THE EFFECTIVENESS OF COVID-19 POLICIES ON THE VOLATILITY OF STOCK IN THE BANKING SECTOR

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ABSTRACT

Covid-19 pandemic infected almost all countries globally, thereby disrupting their economic and financial sectors, especially the capital market, as indicated by the high volatility of stock returns. Therefore, this research aims to measure the effectiveness of the Covid-19 policy to arouse credit amusement capable of depreciating the volatility of stock returns in the Indonesian banking sector. This research uses an event study approach by choosing March 13, 2020, as the date for establishing banking sector policies by the Financial Services Authority during the pandemic. The event study approach was used to calculate the daily abnormal return volatility of the estimation results of the pre and post single index model policy using 15 banking stocks. Furthermore, the effectiveness of the policies in reducing the volatility of bank stock returns was analyzed using three-panel regression models on the proxy of market return on financial, LQ45, and composite indexes, namely FEM, REM, and CEM. These models were tested using the Chow and Hausman test, and the results showed that the Covid-19 policy in the banking sector was able to reduce the volatility of stock returns. It also proved that the dummy variable (policy) for all models was significantly negative and explained the minimal change in volatility or the determination coefficient of less than 5%. Furthermore, it is possible that during the event, several other policies simultaneously reduced the volatility of banking stock returns, which were not included in the model.

Keywords: Banking, Covid-19, Policy, Stock Returns, Volatility, Indonesia.

JEL Classification: J24, J61, O11

INTRODUCTION

Volatility or stock price movements of a publicly-traded company are a common phenomenon often seen in trading on the stock exchange floor. It is an economic instrument that strongly influences individual and combined prices, such as the Composite Stock Price Index and LQ45 Index. The factors responsible for these influences come from the internal (micro-events) and external variables (macro-events) of companies (micro-events), such as various announcements and fundamental factors. Covid-19 provides signals or information that affects all sectors in a country, including the financial sector and, more specifically, the capital market. Signal theory is an information signal used by investors to determine their wiliness to invest in a company (Suwardjono, 2010). According to Bodie et al. (2008), during investments, investors expect the stock price to fully reflect all available information in accordance with the theory of the Efficient Market Hypothesis (EM).

The Indonesian stock market experienced high volatility in mid-March 2020, with the composite index touching its lowest level of 3,937.63 on March 24, 2020, after the government announced the first case of Coronavirus on March 2, 2020. Till date, the stock market is still potential to volatility due to the high dynamics of the economy during the

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pandemic. Therefore, it is important to adhere to government policies to prevent the occurrence of further impacts.

The pandemic directly impacted real sector activities and on banks as an institution that collects and distributes funds to the public. Businesses financed by banks were the most hit during the pandemic, with a large percentage of losses and decreased income. During the first quarter of the pandemic, Indonesia's banking performance was still positive in terms of capital and credit quality. However, as time passed, the economic performance, especially in the banking sector, declined significantly, thereby affecting the ability of this intermediary to function regularly.

The business sector is currently encountering a decrease in production, and the downturn of purchasing power makes the company trapped in debt, increasing the number of non-performing loans. According to Ozili (2019), NPL is an indicator of credit risk assessment in a bank. Therefore, the graph of the existing NPL is used to determine the low and high levels of credit risk in a bank. The spread of coronavirus is rapid and, when not handled properly, is likely to have a lasting impact on the economy. The United Nations Conference Trade and Development-UNTCAD (2020) reported that the duration and level of risk caused by a pandemic depend on three variables: (1) how far and how fast it spreads, (2) the duration of time before discovering a vaccine, (3) the effectiveness of policies implemented in reducing risk in the health and economy of a country.

Therefore, In order to prevent an economic recession due to the pandemic, the Indonesian government, through the Financial Services Authority on March 13, 2020, undertook relaxation efforts in the banking sector by stipulating POJK Number 11 / POJK.03 / 2020, which is expected to be able to provide stimulus to Indonesians. POJK was issued to assist debtors affected by decreased performance and capacity and prevent an increase in credit risk that can disrupt banking performance and financial system stability. It is hoped that this POJK will boost banking performance as intermediation, financial system stability, and optimal economic growth.

This research aims to examine the effectiveness of the Covid-19 policy in the financial sector on the volatility of banking sector stocks widely studied in preliminary studies. It was carried out using the event study approach with March 13, 2020, used to determine the impact of the policy. This research contributes to the expansion of the literature related to event studies that examine the capital market's response to new information. Positive and negative responses are indicated by a decrease and increase in stock volatility, respectively. The event study is used to observe the banking sector's stock price movement in the capital market by comparing the volatility before and after the Covid-19 policy.

LITERATURE REVIEW

In 2020, Liu et al. researched the impact of Covid-19 on the economic sector, especially the capital market. Liu evaluated the short-term impact of the coronavirus outbreak on 21 leading stock market indices in major affected countries, including Japan, Korea, Singapore, the United States, Germany, Italy, and the United Kingdom. The result showed that the pandemic harmed stock market returns in all countries, especially those in Asia, which recorded more negative abnormal returns. Wang & Enilov (2020) examined the effect of Covid-19 on financial markets in the most developed industrialized countries (G7) between February 17 2020, and April 9 2020. This study tested the hypothesis that the number of new cases of the coronavirus has a significant effect on stock returns on international financial markets. The results showed that based on the Granger panel non-causality test strongly supports this hypothesis for the G7 countries. This study also adds to

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the growing literature on the impact of non-economic variables on financial markets from a disease perspective.

