The Covid-19, Banking Stock Price, and Policy in Indonesia

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ABSTRACT

This study examines whether COVID-19 has an impact on banking stock price and whether any policy from the Indonesian government and regulators could alleviate its impact. We use time-series daily data from January to July 2020, regression models (ordinary least square and generalized method of moments), and some robustness tests. We find that COVID-19 has a negative effect on the banking stock price, where new deaths have the greatest one. Nonetheless, the policies could mitigate its negative effect to be insignificant on the price. Therefore, it is pivotal to measure COVID-19's drawback by providing relevant policies.

1. Introduction

The Coronavirus disease (COVID-19), as the global pandemic, has devastated massively various aspects of the economy and financial markets (Goodell & Goutte, 2020; Zaremba, Kizys, Aharon, & Demir, 2020). In a recent pioneer study, Goodell (2020) highlighted that the COVID-19 pandemic caused unprecedented global economic damage in most of the countries entailing Indonesia. It firstly infected Indonesia with two new cases on March 2, 2020 (WHO, 2020). It also dramatically caused various impacts on the economy; therefore, all governments worldwide attempt to measure it with multiple policy responses (IMF, 2020). The effect was proven through the fall in stock prices, including the banking sector, so that the price of banking stock fell sharply to an average of Rp1,316 (Reuters, 2020).

The rapid spread of COVID-19 recently has confirmed up to 100,303 people in 34 provinces as of July 27, 2020. So, it is pivotal to prove its impact empirically on the banking sector because several studies show that sentiment or a significant event affects the return of stocks (Al-Awadhi, Alsaifi, Al-Awadhi, & Alhammadi, 2020; Alfaro, Chari, Greenland, & Schott, 2020; Ashraf, 2020; Gangopadhyay, Haley, & Zhang, 2010). Meanwhile, the government responded with various policy approaches to minimize the pandemic (Narayan, Phan, & Liu, 2020). Various countermeasures for handling COVID-19 by providing medical facilities and equipment, medicines, providing incentives to medical teams, social distancing, and economic stimulus packages.

Therefore, based on those backgrounds, this study aims to examine whether COVID-19 has an impact on banking stock price. We argue that it would negatively affect the bank since it creates devastating shocks and leads to panic for investors; hence the price would plunge. This posit is supported by prior studies that find that the COVID-19 creates freefall of global markets and banks due to increasing panic and deterioration (Ali, Alam, & Rizvi, 2020; Haroon & Rizvi,

2020). The COVID-19 pandemic is causing a direct global destructive economic impact present in every globe (Goodell, 2020). Second, this study also proposes to test whether any policy from the Indonesian government and authorities could alleviate its impact. The previous review stated that policymakers should tackle COVID-19 together through significant policies to reduce unfavorable outcomes (Liu, Manzoor, Wang, Zang, & Manzoor, 2020; Wagner, 2020). The Indonesian government implements some measures to maintain financial stability and avoid recession, such as the task force (Gugus Tugas) to accelerate COVID-19 handling, Presidents' regulations (KEPRES), lockdown relaxation, and new normal. It is interesting to explore whether and which policies are adequate to measure COVID's negative impact.

