Does Trading Volume Activity React To The Announcement of Large-Scale Social Restrictions During The Covid-19 Pandemic

by Hendro Widjanarko

Does Trading Volume Activity React To The Announcement of Large-Scale Social Restrictions During The Covid-19 Pandemic?

Suratna[1], Hendro Widjanarko[2], Humam Santosa Utomo[1]

[1]Business Administration Department, Universitas Pembangunan Nasional Veteran Yogyakarta, Indonesia

[2]Management Department, Universitas Pembangunan Nasional Veteran Yogyakarta, Indonesia

Abstract

This research is an event study that aims to examine the information content as measured by trading volume activity as a form of capital market reaction to the announcement of the COVID-19 pandemic in Indonesia. The purpose of this research study is to determine and analyze the presence or absence of trading volume activity before and after the announcement of Large-Scale Social Restrictions in the context of handling COVID-19 in Indonesia. The analytical method used in the study is a quantitative method in research with an event study approach which is used to analyze the reaction of the capital market to the announcement of large-scale social restrictions (PSBB) in the context of handling the COVID-19 pandemic in Indonesia. The data analysis technique is this research is using event study. The results showed that there were significant differences in stock trading volume activity before and after the announcement of the PSBB policy during the Covid-19 pandemic in DKI Jakarta.

Keywords: *Importance-Performance Analysis; e-business motivation; a cartesian diagram*

INTRODUCTION

The capital market is an alternative in investing, by investing in a company managed by the Indonesia Stock Exchange with the aim of making a profit. The capital market is the market for medium-term or long-term debt and company shares (Brigham & Houston, 2011:145). The stock market is sensitive to events around it. The COVID-19 pandemic in Indonesia has tremendous implications for people's lives. Studies on the implications of social restrictions during the pandemic on stock activities are still limited.

The Head of the National Disaster Management Agency of Indonesia (BNPB) stipulates rule No. 13A of 2020 concerning "Extension of the status of a certain state of emergency for an outbreak of a disease caused by the Corona Virus in Indonesia" on February 29, 2020 (setkab.go.id, 2020). In addition to the decision, Large-Scale Social Restrictions (PSBB) were also set for certain areas, especially in DKI Jakarta. This study discusses the events that occurred in it, namely the events before and after the announcement of the Large-Scale Social Restrictions (PSBB). Researchers take this as an event because it is suspected to contain information that causes the capital market to react. Due to significant fluctuations during the announcement of Large-Scale Social Restrictions (PSBB) in DKI Jakarta, further analysis is needed in the form of Event Study analysis to examine the information contained in it. Market reactions can be seen, among others, from trading volume activity. This research is expected to provide information and as a consideration for investors to be wiser in determining their attitudes and decisions in investing in the

capital market. This research can be used as a reference for further researchers and can provide additional knowledge and contributions to the literature in the field of financial management.

LITERATURE REVIEW
Capital Market Efficiency Theory

Capital market efficiency is one of the classical financial concepts that explains the condition of investors in processing all the information available on the stock exchange in order to form the equilibrium price on the stock exchange. An efficient market is a market where the prices of all traded securities reflect all available information. In this case, the available information may include information in the past, such as the company's profit last year, current information such as plans to increase dividends this year, and information that is opinionated or rational opinions circulating in the market that can influence price changes (Tandelilin, 2010).

The essence of this concept is basically that in an efficient market, there is a process of adjusting stock prices to a new equilibrium price in response to information on the stock exchange. The information circulating on the exchange does not always run perfectly, but the most important thing is that the prices formed do not contain bias. In an efficient market, the existing information will be easily digested by investors so that changes in security prices occur quickly, but for inefficient markets, there is often a lag in the price adjustment process, allowing investors to gain or suffer losses from the lag.

Signaling Theory

Signaling theory is an action taken by the company to provide instructions for investors about how management views the company's prospects (Brigham & Houston, 2014: 461). This action is taken by the company in order to give a signal to shareholders or investors regarding the company's management in seeing the company's prospects in the future so that it can distinguish good quality companies and poor quality companies. Published company reports can be used as a guide for shareholders and consideration in investing. Company management can provide company reports as an internal interest. Investor interest can be maintained by providing information about the company to shareholders. Every action (event) can give a signal to the market, either in the form of a positive signal or a negative signal, so that if an event contains strong information, it will cause the capital market to react.