The spread of the Covid-19 pandemic on financial markets was also studied by Sansa (2020) by analyzing the global financial markets from January 21, 2020, and April 7, 2020. The global market was represented by European countries and those in the G7 using the Morgan Stanley Capital Index (MSCI). According to the research carried out by Bora & Basistha (2021), the pandemic had a negative impact on the Indian stock market between September 3, 2019, and July 10, 2020, with significant volatility. Öztürk et al. (2020) analyzed the effect of the outbreak on the Turkish stock market using a fixed-effect model with daily data to explore the impact of the global economy. The results showed that the sectoral index is influenced by the number of cases reported in Turkey compared to those in Europe and other parts of the world. Furthermore, the sectors most negatively affected are metal products, machinery and sports, insurance, and the banking sector. Subsequent research by Dufour (2020) empirically investigates the impact of the pandemic on the Equity Market. The results indicate that the pandemic has a profound effect on the capital market and the economy. Therefore, the government, financial markets, and infrastructure need to work together to anticipate worse conditions due to the pandemic.

Ender Demir (2020) conducted a study to examine the impact of bank-specific factors and variations in accordance with stringent government policy responses to bank share returns in response to the pandemic. The results showed that returns on large capitalized bank stock with greater diversification and business volume tend to be more resilient due to the pandemic. However, the decline in bank share prices can be reduced by implementing economic policy responses such as income support, debt and contract relief, and fiscal measures from the government. Furthermore, Harabida & Bouchra (2020) analyzed the spread of the virus in Morocco's financial markets from February 24 to May 5, 2020, which showed a detrimental effect on their economy. According to various studies, the market reaction is more responsive in the short-term window, especially on the days around the event date, and less responsive over a prolonged period. Research conducted by Ibrahim et al. (2020) empirically examines the direct reaction of the stock market index of countries affected by the virus. The results showed that the announcement of the first confirmed COVID-19 case has a significant negative impact on the economy. Subsequently, this effect was more significant after the World Health Organization announced the virus as a global pandemic on March 11, 2020.

The fast-spreading outbreak of the pandemic has put pressure on the economies of all affected countries, thereby leading to turmoil in global financial markets. This research sheds more light on the potential economic and social costs of COVID-19 that are of concern to policymakers and other stock market stakeholders. Riaz et al. (2020) carried out a study to determine the extent to which covid-19 affects the behavior of stock market investors. The results showed that the most significant determinants that influence investment decisions in the Pakistan Stock Market are related to getting rich quick, loss avoidance, fear of loss, expected company earnings and dividends, a hunch on the economy, previous performance of company stock, the opinion of its majority shareholder, and recommendations from brokers and family or friends. Investors were more likely to avoid losses during the pandemic due to less investment risk. Khanthavit (2020) conducted a study to determine the strategies used by the world stock market to deal with the pandemic using the event study method. The results based on the stock returns of France, Germany, Italy, Spain, England, The US, China, the Philippines, and Thailand found a significant negative reaction to the pandemic.

Dilla et al. (2020) carried out research to evaluate Indonesia's sectoral stock market's performance and determine whether the virus outbreak affected abnormal return on the sectoral index. The results showed an abnormal return in the Basic Industry and Chemicals,

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Infrastructure, Utilities and Transportation, Agriculture and Mining. Furthermore, Basic Industrial and Chemical Sectors represented by Barito Pacific Ltd. contributed most to the stock market in Indonesia. Meanwhile, Zulfitra & Tumanggor (2020) tested the impact of the pandemic in Indonesia, especially the Capital Market on the LQ45, Consumer Goods, Manufacture, and Finance Indexes for the Indonesia Stock Exchange. The result showed that the shared liquidity of the Covid-19 pandemic only had a significant impact on the Consumer Goods and the Manufacture Indexes.

Based on some of the literature review above, the study results concluded that Covid-19 endangered the financial sector, including the capital market. Therefore, further research is needed to examine the effectiveness of government stimulus in the form of credit relaxation policies by the Financial Services Authority on stock volatility, especially the banking sector, which is likely to be affected in the long term. This led to the formulation of the following research hypothesis:

H_1 *The Covid-19 policy is effective in reducing stock volatility in the banking sector*

METHODOLOGY

This research focuses on the effectiveness of the Covid-19 policy in the banking sector issued by the Indonesian Financial Services Authority on the volatility of stocks. The event study method was used to carry out this research, and it rules out the assumption of market efficiency, which means that movements in the stock price include all relevant information available to market participants. According to McWilliams & Siegel (1997), this method is based on the identification of the estimation and event periods.

Harabida & Bouchra (2020) stated that the estimation period uses 200 trading days. However, this research was carried out within 50 trading days from December 19, 2019, to March 2, 2020. The selected time span is shorter than the previous research due to the fear of new information capable of affecting the stock prices during longer trading days. This research was carried out on March 13, 2020, which is the date established by the banking sector's policy on credit relaxation by the Financial Services Authority during the pandemic. Furthermore, a research event window of 70 trading days, as shown in Figure 1, was the stipulated time used by the banking sector to enforce. The sample data from this study were 15 banking stocks listed on the Indonesia Stock Exchange.

