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THE EFFECT OF COVID-19 AND SECTORAL FINANCING ON ISLAMIC BANK PROFITABILITY IN INDONESIA

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ABSTRACT

COVID-19 pandemic has created a new economic crisis worldwide. Islamic Bank which was reportedly resilient against the financial crisis is expected to be stable in this period. Apart from that, Islamic Bank in Indonesia has channeled financing fund to various business sectors with different portions leading to a question whether they have different impact on Islamic Bank's profitability. This paper aims to discover the impact of COVID-19 pandemic and financing to business sectors on Islamic Bank profitability in Indonesia. An ARDL approach is employed for analysis. The result of the study shows that COVID-19 pandemic has a negative relationship with Islamic Bank profitability in the long-run. Furthermore, financing to transportation, warehousing and communication sectors is associated with higher profitability in the short-run. On the other hand, financing to wholesale and

retail trade sectors hurt Islamic Bank profitability. Based on this result, it is suggested that Government impose some measures in stabilizing Islamic Bank's performance during COVID-19 pandemic. In addition, Islamic Banks are expected to make adjustment on financing to business sectors ratio accordingly in order to maintain the profitability of Islamic Bank.

Keywords: COVID-19, profitability, business sector, ARDL

INTRODUCTION

The outbreak of COVID-19 pandemic has caused a lot of issues in this world particularly in economic aspect. Such an issue might become worse in the case of developing countries, including Indonesia. McKibbin & Fernando (2020) predicted through their research that Indonesia was expected to experience a decline in economic growth over this period due to the implementation of mobility-restriction policy. In this case, banking could be one of the affected sectors as people withdraw their money for their needs during economic crisis caused by such a pandemic and therefore public confidence on bank would possibly decrease (Sapienza & Zingales, 2012).

As a response to this issue, the monetary regulator of Indonesia initiated some attempts to mitigate the risk of this pandemic in maintaining the stability of Banking System, either Conventional or Islamic Banking. Although Islamic banking had a good record of stability over several kinds of economic crisis, a proper preparation in facing this issue should also be conducted since the current crisis is a mixture of crisis in health, social and economic aspects (Omar, 2020). Furthermore, it was predicted that the economic crisis during the pandemic would be more severe than the 2008 financial crisis as some particular sectors would be adversely affected leading to a worse economic recession in the near future (IMF, 2020). In countering this issue, Nugroho et al. (2020) viewed that the decline in Islamic Banking performance can be mitigated by strengthening liquidity, improving cost efficiency, and shifting to business sectors not affected by COVID-19 pandemic.

The stability of Islamic Banking is essential in economy for its contribution to the real sector financing which is important for small business development (Ascarya & Yumanita, 2005). On the other hand, channelling fund through such a financing could generate profit for Islamic Bank even though it is risky enough (Afkar, 2017). It is recorded by Financial Service Authority (OJK) that in the last decade, Finance to Deposit Ratio (FDR) of Indonesian Islamic Banking hit around 75% on average. In simple way, it can be seen that financing is important in determining the profit of Islamic Banking. The more the fund is channelled to finance business sectors, the more the profit can be generated.

There are various business sectors that become the target of Islamic Banking for finance program. The capacity of Islamic Banking to set a proper portion of fund every business sector would be financed can affect the profit that would be generated. OJK (2020) recorded that at the end of 2020, the highest shares of fund were targeted to wholesale and retail trade, construction, processing industry, agriculture, hunting and forestry at 12.45%, 11.75%, 8.74% and 4.87% respectively. This data raises a question whether the shares of fund for financing business sectors have different impact on Islamic Banking profitability.

There has been a number of researches conducted regarding the effect of finance on Islamic Banking profitability in Indonesia (Fadrul & Asyari, 2018; Handayani et al., 2019; Izhar & Asutay, 2007), however they used FDR in general without separating it according to the business sectors. Meanwhile, these studies were conducted before the COVID-19 period. On the other hand, there are only limited studies related to determinant of Islamic Banking profitability during COVID-19 period (Sutrisno et al., 2020; Wahyudi et al., 2021) but there has not been study covering the pre and post pandemic period by including COVID-19 as one of its determinants. This study focuses on estimating the effect of FDR for each business sector and COVID-19 on the profitability of Islamic Banking in Indonesia.

The objective of this study aims to reveal how the COVID-19 pandemic influences the profitability of Islamic Banking in Indonesia. Furthermore, this study is also aimed to discover how

financing to business sectors affect the Islamic Bank profitability. The research on this topic is important in order to know whether financing for different business sectors can support the profitability of Islamic Bank in Indonesia. The result of the study can become the basis for decision maker to channel the fund to business sectors which generate better profit for Islamic Bank.