We choose Indonesia as an emerging market since Indonesia is a country with the 4th largest population in the world. Indonesia is also quite a different condition than other developing and developed countries (Naufa, Lantara, & Lau, 2019). The prior studies mostly focused on cross-country levels (Ali et al., 2020; Haroon & Rizvi, 2020), but to best our knowledge, there is a limited study that specifically elaborates COVID-19's impact on a particular market, particularly Indonesia. Its banking sector, as a vital economic pillar, is the most affected sector due to COVID-19's widespread, reflected by the highest drop on the banking stock price on average (Reuters, 2020). It started to recover its stock price in the middle of May due to the Indonesian governments' interventions (IMF, 2020). According to the Financial Stability Board's reports, Indonesia has taken out some financial policy measures in response to the COVID-19 pandemic, i.e., reducing policy rate and fiscal stimulus as the monetary and fiscal policy, government guarantees on lending, and other policies. Further, the details of banking stock price movements are presented in Figure 1 as follows:
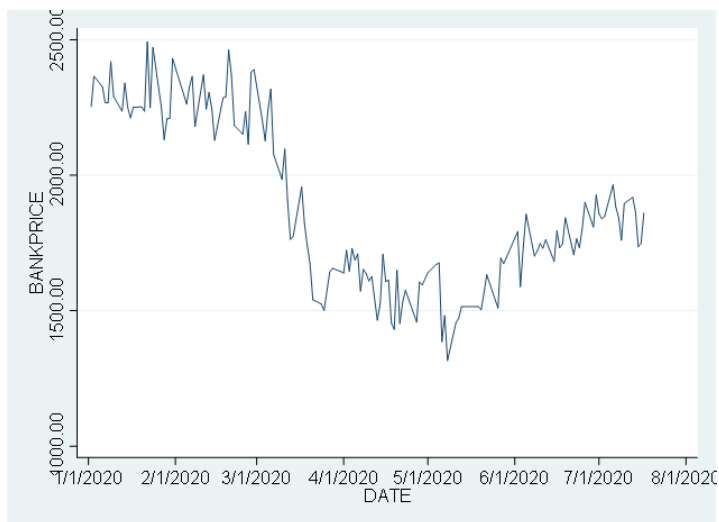
Note: This figure depicts the movement of banking stock price from January 1, 2020, to July 24, 2020, per day.

Figure 1. Banking stock price index from January to July 2020

(Sources: Thomson Reuters Eikon)

The Indonesian government and other regulators attempt to measure COVID-19's impact by promoting some regulations like lockdown in many regions and cities (PSBB), national emergency status, learning and working from home, health protocol, health awareness campaigns, wearing a masker mandatory, and other regulations (IMF, 2020). However, the number of new cases and new deaths fluctuate, up to 2,657 new cases and 139 new deaths per day. The number of cumulative cases and cumulative deaths also upsurge sharply up to 91,751 and 4,459 cases per July 25, 2020, according to the World Health Organization's data (WHO). There is a message from the WHO's Director; many countries take some wrong policies to conduct relaxations from lockdown

without considering the number of COVID's pattern that is still continuously increasing. The conditions of ineffective policies to reduce the amount of those cases could be caused by the indiscipline of the Indonesian citizens to obey the government rules or regulations. On the other hand, there is a possible condition that those policies are still ambiguous due to without explicit punishment or penalty to a person who did not commit the rules.

To best our knowledge, the COVID-19 research for the Indonesian context, primarily related to the banking sector with empirical evidence, is limited, so further investigation about its potential impact empirically is essential (Goodell & Goutte, 2020). For instance, prior studies only focused on many financial markets (Liu et al., 2020) and investment instruments (Ashraf, 2020), and we only found two papers: (i) Nicolaides (2020) elaborates on the Coronavirus relationship with the European Union (EU) bank. However, it only tells the literature and regulations without empirical testing or evidence, and (ii) Talbot and Ordonez-Ponce (2020) relates COVID-19 and Canadian bank with content analysis only. Therefore, we attempt to contribute literature in this field to capture more detail in a specific country (Goodell & Huynh, 2020; Sharif, Aloui, & Yarovaya, 2020) about the effect of COVID-19 on banking, rather than broader context (cross-country analysis). It helps us to get more of its far-reaching impact as previous studies done (Ali et al., 2020; Liu et al., 2020). We also offer new empirical evidence whether the policy from the Indonesian government or other authorities effectively could reduce COVID-19's impact on Indonesian banks. It is an absolute novelty that the prior studies did not explore specifically (Sharif et al., 2020; Zhang, Hu, & Ji, 2020).

This study contributes to twofold as follows. For the literature, this research would enhance the empirical studies related to COVID-19 and how it could alleviate its negative impact, significantly the more in-depth understanding of Indonesia as one of the emerging markets to contribute globally. Second, for

the policymakers, this study promotes which and from whom policies in detail that effectively could measure COVID-19's drawbacks in Indonesia. This study reports each policy from all regulators simultaneously and partially evaluates its impact COVID-19 on banking stock price.