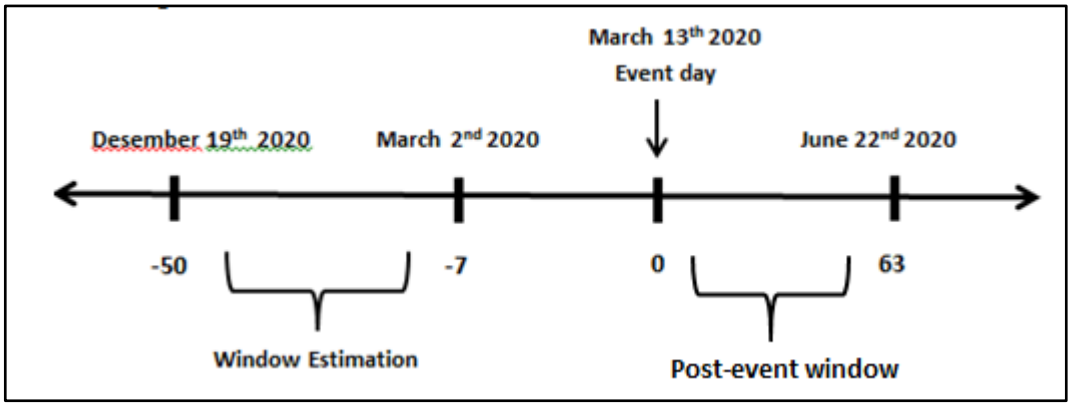

FIGURE 1
STUDY WINDOWS

Estimation and event period were determined and used to calculate the Abnormal Return (AR) on banking stock with various time ranges, as shown in Figure 1. It is necessary

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to estimate the expected return for each bank using the Market Model (MM) to determine the abnormal return triggered by the banking stock and the stock index market returns.

$$R_{i,t} = \beta\beta_{0i} + \beta\beta_{1i} RM_t + \mu_{i,t} \quad (1)$$

Where:

$$R_{i,t} = \frac{\left(P_{i.t} - P_{i.t-1}\right)}{P_{i.t-1}} \quad (2)$$

$P_{i,t}$ denotes the change in the price of banking stock, while RM is the market return on day t, which is the average return of all companies included in an index. This study uses three indexes, namely financial stock, LQ45, and composite. The expected abnormal return is calculated in the following equations.

Where:

$\mu_{i,t}$ denotes the random error term for share i on day t, and α and β are the regression parameters.

$$E(R_{i,t}) = \beta\beta_{0i} + \beta\beta_{1i} RM_t + \mu_{i,t} \quad (3)$$

$$AR_{i,t} = R_{i,t} + E(R_{i,t}) \quad (4)$$

Where:

E ($R_{i,t}$) is expected return, $R_{i,t}$ is actual return, and $AR_{i,t}$ is an abnormal return of share i on day t. The average abnormal return of the stock in the sample on day t is calculated as follows:

$$AAR = \frac{1}{N}\sum_{(i=1)}^{N} AR_{(i,t)} \frac{1}{N}\sum_{(i=1)}^{N} AR_{(i,t)} \quad (5)$$

Where

N denotes the number of banks (1, 2, 3, ……, 15)

After determining the AAR value, the panel data regression is conducted to visualize the effectiveness of the Covid-19 policy in the banking sector issued by the Financial Services Authority on the volatility of banking stocks. This was carried out using the analysis technique in panel data, which consists of three models, namely Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). Furthermore, Chow, Hausman, and LM tests were used to determine the best model. The result showed that the Chow test is the best model, followed by the Common Effect Model and the Fixed Effect Model with the following hypotheses:

H_0 *Common Effect Model*

H_1 *Fixed Effect Model*

H0 is rejected when the p-value is less than 5% = 0.05 and accepted when the p-value is greater than 5%. Furthermore, the Hausman test was used to choose between the Fixed Effect Model and the Random Effect Model with the following hypotheses:

H_0 *Random Effect Model*

H_1 *Fixed Effect Model*

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H0 is rejected when the p-value is less than 5% = 0.05 and the accepted p-value is greater than 5%. The last test is the LM test, which is used to select the Common Effect Model with the Random Effect Model as follows.

H_0 *Common Effect Model*

H_1 *Random Effect Model*

H0 is rejected when the p-value is less than 5%=0.05 and accepted when the p-value is greater than 5%. The panel regression is presented as follows:

$$AAR_{i,t} = \beta\beta_{0i,t} + \beta\beta_1 Dummy_{i,t} + \mu_{i,t} \quad (6)$$

Where:

AAR denotes the volatility of banking stock, β are the regression parameters to be estimated, and dummy variables with 0 and 1 values are the pre and post Covid-19 policies.

RESULTS

First, the regression results are presented to estimate the expected return for each bank in the pre and post Covid-19 policies, to determine abnormal return and the volatility of banking stocks. Furthermore, the results of panel data regression are displayed to determine the effectiveness of policies on the volatility of banking stocks. Tables 1 (pre) and 2 (post) show the regression results of the policy between the return of 15 banking stocks and the market return of each stock index, namely financial, LQ45, and composite and t-statistics.