Trading Volume Activity

Trading volume activity (TVA) is the sales volume of each trading transaction that occurs on the stock exchange at a certain time and stock. Trading volume is a key element in predicting stock price movements (Hamidi, 2008:36). He believes that the volume tends to increase as securities decline, so it is indicated in a bearish condition. Meanwhile, when the trading volume tends to increase as long as the price increases, the market is indicated to be in a bullish state, and when the volume tends to decrease as long as the price increases, the market is in a bearish state (Husnan, 2009: 97). The more the volume of supply and demand for a stock increases, the greater its influence on stock price fluctuations on the stock exchange, and the increasing volume of stock trading indicates the public's interest in the stock so that it will have an effect on rising stock prices or returns (Halim, 2015: 187). Trading volume will lower the cost of owning the stock, thereby lowering the spread.

Previous Research

Previous research comes from journals with research results and compares with future research by analyzing based on different circumstances and times. The summary of previous research is as follows:

Table 1. Previous Research

No.	Author	Finding
1.	I.B. Sambuari, Ivonne S. Saerang, Joubert B. Maramis (2020)	- Does not contain information that causes the capital market to react to abnormal returns - Contains information that causes the capital market to react to trading frequency - Does not contain information that causes the capital market to react to market capitalization
2.	Zoraya, Intan (2019)	There is a difference in the average abnormal return and the average trading volume activity before and after the election
3.	Sari (2018)	There are differences in abnormal returns before and after the 2017 DKI Jakarta Governor General Election
4.	Wulan (2018)	There is a significant reaction around the Unusual Market Activity announcement date

Based on the Capital Market Efficiency Theory, Signaling Theory, and previous research, the hypothesis proposed in this study is that there are differences in stock trading volume activity five days before and five after the announcement of Large-Scale Social Restrictions (PSBB) during the Covid-19 pandemic in DKI Jakarta for companies, which is included in the LQ-45 index.

RESEARCH METHOD

The type of research used in this research is quantitative research with a descriptive approach. This research includes quantitative case study research, not only collecting data in terms of quantity but also wanting to gain a deeper understanding of the events that were successfully obtained. This study examines the effect before and after the announcement of Large-Scale Social Restrictions (PSBB) during the Covid-19 pandemic in DKI Jakarta on the research variable in the form of trading volume activity.

The objects in this study are companies listed on the LQ-45 index on the Indonesia Stock Exchange (IDX). The observation period in this study is April 03, 2020, to April 17, 2020. The events used in this study are the reaction of the capital market before and after the announcement of Large-Scale Social Restrictions (PSBB) during the Covid-19 pandemic in DKI Jakarta. Based on data from the Indonesia Stock Exchange (IDX), in this study, the window period for the events to be studied is 11 days in 3 events, namely, before the announcement of PSBB policy, one day at the time of the announcement, and after the announcement of PSBB policy. The window period in this study are:
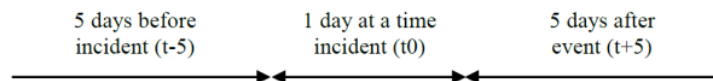
5 days before incident (t-5)	1 day at a time incident (t0)	5 days after event (t+5)

Figure 1. 11 Day Window Period

The data used in this study were five days before the event (t-5), one day at the time of the event (t0), and five days after the event (t+5). Trading volume activity is measured by the following formulation (Husnan, 2009:79). The data analysis technique used Paired t-test. This test was carried out on two paired samples. The paired sample is defined as a sample with the same subject but experiencing two different measurements.

FINDINGS AND DISCUSSION
Results
Descriptive Analysis

Based on the results of stock trading volume activity in the research period five days before and five after the announcement of the PSBB policy, the data obtained on the average trading volume activity during the research observation period are as follows:

Table 2. Descriptive Statistics Test Results Trading Volume Activity

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
PreATVA	45	.00033	.07060	.0047858	.01069740
PostATVA	45	.00020	.06633	.0040104	.00991963
Valid N (listwise)	45				

Table 2 shows the average value of stock TVA before and after the announcement of the PSBB policy. The minimum value before the PSBB announcement was obtained by PT. Unilever Indonesia Tbk. of 0.00023. While the maximum value obtained by PT. Erajaya Swasembada Tbk. of 0.13922. The mean value of TVA before the announcement of the PSBB was positive at 0.00478, and the standard deviation was 0.01069. This means that the mean trading volume of stock activity is smaller than the standard deviation value, indicating that the data is heterogeneous because the distribution of the data varies, which means that the mean TVA has a high level of deviation.