2. Data and Methodology

2.1. Data

In this study, we used some data sourced from Thomson Reuters (DataStream), The World Health Organization (WHO), The Financial Service Authority (OJK), The Indonesian Website of COVID-19 (www.covid19.go.id), The Indonesian Stock Exchange (IDX), and International Monetary Fund (IMF). We use time-series data from January 1, 2020, to July 24, 2020. The data, such as bank price, is the average value of stock price from all public banks daily in Indonesia from the Thomson Reuters database. The new cases, cumulative cases, new deaths, and cumulative deaths are from the WHO database that consists of each case.

The policy data, such as OJK, is the dummy variable. We put one if there is any policies or regulation from the OJK and 0 for otherwise daily. The government is also a dummy variable where we put one if there is any policies or law from The Indonesian President, ministries, and local government, and 0 for otherwise daily. The other variable, IDX, is from that website if there are any rules or regulations to measure COVID-19 in the capital market. We also obtain from the IMF reports any policies background, reopening economy, fiscal, monetary and macroeconomic, exchange rate and balance of payments by inputting dummy one if there are any policies related to those fields and 0 for otherwise. We retrieve the exchange rate from local currency (IDR) to obtain 1dollar per day as a control variable by DataStream. The details of our variables are presented in Table 1 as follows:

Table 1 Operationalized Variables

Variable	Definition	Source	Reference
BANKPRICE	The average value of stock prices from all public banks daily in Indonesia	Thomson Reuters	(Haroon & Rizvi, 2020)"
NEWCASES	The number of new cases of COVID-19 per day in Indonesia	The World Health Organization	(Goodell, 2020)
CUMCASES	The number of cumulative cases of COVID-19 per day in Indonesia	The World Health Organization	(Sharif et al., 2020)
NEWDEATHS	The number of new deaths of COVID-19 per day in Indonesia	The World Health Organization	(Liu et al., 2020)
CUMDEATHS	The number of cumulative deaths of COVID-19 per day in Indonesia	The World Health Organization	(Sharif et al., 2020)
OJK	Dummy 1 if there is any policies or regulations from The Indonesia Financial Service Authority (OJK) and 0 for otherwise daily	www.ojk.go.id	(Berardi et al., 2020)
GOVERNMENT	Dummy 1 if there is any policies or regulations from The Indonesian President, Ministries, local governments, and 0 for otherwise daily	www.COVID19.go.id	(Goodell, 2020)
IDX	Dummy 1 if there is any policies or regulations from The Indonesian Stock Exchange (IDX), and 0 for otherwise daily	www.idx.co.id	(Liu et al., 2020)
POLICY	Dummy 1 if there is any policies background from The Indonesian government to measure COVID-19 such as lockdown, etc., and 0 for otherwise daily	International Monetary Fund	(Sharif et al., 2020)
REOPENINGECONOMY	Dummy 1 if there is any policy to reopen the economy from The Indonesian government such as new normal, etc., and 0 for otherwise daily	International Monetary Fund	(He et al., 2020)

Variable	Definition	Source	Reference
FISCAL	Dummy 1 if there is any policy related to fiscal from the Indonesian government such as stimulus packages, etc., and 0 for otherwise daily	International Monetary Fund	(Ashraf, 2020)
MONETARYMACRO	Dummy 1 if there is any policy related to monetary and macroeconomic from the Central Bank (BI), and 0 for otherwise daily	International Monetary Fund	(Conlon et al., 2020)
EXRATEBALANCEPAYMENT	Dummy 1 if there is any policy related to exchange rate and balance of payments from the Central Bank (BI), and 0 for otherwise daily	International Monetary Fund	(Lawley, 2020)
IDRUSD	The exchange rate from local currency (IDR) to obtain 1 Dollar per day.	DataStream	(Wójcik & Ioannou, 2020)