Table 1
THE MODEL OF SINGLE STOCK INDEX PRE COVID-19 POLICY

Kode Bank	$R_t = \beta\beta_{0t} + \beta\beta_1 RMFinance_t + \mu_t$		$R_t = \beta\beta_{0t} + \beta\beta_1 RMLQ45_t + \mu_t$		$R_t = \beta\beta_{0t} + \beta\beta_1 RMComposite_t + \mu_t$	
	$\beta\beta_0(t-statistics)$	$\beta\beta_1(t-statistics)$	$\beta\beta_0(t-statistics)$	$\beta\beta_1(t-statistics)$	$\beta\beta_0(t-statistics)$	$\beta\beta_1(t-statistics)$
1	0.000661 (0.250096)	1.513458 (19.35282)*	-0.003417 (-1.033782)	1.203459 (14.66438)*	-0.003914 (-1.014073)	1.585033 (12.02758)*
2	-0.001829 (-0.595926)	1.409065 (15.51549)*	-0.005602 (-1.588744)	1.124577 (12.84513)*	-0.005977 (-1.560185)	1504062 (11.49908)*
3	-0.001891 (-0.598444)	1.441295 (15.41110)*	-0.005676 (-1.633057)	1.163879 (13.48869)*	-0.006023 (-1.615008)	1.566871 (12.30517)*
4	0.005125 (0.904148)	0.191374 (1.140781)*	0.004377 (0.776900)	0.110399 (0.789312)*	0.004274 (0.757966)	0.130909 (0.679920)*
5	0.002050 (0.970526)	1.080941 (17.28736)*	-0.000909 (-0.345060)	0.851138 (13.01553)*	-0.001118 (-0.409882)	1.157259 (12.42135)*
6	0.002081 (0.521668)	0.915562 (7.756357)*	9.89E-05 (0.028016)	0.815175 (9.301305)*	7.54E-05 (0.022642)	1.153653 (10.14718)*
7	0.000907 (0.193423)	0.961107 (6.925322)*	-0.001346 (-0.302214)	0.824704 (7.457934)*	-0.001366 (-0.318549)	1.168193 (7.980855)*
8	-0.001390 (-0.327737)	1.105065 (8.805527)*	-0.004357 (-0.984014)	0.880566 (8.010148)*	-0.004604 (-1.017793)	1.189643 (7.703315)*
9	-0.005738 (-1.587433)	-0.108080 (-1.010347)*	-0.005413 (-1.514147)	-0.079977 (-0.901023)*	-0.005381 (-1.505092)	-0.105532 (-0.864557)*
10	-0.004207 (-1.224894)	-0.040648 (-0.399843)*	-0.003866 (-1.138607)	0.009298 (0.110286)*	-0.003793 (-1.118430)	0.031998 (0.276371)*
11	0.002124 (0.226900)	1.299317 (4.690503)*	-0.001629 (-0.170289)	0.988033 (4.161046)*	-0.001898 (-0.197512)	1.336667 (4.073493)*
12	0.004826 (0.431813)	0.329248 (0.995448)*	0.003375 (0.303953)	0.160628 (0.582618)*	0.003364 (0.303183)	0.225637 (0.595615)*
13	-0.004041 (-0.911302)	0.515966 (3.931278)*	-0.005466 (-1.228134)	0.404121 (3.657341)*	-0.005339 (-1.234556)	0.607225 (4.112313)*
14	0.002098 (0.509656)	0.362249 (2.973465)*	0.001098 (0.267665)	0.283758 (2.786239)*	0.001118 (0.274983)	0.408836 (2.944780)*
15	-0.012925 (-1.924804)	-0.031849 (-0.160261)*	-0.012643 (-1.907174)	0.009879 (0.060023)*	-0.012523 (-1.890965)	0.044736 (0.197854)*

Note: *Significant at the level of 5%.

Table 2

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THE MODEL OF SINGLE STOCK INDEX POST COVID-19 POLICY						
Kode Bank	$R_t = \beta\beta_{0t} + \beta\beta_1 RMFinance_t + \mu_t$		$R_t = \beta\beta_{0t} + \beta\beta_1 RMLQ45_t + \mu_t$		$R_t = \beta\beta_{0t} + \beta\beta_1 RMComposite_t + \mu_t$	
	$\beta\beta_0(t-statistics)$	$\beta\beta_1(t-statistics)$	$\beta\beta_0(t-statistics)$	$\beta\beta_1(t-statistics)$	$\beta\beta_0(t-statistics)$	$\beta\beta_1(t-statistics)$
1	-0.002939 (-2.411616)	1.489018 (14.79588)*	-0.001665 (-1.237832)	1.408095 (13.02081)*	-0.001936 (-1.325137)	1.908111 (11.80464)*
2	0.001227 (0.546372)	1.763551 (9.510544)*	0.002750 (1.164787)	1.658746 (8.737429)*	0.002469 (0.976891)	2.216344 (7.926984)*
3	-0.002465 (-1.237439)	1.576978 (9.586382)*	-0.001121 (-0.545006)	1.494995 (9.038699)*	-0.001435 (-0.683560)	2.046069 (8.812494)*
4	-5.58E-05 (-0.005530)	0.620475 (0.745112)*	0.000832 (0.082966)	0.349145 (0.432760)*	0.000442 (0.044161)	0.730909 (0.659499)*
5	0.001062 (0.755838)	0.736942 (6.352732)*	0.001847 (1.136754)	0.594523 (4.551678)*	0.001797 (1.053635)	0.753592 (3.994715)*
6	0.000381 (0.082219)	0.965497 (2.520512)*	0.000897 (0.204529)	1.119637 (3.173678)*	0.000750 (0.167837)	1.462728 (2.961228)*
7	0.003066 (0.544335)	1.061261 (2.281702)*	0.003568 (0.670054)	1.274239 (2.976071)*	0.003380 (0.626144)	1.680618 (2.814872)*
8	-0.004037 (-1.281581)	0.934688 (3.593588)*	-0.003189 (-1.002759)	0.851935 (3.331586)*	-0.003406 (-1.075565)	1.196838 (3.416466)*
9	0.000379 (0.067841)	0.734895 (1.593469)*	0.001352 (0.239507)	0.465933 (1.026377)*	0.001199 (0.212291)	0.682054 (1.091895)*
10	-0.000509 (-0.307060)	0.155667 (1.137834)*	-0.000312 (-0.188215)	0.104702 (0.786410)*	-0.000280 (-0.168003)	0.100582 (0.545289)*
11	0.003218 (0.854783)	0.823816 (2.649888)*	0.003924 (1.049154)	0.778814 (2.589715)*	0.003588 (0.983096)	1.203619 (2.981389)*
12	0.004461 (0.554920)	-0.291538 (-0.439203)*	0.003526 (0.442529)	0.180495 (0.281727)*	0.003371 (0.422538)	0.340631 (0.386011)*
13	-0.000426 (-0.187847)	0.578480 (3.090352)*	-0.000113 (-0.053789)	0.668186 (3.963923)*	-0.000414 (-0.212004)	1.043464 (4.826160)*
14	0.006125 (0.952425)	-0.699796 (-1.317868)*	0.006444 (1.088881)	-1.272742 (-2.674502)*	0.006826 (1.162352)	-1.833606 (-2.822705)*
15	0.003652 (0.521415)	0.859261 (1.485804)*	0.004316 (0.624427)	0.860409 (1.548264)*	0.004265 (0.611690)	1.073580 (1.391978)*