The minimum value of the mean TVA after the announcement of the PSBB policy was obtained by PT. Unilever Indonesia Tbk. of 0.00011. Meanwhile, the maximum mean TVA after the announcement of the PSBB policy was obtained by PT. Erajaya Swasembada Tbk. of 0.10629. The mean value of TVA after the announcement of the PSBB policy is 0.00401, and the standard deviation is 0.00991. This means that the mean trading volume of stock activity is smaller than the standard deviation, indicating that the data is heterogeneous because the distribution of the data varies, which means that the mean trading volume activity has a high level of deviation. For the calculation of the mean trading volume of daily stock activity during the observation period, it can be seen in table 3.

Table 3. Calculation Results of Average Trading Volume Activity

Date	Period	Average TVA
03-Apr-20	t_{-5}	0.00319
06-Apr-20	t_{-4}	0.00514
07-Apr-20	t_{-3}	0.00759
08-Apr-20	t_{-2}	0.00409
09-Apr-20	t_{-1}	0.00392
10-Apr-20	t_0	0.00392
13-Apr-20	t_{+1}	0.00233

Date	Period	Average TVA
14-Apr-20	t_{+2}	0.00499
15-Apr-20	t_{+3}	0.00351
16-Apr-20	t_{+4}	0.00487
17-Apr-20	t_{+5}	0.00433

The movement of the value of the mean trading volume activity during the observation period is quite stable. In the period before the announcement of the PSBB policy, the movement of the mean trading volume activity tends to decrease, and it can be seen from the period t-4 to t-1. However, in the period t+1 to t+5, the mean value of trading volume activity increased from 0.00233 to 0.00433. The movement of the mean TVA of stocks during the observation period can be seen in Figure 2.
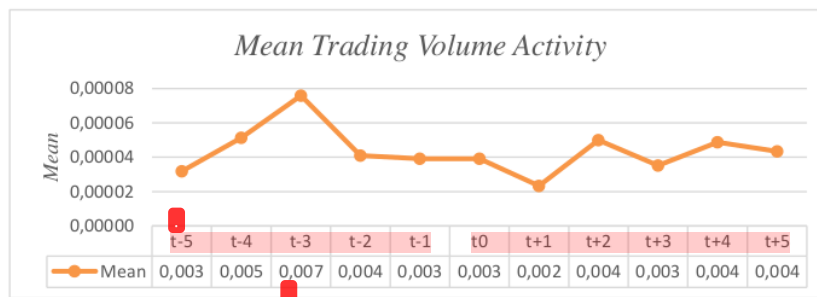

Figure 2. Movement of Average Trading Volume Activity

In the period before the announcement of the PSBB policy, there was an increase at t-3, and in the end, it continued to decline to t+1. After the announcement of the PSBB policy in the t+2 period, it increased by 0.00499 but decreased again at t+3. At t+4, it increased, and at t+5, it decreased again.

Hypothesis Testing

Hypothesis testing in this study used paired t-test.

Table 4. Paired t-Test Trading Volume Activity Test Results

	Mean	Std. Deviation	Mean Difference	t	Sig.	Result
Avg. TVA (before)	0.00479	0.01070	0.00159467	3.29921	0.00193	Significant
Avg. TVA (after)	0.00401	0.00992	0.00147873			

Based on Table 4, the calculation using the paired t-test using the IBM SPSS Statistics 26 software shows that there is a significant difference in the average TVA before and after the announcement of the PSBB policy. The significance value of the mean TVA before and after the announcement of the PSBB policy is 0.001, which is smaller than = 0.005.

Discussion

Based on the paired sample t-test, which was conducted during the observation period of events before and after the announcement of the PSBB policy during the Covid-19 pandemic in DKI Jakarta, there

were significant differences in trading volume activity. This can be interpreted that the event is having strong information content that makes investors make decisions so that the market reacts. Investment decisions under conditions that are different from investment decisions under normal conditions provide a signal that investors respond to the information obtained. Many investors take profit, and this can be seen during the t-4 period, which has the highest average TVA. It can be said that the announcement of the PSBB policy in DKI Jakarta is an event that has a large enough effect. The results of this study support the research conducted by Sambuari et al. (2020), which proves that there is an influence during the Covid-19 virus event, which is indicated by a significant trading volume activity.

CONCLUSION AND FUTURE RESEARCH

Based on the discussion described in the previous chapter, it can be concluded that there are significant differences in stock TVA before and after the announcement of the PSBB policy during the Covid-19 pandemic in DKI Jakarta. Further research is recommended to examine studies with a wider scope.