2.2 Methodology

To analyze our hypotheses, we utilize the ordinary least square (OLS) regression model since it is the most straightforward estimator that could capture the relationship between the independent and dependent variables (Haroon & Rizvi, 2020). We examine the direct effect of COVID-19. It is proxied by four measures (the number of new cases, cumulative cases, new deaths, and cumulative deaths) on Indonesian banking stock prices with the exchange rate (IDR to USD) as a control variable since it could influence the stock price index. We choose it as the control variable as it could affect banking stock prices in Indonesia. In this study. We offer COVID-19 measures from not only many cases (cumulative cases), but also the new cases, new deaths, and cumulative cases. Our composed model is as follows:

$$BANKPRICE_t = \alpha_t + \beta_1 COVID - 19_t + \beta_2 EXRATE_t + \varepsilon_t \qquad (1)$$

BANKPRICE$_t$ denotes the banking index stock prices at time t (daily) from the average value of all banks stock prices, while *COVID-19$_t$* is proxied by new cases, cumulative cases, new deaths, and cumulative deaths on the day t. EXRATE$_t$ is the exchange rate obtained from local currency (IDR) to United States Dollar (USD). ε_t is the standard errors or residuals. Further, in this study, we provide the price of the stock index rather than return or volatility of stock index like most prior studies focus (Haroon & Rizvi, 2020; He et al., 2020). This study also offers deep understanding by focusing on one capital market (Indonesia) to explore a more in-depth market in each sector rather than a broader context or cross-country analysis like previous research (Ali et al., 2020).

Our second hypothesis is whether any policy from the Indonesian government or other regulators could reduce the negative impact of COVID-19 on the Indonesian stock market. We argue that any regulations or interventions from the regulators diminish its impact. We modify the regression model from previous studies (Sharif et al., 2020; Zhang et al., 2020) by accommodating policy with dummy values. So, we include various kinds of regulations into the regression model from Equation (1) to compose Equation (2) as follows:

$$BANKPRICE_t = \alpha_t + \beta_1 COVID\_19_t + \beta_2 POLICIES_t + \beta_3 EXRATE_t + \varepsilon_t \ (2)$$

POLICIES$_t$ denotes dummy 1 values if there are any kinds of policies from various regulators such as the OJK, President or other local governments, Indonesian Stock Exchange (IDX), policy background, reopening economy, fiscal, monetary and macroeconomic, and exchange rate and balance of payments. We will run all of the proxies in Equation (2) like Equation (1) in various proxies for stock index price and COVID-19.

As the robustness, we also estimate the generalized method of moments (GMM) to address the possible endogeneity issue. We put the lagged values

(t-1) of the dependent variable as the instrumental variable (IV) in this GMM model to avoid serial correlations since the benefits of the dependent variable this year could be influenced by itself from the previous year. GMM is the best regression model that could address all endogeneity issues. We could obtain the most efficient and consistent results since this model assumed the error to be zero compared to other least squares.

This argument is supported by Dietrich, Hess, and Wanzenried (2014) state that the GMM model could account for potential problems in the regression model specifications. They used the lagged value of the dependent variable as the instrumental variable (IV) since it could suffer from endogeneity (serial correlation).

Further, we include the policies from the government and other authorities as to the explanatory variable together with COVID-19 to examine whether those could minimize the negative impact of COVID-19 on the banking stock price. As additionally, we also test whether the specific regulations from the OJK (POJK) partially are also useful to measure COVID-19's effect.