Figure 2 shows the regression results in Tables 1 and 2 on the Average Abnormal Returns (AAR) of banking stock prices before and after the Covid-19 policy was announced by the government.

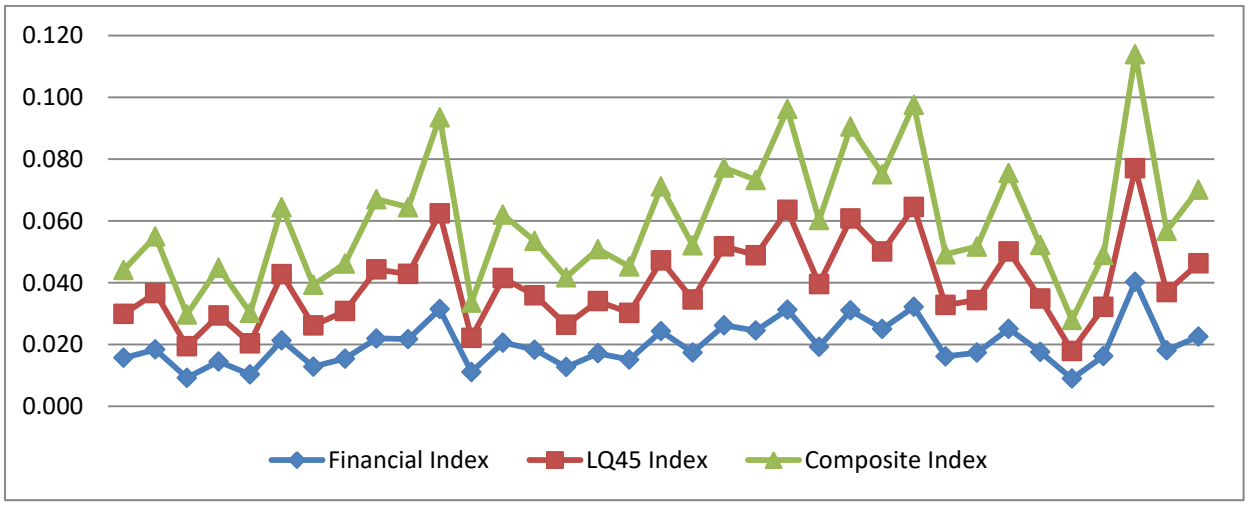

FIGURE 2
VOLATILITY OF BANKING STOCK PRE COVID-19 POLICY

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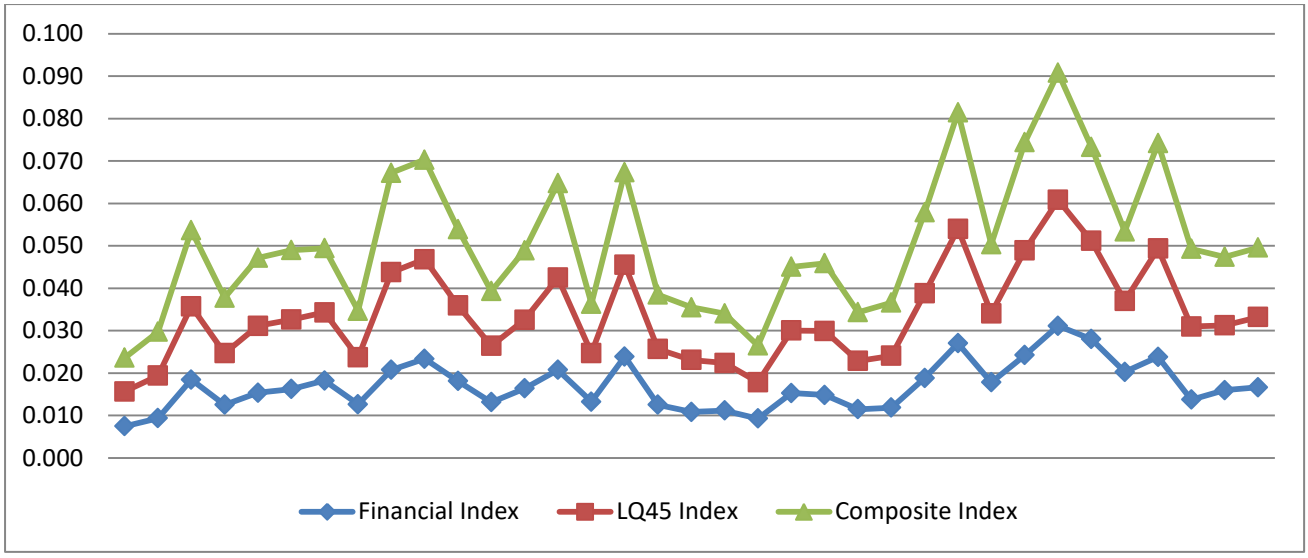