This paper starts with the explanation of the theoretical background on Islamic Bank durability during crisis and several previous empirical studies related to Islamic Bank profitability. Following that, specification of data, development of the model and research method used in this paper is elaborated. Afterward there is display of the results of data estimation and robustness check along with the analysis. The paper then ends with the conclusion of the study and some recommendations for government and Islamic Banking in Indonesia.

LITERATURE REVIEW

Theoretical Background

The COVID-19 pandemic is considered as a shock in financial market that leads to financial crisis either at global or domestic level. Bank is one of the affected financial institutions in this period and is likely to face a huge risk in terms of liquidity insurance. In such a crisis, a lot of people massively withdraw money from the bank while default-payment cases increase (Goodell, 2020) as a consequence of business closures, mobility restrictions and decrease in demand for goods and services during pandemic. In addition, decision for financing program will be hold due to low consumption trend in society and increase in financing cost as a result of reduction in deposit in Bank (Elnahass et al., 2021). However, such negative impacts of pandemic on the Bank can be mitigated depending on the reactions of regulatory and policy makers in countering the vulnerability of the bank (Beck, 2020).

Islamic bank is viewed as one of financial institutions that have resistance on economic crisis caused by pandemic. Hassan et al. (2020) stated that COVID-19 pandemic is expected to have minor or even no impact on Islamic Finance because it uses

interest-free contract in their products and avoids toxic assets like future, option and swap. This view is supported by Allais who urged structural reform for global financial institutions to overcome economic crisis by adjusting interest rate to zero percent. According to Chapra (2011), the credit risk in conventional banking is borne by them while the investors are guaranteed with predetermined return of interest rate for their investment. Unlike the Conventional Bank, Islamic Bank shares both profit and loss with the investors by benchmarking return for them on banking performance without predetermination. Through this system, Islamic Bank would likely to gain smaller profit than conventional banking but it is more resilient to shock such as financial crisis.

Previous Studies

There have been many researches done in investigating the determinant of Islamic Banking profitability. Almonifi et al., (2021) investigated the effect of COVID-19 pandemic on the performance of Al Rajhi Bank in Kingdom of Saudi Arabia through review of financial statements and evaluation of financial ratios. It was discovered from the result that COVID-19 pandemic had a low impact on Islamic Bank in Saudi Arabia, especially Al Rajhi Bank and they were able to quickly adapt to economic and financial shock.

Sutrisno et al., (2020) employed independent sample t-test to analyse the effect of bank-specific variables on Islamic Bank profitability before and during COVID-19 outbreak. The result of the study shows that COVID-19 had no impact on CAR, NPF and ROA. In reverse, FDR, Return on Equity (ROE) and Net Operating Margin (NOM) were negatively affected whereby it then may lead to lower profitability.

Wahyudi et al., (2021) investigated 11 Islamic Bank in Indonesia using their first quarterly report in 2020 and multiple linear regression analysis. In their study, it was discovered that CAR and BOPO have significant impact on ROA while NPF and FDR are not significant.

Ben Khediri et al. (2009) conducted a study on selected Middle East and North Africa (MENA) countries between 1999

and 2006. In determining Islamic Banking profitability, they included country-specific variables and bank-specific variables in estimation and found that management efficiency, capitalisation, inflation, economic growth and bank concentration have positive impact on profitability. In addition, good socio-economic conditions and legal system in those countries lead to better profitability for the Islamic Banking.

In analysing the same region with different time period 1994-2012, Zarrouk et al. (2016) utilized generalized method of moments estimators and found that asset quality, capitalization level and cost-effectiveness of bank have significantly positive impact on Islamic banking profitability. Regarding the macroeconomic variables, Islamic banking profitability is negatively affected by inflation and positively influenced by economic growth and investment. In their conclusion, several determinants of Islamic bank profitability are similar to the determinants of profitability in conventional banks.

Izhar & Asutay (2007) analysed the profitability of Bank Muamalat Indonesia between 1996 and 2001 by employing regression analysis and including internal and external factors. In his research, it is found that financing activities significantly affect the profitability of Bank Muamalat Indonesia as 1% increase in financing activities contribute to 18% increase in Return on Asset (ROA) while service activities are the otherwise. In terms of external factor, inflation is positively related to the profitability of the Islamic Bank.

Ali et.al (2011) included macroeconomic variables and bank specific variables in estimating the profitability of Islamic Commercial Bank in Pakistan during the period 2006-2009. Based on the result of the study, it was found that good economic environment and efficient asset management significantly influence profitability. On the other hand, capitalization and high credit risk contributes to the fall of profitability. To sum up, high profit in Islamic Bank can be gained by highly efficient operating.