3. Results

We present the descriptive statistics, including the number of observations, mean, standard deviation, minimum, and minimum values from each of the variables in Table 2. This step follows prior studies that provided the descriptive statistic to give the detail of data variation for each of the variables (Goodell & Goutte, 2020; Goodell & Huynh, 2020; Haroon & Rizvi, 2020). The results depict that the mean value of banking stock price in Indonesia per day is IDR1,887.54. The maximum amount of new cases, cumulative cases, new deaths, and cumulative deaths are up to 2,657, 91,751, 139, and 4,459 people per day. The exchange rate (IDR to 1 USD) per day is IDR14,559.45 on average. The details are presented below:

Table 2 **Descriptive Statistics**

Variable	Obs	Mean	Std. Dev.	Min	Max
BANKPRICE	139	1,887.54	309.17	1,316.18	2,492.52
NEWCASES	204	449.76	549.48	0.00	2,657.00
CUMCASES	204	17,640.71	24,745.11	0.00	91,751.00
NEWDEATHS	204	21.86	25.82	0.00	139.00
CUMDEATHS	204	972.00	1,222.04	0.00	4,459.00
OJK	204	0.10	0.30	0.00	1.00
GOVERNMENT	204	0.25	0.43	0.00	1.00
IDX	204	0.10	0.30	0.00	1.00
IDRUSD	146	14,559.45	815.72	13,572.50	16,575.00
POLICY	204	0.19	0.39	0.00	1.00
REOPENINGECONOMY	204	0.24	0.43	0.00	1.00
FISCAL	204	0.56	0.50	0.00	1.00
MONETARYMACRO	204	0.40	0.49	0.00	1.00
EXRATEBALANCE	204	0.70	0.46	0.00	1.00

We run the relationship test between COVID-19 (proxied by new and cumulative cases, new and cumulative deaths), and banking stock index price with the exchange rate as the control variable using ordinary least squares (OLS) on Panel A Table 3. We find that all COVID-19 proxies have a negative relationship with bank stock price. These findings confirm prior studies from prior studies that Covid-19 is linked to lower the financial markets since it creates market shocks and negative sentiment for investors (Goodell & Huynh, 2020; Zhang et al., 2020)causing investors to suffer significant loses in a very short period of time. This paper aims to map the general patterns of country-specific risks and systemic risks in the global financial markets. It also analyses the potential consequence of policy interventions, such as the US' decision to implement a zero-percent interest rate and unlimited quantitative easing (QE. In comparison,

the most variable with the highest negative effect is new deaths, compared to other proxies. It indicates that COVID-19 leads to lower banking stock prices, and new deaths have the greatest one.

Those above results are robust and consistent, using the generalized method of moments (GMM) to measure possible endogeneity issues (Panel B Table 3). This argument is supported by Dietrich et al. (2014), who stated that the GMM model could account for potential problems in the regression model specifications. They used the lagged value of the dependent variable as the instrumental variable (IV) since it could suffer from endogeneity (serial correlation).

So, we put the lagged values of the dependent variable as the IV in this GMM model to avoid serial relationships, since the benefits of the dependent variable this year could be influenced by itself from the previous year. We find that all COVID-19 proxies still decrease the banking stock price. This finding is supported by Nicolaides (2020), who stated that the COVID-19 challenges banks to rescue the business, so it is quite difficult for banks. The new deaths due to COVID-19 is a devastated one. The details are presented as follows:

Table 3 **Regression Analysis of COVID-19 on Banking Stock Price**

Panel A. Ordinary Least Squares (OLS)			
Variables	**Dependent variable = Banking Stock Price**		
NEWCASES	-0.23***		
	(0.03)		
CUMCASES		-0.00***	
		(0.00)	
NEWDEATHS			-4.88***
			(0.68)
CUMDEATHS			-0.10***
			(0.01)

Panel A. Ordinary Least Squares (OLS)			
Variables	**Dependent variable = Banking Stock Price**		
IDRUSD	-0.27***	-0.28***	-0.25***	-0.28***
	(0.02)	(0.02)	(0.02)	(0.02)
Constant	5,912.25***	6,059.71***	5,693.76***	6,018.62***
	(240.02)	(252.95)	(251.86)	(239.35)
Observations	115	115	115	115
R-squared	0.75	0.73	0.73	0.76