FIGURE 3
VOLATILITY OF BANKING STOCK POST COVID-19 POLICY

The volatility of AAR on banking stock listed in the Indonesia Stock Exchange is divided into two periods. The first is the pre-Covid-19 policy between December 19, 2019, and March 2, 2020, while the second started from June 22, 2020, until August 10, 2020, as shown in figures 4, 5, and 6. The volatility of the banking stock in the Indonesia Stock Exchange increased daily before the outbreak of the pandemic. The highest value of average abnormal returns was recorded on February 28, 2020, and a few days later, on March 2, 2020, the government announced the first case of Covid-19 in Indonesia. This led to a sharp decline in the average abnormal returns of the stock market. It means the investors reacted as soon as the first cases of infection appeared in Indonesia

The volatility of banking stock decreased in value of average abnormal returns after the Financial Services Authority established a policy for the banking sector. The stock market recovered and reacted positively when the policy was published to the media, with the volatility of banking stock insignificant to the AAR, thereby making it stable daily.

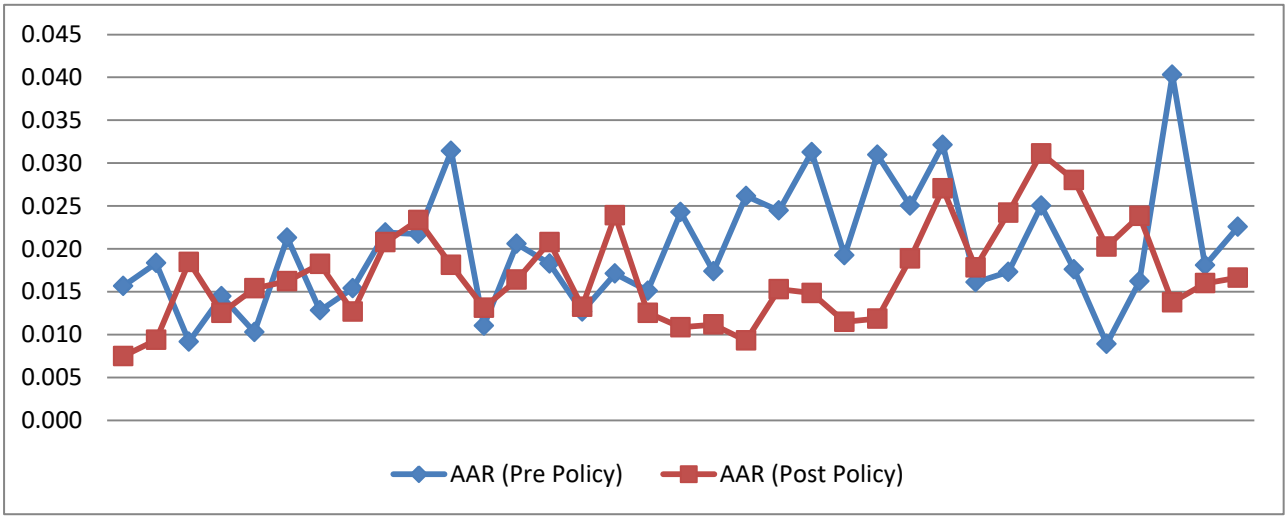

FIGURE 4
VOLATILITY PRE AND POST POLICIES ON BANKING STOCK TO FINANCIAL INDEX

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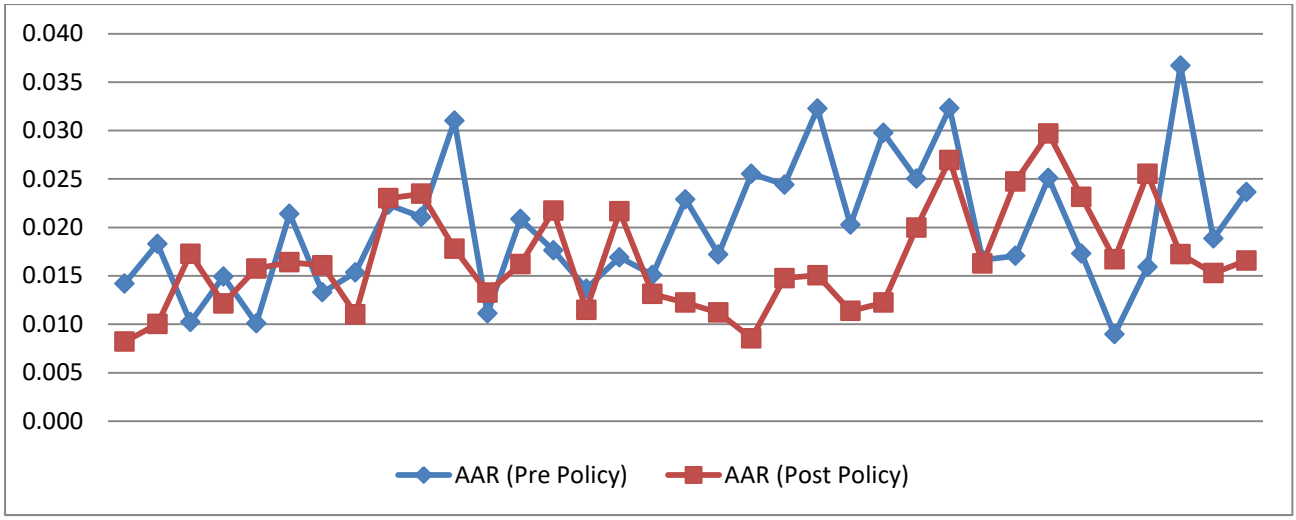