Tumewang et al. (2019) examined profitability of Islamic Bank in Indonesia from 2012 to 2015 using macroeconomic variables. The result of the study shows that inflation and exchange

rate give no impact on Islamic Bank's profitability. However, interest rate negatively influences profitability which implies that determination of profit sharing ratio or margin should be taking into account the interest rate so that the partners continue to use Islamic Bank's products.

(Handayani et al., 2019) uncovered that in 13 Islamic Banks in Indonesia between 2012 and 2018, Capital Adequacy Ratio (CAR) and operational cost to operational revenue ratio (BOPO) significantly influence profitability. Meanwhile, Financing to Deposit Ratio (FDR), Non-Performing Finance (NPF), deposit and inflation are not significant. This study was conducted using multiple linear regression analysis.

It can be seen that the existing literature mostly discuss determinant of Islamic Bank profitability using bank intrinsic variable and macroeconomic variables. This study is the first to use financing to various business sectors as variables. In addition, this study uses the COVID-19 as independent variable unlike the past studies that analyse the effect by comparing the data before and after the COVID-19.

METHODS

This study uses monthly time-series dataset of Islamic Bank in Indonesia from January 2015 to June 2021 obtained from Financial Services Authority (OJK). Meanwhile, the macroeconomic indicators are taken from Bank Indonesia and Bureau for Statistic Centre (BPS). There are a total of 78 observations that will be used for analysis. This time period is used to cover the COVID-19 crisis arising since March 2020 in Indonesia and to be the basis of our estimation to discover the effect in short-run and long run.

The model used in this study is developed from Izhar & Asutay (2007) where Return on Asset (ROA) is used as dependent variable. Independent variables consist of macroeconomic variables and bank-specific variables. The macroeconomic variables are COVID-19 pandemic (COVID), inflation (INF) and interest rate (IR) and the bank-specific variables are NPF and FDR for 6 business sectors; 1) Mining and Quarrying (FDRMQU) 2)

Processing Industry (FDRPRIND) 3) Construction (FDRCONS) 4) Wholesale and Retail Trade (FDRWSRT) 5) Transportation, Warehousing and Communications (FDRTRWCOM) 6) Financial intermediaries (FDRFINI).

ROA stands for Return on Asset (ROA) which resembles the profitability of Bank. COVID is a dummy variable for the time period since COVID-19 stroke. INF is inflation measured by consumer index price (CPI) in Indonesia. IR represents interest rate imposed by central Bank as the authority in monetary system. NPF is percentage of total Non-Performing Finance of total deposit. Meanwhile, the rest of the variables are percentage of financing channeled to the mentioned business sectors over the total deposit in Islamic Bank. Δ indicates that the variables are transformed into first-different form while *Ln* is the symbol of log transformation.

$$\Delta \text{Ln ROA}_t = \alpha_0 + \sum_{i=1}^{k_1} \beta_{1i}\, \Delta \text{COVID}_{t-i} + \sum_{i=1}^{k_2} \beta_{2i}\, \Delta \text{Ln INF}_{t-i} + \sum_{i=1}^{k_3} \beta_{3i}\, \Delta \text{Ln IR}_{t-i} + \sum_{i=1}^{k_4} \beta_{4i}\, \Delta \text{Ln NPF}_{t-i} + \sum_{i=1}^{k_5} \beta_{5i}\, \Delta \text{Ln } FDRMQU_{t-i} + \sum_{i=1}^{k_6} \beta_{6i}\, \Delta \text{Ln } FDRPRIND_{t-i} + \sum_{i=1}^{k_7} \beta_{7i}\, \Delta \text{Ln } FDRCONS_{t-i} + \sum_{i=1}^{k_8} \beta_{8i} \Delta \text{Ln } FDRWSRT_{t-i} + \sum_{i=1}^{k_9} \beta_{9i} \Delta \text{Ln } FDRTRWCOM_{t-i} + \sum_{i=1}^{k_{10}} \beta_{10i}\, \Delta \text{Ln } FDRFINI_{t-i} + \lambda_{1i}\, \Delta \text{COVID}_{t-i} + \lambda_{2i} \Delta \text{Ln INF}_{t-i} + \lambda_{3i} \Delta \text{Ln IR}_{t-i} + \lambda_{4i} \Delta \text{Ln NPF}_{t-i} + \lambda_{5i} \Delta \text{Ln } FDRMQU_{t-i} + \lambda_{6i} \Delta \text{Ln } FDRPRIND_{t-i} + \lambda_{7i} \Delta \text{Ln } FDRCONS_{t-i} + \lambda_{8i} \Delta \text{Ln } FDRWSRT_{t-i} + \lambda_{9i} \Delta \text{Ln } FDRTRWCOM_{t-i} + \lambda_{10i} \Delta \text{Ln } FDRFINI_{t-i} + \text{U}_{it}$$

The COVID-19 is expected to be positive or may be insignificant due to the superiority of profit and loss sharing in Islamic Bank. On the other hand, it can be also negative as there are

more possibility of default payment case as mobility is restricted. Inflation in this case is expected to be negative since the higher cost of goods entails people to spend more amount of money than to save it, and therefore the fund channeled for financing become less. The default payment cases will lead to lower profitability, however, the loss suffered by the Bank can be minimized as it employ profit and loss sharing system. Eventually, the financing activities are expected to be associated with higher profitability whereby the more fund channeled to financing the more profit can be generated.