REFERENCES

Agustiawan, Koman Endri dan Edy Sujana. 2020. Reaksi Pasar Modal Indonesia Sebelum dan Sesudah Pengumuman Kebijakan Pemerintah Tentang Status Darurat Bencana Covid-19. Jurnal Akuntansi Profesi, Vol. 11 No.2 Desember 2020.

Baskara, B. 2020. Rangkaian Peristiwa Pertama Covid-19.

Diakses 24 Mei 2020, dari www.bebas.kompas.id. Website: https://bebas.kompas.id/baca/riset/2020/04/18/rangkaian-peristiwa-pertama-covid-19/

Sambuari, B., Inri, Saerang, I.V., Maramis, J.B. 2020. Reaksi Pasar Modal Terhadap Peristiwa Virus Corona (Covid-19) Pada Perusahaan Makanan dan Minuman yang Terdaftar di Bursa Efek Indonesia. Jurnal Ilmiah Manajemen Bisnis, Vol.7 No.3 September 2020: 407-415.

Bluman, Allan G., 2012, Elementary Statistics A Step By Step Approach Eight Edition. New York: McGraw-Hill.

Bursa Efek Indonesia. 2021. Ringkasan Indeks. Diakses tanggal 12 April 2021, dari http://www.idx.co.id

Fama, Eugene F., 1970, Efficient Capital Market: A Review of Theory and Empirical Work. Journal of Financial. 25.

Husnan, Suad. 2013. Dasar-Dasar Teori Portofolio dan Analisis Sekuritas. Yogyakarta: UPP AMP YKPN.

Jogiyanto, Hartono, 2005, Pasar Efisien Secara Keputusan. Jakarta: Gramedia Pustaka Utama.

_____, 2015, Teori Portofolio dan Analisis Investasi, Edisi Kedelapan. Yogyakarta: BPPE.

Kusumayanti, Kadek Ria dan Anak Agung Gede Suarjaya, 2018, Reaksi Pasar Modal Indonesia Terhadap Pengumuman Kemenangan Donald Trump Dalam Pilpres Amerika Serikat 2016. E-Jurnal Manajemen Unud, Vol. 7, No. 4. 2018 :1713-1741.

Sari, Luh Gede Hari Purnama. 2018. "Perbedaan Abnormal Return Sebelum dan Sesudah Pemilihan Umum Gubernur DKI Jakarta Tahun 2017". E-Jurnal Akuntansi Universitas Udayana Vol.24 No.2 Agustus (2018): 1413-1440. https://doi.org/10.24843/EJA.2018.v24.i02.p22

Sekaran, Uma dan Bougie, R., 2017, Metode Penelitian untuk Bisnis Pendekatan Pengembangan-Keahlian. Jakarta: Salemba Empat.

Sekretariat Kabinet Republik Indonesia. (2020). Status Keadaan Tertentu Darurat Bencana Covid-19 Diperpanjang Hingga 29 Mei 2020. Diakses 21 Mei 2020, dari https://setkab.go.id/status-keadaan-tertentu-darurat-bencana-covid-19-diperpanjang-hingga-29- mei-2020/

Tandelilin, Eduardus, 2007. Analisis Investasi dan Manajemen Portofolio. Yogyakarta: BPFE UGM.

_____, 2010, Portofolio dan Investasi. Yogyakarta: Percetakan Kanisius.

Wulan, Dewi Cahya. 2018. "Analisis Abnormal Return Dan Trading Volume Activity Terhadap Pengumuman Unusual Market Activity (Studi pada Perusahaan yang Terdaftar dalam Pengumuman Unusual Market Activity di BEI Tahun 2015-2017)". Jurnal Administrasi Bisnis (JAB) | Vol. 61 No. 1 Agustus 2018. http://administrasibisnis.studentjournal.ub.ac.id

Yahoo Finance (2021, April). Historical Data Saham pada Indeks LQ-45 tahun 2020. Diakses 12 April 2021, dari https://finance.yahoo.com

Zoraya, Intan. 2019. "Dampak Pilkada Serentak 27 Juni 2018 Terhadap Abnormal Return Dan Aktivitas Volume Perdagangan Saham DI BEI". Jurnal Riset Manajemen dan Bisnis (JRMB) Fakultas Ekonomi UNIAT Vol. 5, No 1, November – Februari 2020:13–28. Dari http://jrmb.ejournal-feuniat.net/index.php/JRMB/article/view/355

Does Trading Volume Activity React To The Announcement of Large-Scale Social Restrictions During The Covid-19 Pandemic