FIGURE 5
VOLATILITY PRE AND POST POLICIES ON BANKING STOCK TO LQ45 INDEX

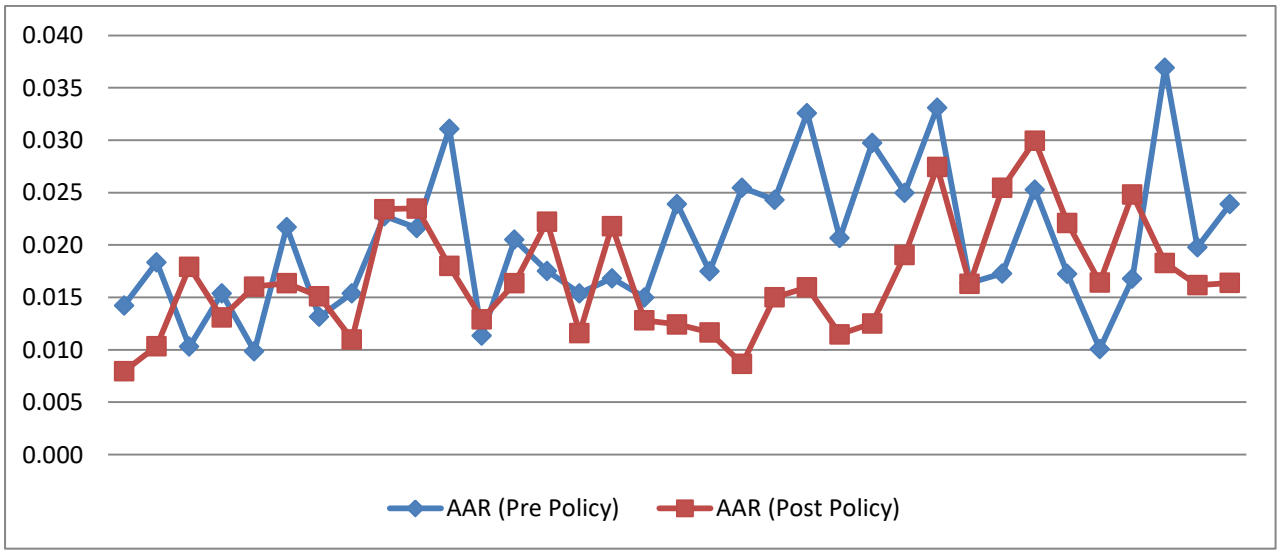

FIGURE 6
VOLATILITY PRE AND POST POLICIES ON BANKING STOCK TO COMPOSITE INDEX

Table 3 shows the panel data regression results used to determine the effectiveness of the policy associated with the volatility in banking stock, which is influenced by three regression models, namely (1) financial index, (2) LQ45 index, and (3) composite index. The results of panel data regression consist of the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM), which were then tested to select the best. The Chow test results of the three models show that the cross-section prob value Chi-square=0.0000<0.05, which means that H0 is rejected and the Fixed Effect Model is selected. Furthermore, the Hausman test was carried out from the three models, which shows a random cross-section prob value of 1.0000>0.05, therefore H0 was accepted, and the Random Effect Model was chosen. From the two tests, different results were found; hence the LM test was conducted using the Breusch Pagan method. The p-value for the three models of this method is 0.0000<0.05, which means H1 is accepted; hence the best estimation method is the Random Effect Model. Based on the test results, it is concluded that the best estimation model in panel data regression is the Random Effect Model.

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Table 3
IMPACT OF COVID-19 POLICY EFFECTIVENESS ON VOLATILITY OF STOCK IN THE BANKING SECTOR IN INDONESIA

	Financial Index		LQ45 Index		Composite Index	
Equation	$Volatility_{i,t} = \beta\beta_{0i,t} + \beta\beta_1 Dummy_{i,t} + \mu_{i,t}$		$Volatility_{i,t} = \beta\beta_{0i,t} + \beta\beta_1 Dummy_{i,t} + \mu_{i,t}$		$Volatility_{i,t} = \beta\beta_{0i,t} + \beta\beta_1 Dummy_{i,t} + \mu_{i,t}$	
	$V = 0,024366 - 0,007363D + \mu$		$V = 0,021107 - 0,004357D + \mu$		$V = 0,022159 - 0,005286D + \mu$	
t-statistics	(9.376811)*	(-4.597549)*	(8.164174)*	(-2.905212)*	(8.701114)*	(-3.453532)*
Mean	0.020685	0.500000	0.018928	0.500000	0.019516	0.500000
Std. Dev	0.027621	0.500238	0.025934	0.500238	0.026380	0.500238
R-square	0.019771		0.007989		0.011253	
Model	Random Effect Model		Random Effect Model		Random Effect Model	