Panel B. Generalized Method of Moments (GMM); IV = Lag-1 of Price			
Variables	**Dependent variable = Banking Stock Price**		
NEWCASES	-0.53***			
	(0.06)			
CUMCASES		-0.01***		
		(0.00)		
NEWDEATHS			-13.05***	
			(1.50)	
CUMDEATHS				-0.24***
				(0.03)
IDRUSD	-0.26***	-0.30***	-0.21***	-0.28***
	(0.01)	(0.02)	(0.02)	(0.02)
Constant	5,946.85***	6,407.86***	5,266.35***	6,223.01***
	(214.45)	(252.85)	(287.64)	(225.86)
Observations	97	97	97	97
R-squared	0.53	0.34	0.38	0.52

Note: Panel A (Standard errors in parentheses). Panel B (Robust standard errors in parentheses). *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Further, we attempt to include any government and authorities' policies to test whether those policies could alleviate the negative impact of COVID-19 on banking stock price. We present our results in Table 5, Panel A (OLS), and Panel

B (GMM). The results depict that the negative impact of COVID-19 on banking stock price becomes insignificant.

It means that those policies are significant to mitigate drawback's effects of COVID-19 on banks. The relevant policies to reduce COVID19's impact on banks are the government (the President and ministries), The Indonesian Stock Exchange (IDX), and the Bank Indonesia through exchange rates balance of payments. These results indicate that the policy from the government and authorities could lower the negative impact of Covid-19 on the capital market. The results are consistent with the previous study who find that any policy from the government could minimize the adverse effects from Covid-19 on the capital market since it would maintain stock price (Sharif et al., 2020).

Table 4 **COVID-19 To Banking Stock Price with Policy**

	Panel A. Ordinary Least Squares (OLS)			
NEWCASES	-0.00			
	(0.08)			
CUMCASES		0.00		
		(0.00)		
NEWDEATHS			0.78	
			(1.19)	
CUMDEATHS				-0.01
				(0.04)
OJK	-19.13	-19.49	-21.56	-18.73
	(32.35)	(31.97)	(32.14)	(32.02)
GOVERNMENT	-54.87*	-58.69*	-54.88*	-52.50
	(31.99)	(32.09)	(31.41)	(32.08)
IDX	-73.33*	-76.05*	-76.50*	-71.27*
	(42.58)	(42.36)	(42.34)	(42.51)
POLICY	95.39	83.76	86.19	101.62
	(76.11)	(78.20)	(76.69)	(77.27)

Panel A. Ordinary Least Squares (OLS)				
REOPENING	72.42	46.91	49.89	86.90
	(94.02)	(88.27)	(83.56)	(87.18)
FISCAL	-146.16	-183.09	-176.87	-118.46
	(116.77)	(122.91)	(114.32)	(128.05)
MONETARY	8.14	-7.18	3.42	19.83
	(80.46)	(83.70)	(79.55)	(84.85)
EXRATEBALANCE	-318.98**	-293.33**	-305.03**	-335.01***
	(121.71)	(128.34)	(121.87)	(127.15)
IDRUSD	-0.11***	-0.11***	-0.11***	-0.11***
	(0.02)	(0.02)	(0.02)	(0.02)
Constant	3,817.29***	3,783.61***	3,825.07***	3,850.81***
	(332.48)	(332.45)	(327.64)	(339.19)
Observations	115	115	115	115

Panel B. Generalized Method of Moments (GMM); IV = Lag-1 of Price				
NEWCASES	-12.88			
	(37.40)			
CUMCASES		0.13		
		(0.20)		
NEWDEATHS			67.10	
			(69.53)	
CUMDEATHS				-7.14
				(26.37)
OJK	1,290.65	-191.50	-391.83	621.85
	(3,877.26)	(348.48)	(404.55)	(2,521.48)
GOVERNMENT	1,107.11	-610.33	-121.60	1,266.40
	(3,500.73)	(785.43)	(239.97)	(5,245.51)
IDX	699.23	-396.75	-316.33	815.29
	(2,498.13)	(567.94)	(289.95)	(3,406.94)

