesis test obtained results similar to those of Febriyanti's (2020), which investigated the impact of the COVID-19 pandemic in Indonesia in the capital market, which revealed that the abnormal returns before and after the event were significantly different.

Table 4. Wilcoxon Test of Average Trading Volume Activity

Test Statistics[a]	
	After - Before
Z	-0.804
Asymp. Sig. (2-tailed)	0.422

Hypothesis testing with the Wilcoxon test produced a Z value of -0.804 with a significance value of 0.422, or above 0.05. This signifies that H_0 was accepted, hence it can be concluded that there was no significant difference before and after the declaration of COVID-19 as a national disaster in the stock trading volume activities of the hotel, resort, and cruise ship sub-industry firms. This implies that the information content in the declaration of COVID-19 as a national disaster was considered not powerful enough to trigger a significant reaction to conduct transactions in the capital market during the research period. In addition, investors chose not to be too quick in making trading transaction decisions based on information outside of economic events, they tended to wait and see. The results of this study were in accordance with those of Ghibran et al., (2021) on how the capital market reacted when Indonesia declared the COVID-19 outbreak, in which revealed no significant difference on trading volume activities before and after the event.

Tabel 5. Wilcoxon Test of Average Abnormal Return Big Firm

Test Statistics[a]	
	After - Before
Z	-1,690
Asymp. Sig. (2-tailed)	0,091

In Table 5., the Wilcoxon test gives a Z value of -1.690 and a significance value of 0.091 or above 0.05. This means that "H" _"0" is accepted, so the conclusion drawn is that there is no significant difference in abnormal returns before and after the establishment of Covid-19 as a national disaster in shares of large-sized hotel, resort and cruise ship sub-

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industry companies.

Tabel 6. Paired Sample t-test Average Abnormal Return Small Firm

		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	Abnormal Return After - Abnormal Return Before	0,0042	0,0106	0,0043	-0,007	0,0153	0,957	5	0,383

In Table 6., the Paired Sample t-test gives a significance value of 0.383 or above 0.05. This means that "H" _"0" is accepted, so the conclusion drawn is that there is no significant difference in abnormal returns before and after the establishment of Covid-19 as a national disaster in the shares of small-sized hotel, resort and cruise ship sub-industry companies. This explains that the announcement of the stipulation of Covid-19 as a National Disaster has enough information to change the movement of stock prices in large and small companies.

This finding is in accordance with the theory of Jones (2014), which suggests that low stock returns are related to stocks with small market capitalization and are quite difficult to obtain or purchase either by individuals or institutions due to their large spreads and commissions. Firms with large stock capitalizations tend to have low price fluctuations, and provide clear returns because these firms can sell their products well and are in good financial conditions. Consequently, firms with large stock capitalization tend to gain investors' trust easier. The results of this study supported the study of Diahlestari & Artini (2019) which tested the anomaly of the firm size effect on Indonesia Stock Exchange and found that there was no significant difference in the abnormal returns of large-cap firms compared to small-cap ones, indicating that there was no size effect.

5. CONCLUSION

Referring to the results of this study, the declaration of COVID-19 as a national disaster has an impact on the shares of the hotel, resort, and cruise ship sub-industry firms. The results of the statistical test of the average return are not normal which imply that there is a significant difference before and after the event, despite the insignificant difference in trading volume activity. This is due to the temporary suspension of trading imposed by Indonesia Stock Exchange. During the research period, the suspension took place on March 12, 13, and 17, 2020. It caused obstruction of trading transactions by investors on the Indonesia Stock Exchange. Also, the abnormal returns of large-cap shares compared to small-cap shares did not show a significant difference, denoting that there was no proof of a firm size effect.

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