Note: *significant at the level of 5%

DISCUSSION

This research found that government policies in the banking sector effectively reduced the volatility of banking stocks during the Covid-19 pandemic. A number of preliminary studies, such as those carried out by Demir & Danisman (2020), revealed that government policies in the banking sector during the pandemic significantly affected the stability of banking stocks, economic growth, and turnover. One of the factors that influenced the success of these policies is the government's speed and accuracy to overcome crisis associated with security, economy, and peoples' abilities. The Indonesian government has a good level of responsiveness in making relaxation policies in the banking sector, hence the volatility was stabilized and well maintained. On March 2, the first case of the pandemic was announced, and on March 13, through the OJK, the government issued a policy to relax the banking sector. The period between these two factors shows that the Indonesian government's responsiveness to COVID-19 in the banking sector is very good and capable of creating stability. This is because the government is aware of the adverse effects of the pandemic on economic growth. Previous research also revealed that the government's success in creating stability in economic growth in times of crisis is inseparable from the implemented strategic policies (Zaremba et al., 2021). The success of the banking sector relaxation policy in Indonesia proves that the Indonesian government has formulated and implemented strategic policies that support comprehensive and sustainable economic growth. The comprehensiveness of the relaxation policy for the financial sector is demonstrated by the existence of two types of relaxation policies implemented by the OJK, namely the financial and non-financial found in the banking and non-banking sectors, which are properly maintained. According to Demir & Danisman (2020), the implementation of this policy is inseparable from the government's level of responsiveness and awareness to economic growth influenced by the banking and non-banking sectors, both of which are places for public financial transactions related to community economic activities, whether large, medium, or medium, or small scale. The sustainable relaxation policy is also an important factor in shaping the stability of banking stock volatility during the pandemic. The Indonesian government ensures that the credit relaxation policy continues to be implemented sustainably to support economic growth.

Other researches reveal that the success of policies in times of crisis is inseparable from stakeholders' responsiveness to the policies implemented by the government (Demir & Danisman, 2020). This is shown through the efforts of stakeholders in complying with and

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responding to government policies that aim to recover the crisis conditions caused by the pandemic until it stabilizes. Stakeholder responsiveness is very high on the financial relaxation policy imposed by the OJK. At the beginning of the implementation of the credit relaxation policy, the banking sector, debtors, MSMEs, and finance companies made good use of it to stabilize banking stock volatility. Good responsiveness of stakeholders to the relaxation policy is inseparable from the ability of the government to provide understanding and certainty to stakeholders. However, OJK has continued to build a synergy with other policies directly related to the economic and development sectors, such as trade, industry, MSMEs, transportation, etc. (Susilawati et al., 2020). Although this process was difficult to build and create by the Indonesian government, OJK consistently ensures that financial relaxation policies in both the banking and non-banking sectors can be implemented through two important keywords, namely responsiveness and synergy between stakeholders.

Although this research reveals the success of implementing financial relaxation policies in creating stability in banking stock volatility, several factors need to be re-discussed. This includes the success of the policies not linked to the banking sector (Hidayaturrahman & Purwanto, 2020). Previous research revealed that the volatility of banking stocks is also influenced by investment, politics, and development policies (Demirgüç-Kunt et al., 2020). The research findings revealed that policies in the banking sector do not always have a positive effect on the volatility of stocks. In fact, in some cases, it negatively affects economic growth and debtor business of financial and non-financial companies (Zaremba et al., 2021). Previous research strengthened the theory that policy formulation is influenced by economic, political, cultural, and policy aspects. Crisis management's political policy is used to determine success in creating stability in the volatility of banking stocks, such as those on limiting social activities, thereby disrupting the financial cycle of banking and non-banking (Zaremba et al., 2021).

Based on preliminary researches, the stability of the volatility of banking stocks cannot be ascertained due to the financial relaxation policy. Nevertheless, the success of this policy, as revealed by this research, is an important illustration in accordance with the responsiveness of government policies during the pandemic. This is needed to minimize the increase in the volatility of banking stocks that tend to worsen a country's economy. The Indonesian government has proven that the credit relaxation policy in both the banking and non-banking sectors is able to reduce the volatility of stocks, which is influenced by large, medium, and small scales business capital such as MSMEs, small and medium industries, and individual businesses in the real sector such as street vendors and market traders. Furthermore, through a relaxation policy, the Indonesian government seeks to provide guarantees for credit restructuring to MSMEs' actors through the banking sector such as Regional Development Banks and Islamic Banks, which also proves that the synergy of stakeholders ensures the stability of banking stock volatility.

CONCLUSION

The corona virus rapid spread disrupted the economic and financial sectors, especially the capital market. Therefore, this research examined the effectiveness of the Covid-19 policies on the volatility of the stock in the Indonesian banking sector using the event study methodology. Data were collected by calculating the daily abnormal returns of 15 banking listed on the Indonesia Stock Exchange, regressed to verify their significance. The result showed that banking stocks are recorded statistically with significant average abnormal returns. Furthermore, the results of panel regression revealed that the policy in the banking sector conducted by the Financial Services Authority effectively reduces the volatility of banking stock during the pandemic. This research contributes to the development of the

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literature related to event studies that examine the capital market's response to new information, however it is limited to utilizing other policies likely to affect the financial market volatility. Therefore, further researches conducted need to examine various policies in the financial market.

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