Panel B. Generalized Method of Moments (GMM); IV = Lag-1 of Price			
POLICY	1,993.71	-1,800.36	-721.82	3,899.37
	(5,945.15)	(3,043.22)	(1,121.20)	(14,562.16)
REOPENING	8,373.94	-3,253.09	-1,665.60	7,578.54
	(24,205.92)	(5,118.31)	(1,791.88)	(27,586.36)
FISCAL	8,254.12	-5,448.04	-2,571.84	14,642.18
	(24,704.45)	(7,998.34)	(2,706.99)	(55,053.59)
MONETARY	1,682.79	-2,014.06	-224.42	5,484.18
	(5,060.17)	(3,010.37)	(438.66)	(20,384.37)
EXRATEBALANCE	-2,758.26	3,193.79	586.72	-8,011.91
	(7,688.37)	(5,232.43)	(1,284.61)	(29,117.07)
IDRUSD	-1.20	0.40	-0.07	-1.88
	(3.14)	(0.82)	(0.15)	(6.49)
Constant	18,647.03	-3,130.38	3,237.72	28,046.96
	(42,929.97)	(11,277.64)	(2,098.94)	(89,048.77)
Observations	97	97	97	97

Note: Panel A (Standard errors in parentheses). Panel B (Robust standard errors in parentheses). *** $p<0.01$, ** $p<0.05$, * $p<0.1$

We separately examine which policies from The OJK able to mitigate the impact of COVID-19 on banking stock price. The policies are from The OJK's rules (POJK) such as collecting debt, rural and Islamic bank policies (BPR/S) of COVID-19, written order of problem banks, risk management to use information technology, general bank consolidation, and national economic stimulus as the countercyclical impact of COVID-19. We find that all those policies are significantly reducing the adverse effects of COVID-19 to be insignificant on banking stock price. In the details, risk management, written order, consolidation, and stimulus policies could diminish the impact of new cases on banks.

In contrast, only risk management could alleviate the cumulative case's effect on banking stock price to be insignificant.

4. Conclusions

We conclude that, firstly, COVID-19 (proxied by new cases, cumulative cases, new deaths, and cumulative deaths) is linked to lower banking stock prices where the new death cases are the most significant ones. Secondly, the Indonesian government's policies from the President and other authorities such as OJK, BI, and IDX effectively can measure its negative impact on that price to be insignificant. The IMF reports those policies into four categories: policy background, reopening economy, fiscal, monetary, and macroeconomic, exchange rate, and balance of payments. Thirdly, these findings are consistent and robust by using both OLS and GMM. Fourth, we also find that OJK's rule itself is separately related to banking. i.e., procedures to collect debt in the financial service, policy for BPR and BPRS as the impact of Corona widespread, written order to solve banking problems, risk management and the information technology, consolidation for global banks, and national economic packages as the countercyclical impact of COVID-19 have benefits to reduce its effect in some proxies significantly. It is less powerful compared to all policies from the Indonesian government and other authorities together. So, the strategies from all policymakers are more effective than a strategy from OJK itself to tackle COVID-19's impact on banks. In conclusion, it is pivotal to measure COVID-19's drawback by providing relevant policies.

There are some policy implications from this study. First, this study provides empirical evidence of the drawbacks due to COVID-19 on Indonesian banking. Second, to measure those drawbacks, it is necessary to promote policies not only from the Financial Services Authorities (OJK) and all regulators. Third, even though those policies could solve its negative impact on the bank, it is pivotal

to seek more applicable policies from countries that succeed in diminishing COVID-19 since Indonesia is still facing a sharp increase in cases. Fourth, this paper also depicts which effective and ineffective system to reduce Corona's impact.

We are still aware that our study still has limitations, such as a limited proxy for banking performance with daily basis data. Further research could accommodate that issue by exploring more proxies of banking performance with detailed data. We only included one control variable, the exchange rate, to test COVID-19's effect on the banking sector. So, there are possible other control variables that could be included in this model. However, the multicollinearity issue must be considered. Further, future research could examine which policies from Indonesian authorities could combat COVID-19 cases in Indonesia. This study also limits banks, and there is room for improvement in comparing banking with other financial institutions.

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