In this study, Autoregressive Distributed Lag (ARDL) analysis is employed due to its effectiveness compared to likelihood-based approach initiated by Engle & Granger (1987) and Johansen & Exogeneity (1991). There is no need for definition of integration order of the series because the test can be conducted even though they are purely or fractionally integrated. Apart from that, this method can avoid the issues related to endogeneity and the ability of Engle & Granger (1987) methods to conduct a hypotheses test in the long-run. The issues of autocorrelation and endogeneity can be corrected through this model provided that appropriate lags are used (Pesaran et al., 1999). The other advantages of ARDL are the ability to utilize small sample properties for analysis (Halicioglu, 2007) and the ability to estimate the short and long-run simultaneously.

There are diverse methods in the literature that were used to investigate the long-run relationship between variables in the model like the cointegration tests of Engle and Granger (EG) and Johansen and Juselius (JJ). However, the ARDL technique has some econometric estimation advantages over both techniques (Pesaran et al., 2001).

The analysis in this study starts by conducting a unit-root test using the augmented Dickey-fuller (ADF) (Dickey & Fuller, 1979) test to show the stationarity of all variables in the model. Following that, ARDL bounds test is applied to investigate co-integration among the variables in terms of their correlation in the long-run and short-run. Finally, in testing the stability of all variables employed in this study, CUSUM test is then conducted.

RESULTS

Descriptive Statistics

Table 1 shows descriptive statistics of the data used in this study. It can be seen from the table that the profitability of Islamic Banking in Indonesia as represented by ROA ranges between 0.16 percent and 2.44 percent during the studied period with 1.24 percent on average. As dummy variable, COVID-19 ranges between 0 and 1 with 0.21 on average. The average value of Inflation is 123.65 ranging between 104.33 and 139.07 of values, while the average value of interest rate is 5.36 percent with values ranging between 3.5 percent and 7.75 percent. The value of Non-Performing Finance ranges between 3.13 percent and 6.17 percent.

The average values of FDR for business sectors: mining and quarry; processing industry; construction; wholesale and retail trade; transportation, warehousing, and communication; financial industry are 2.6 percent, 9.32 percent, 8.92 percent, 13.71 percent, 4.78 percent and 7.96 percent respectively. Among those business sectors, the highest FDR value is FDR for wholesale and retail trade at 16.07 percent. On the other hand, mining and quarry sector has the lowest value of FDR at 1.61 percent.

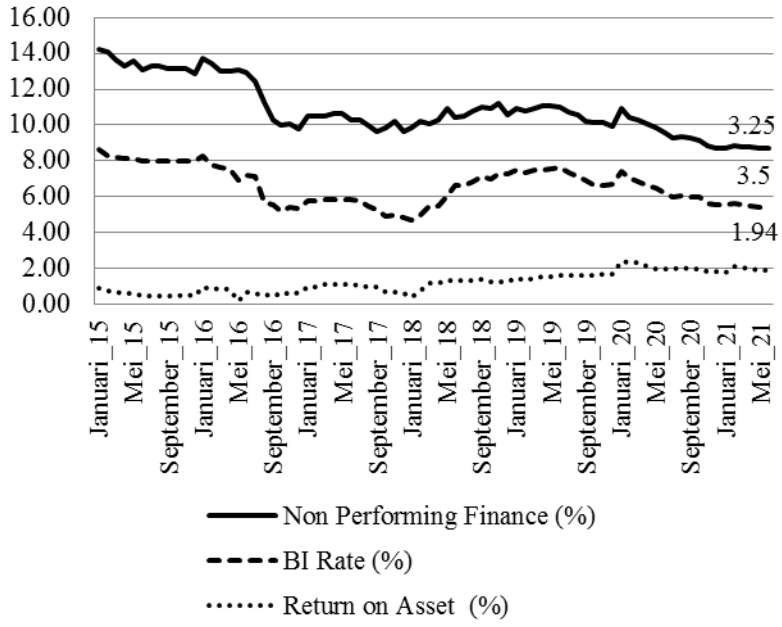
Table 1. Descriptive Statistics

Variables		Mean	Median	Maximum	Minimum
ROA	(%)	1.24	1.23	2.44	0.16
INF	(%)	123.65	125.5	139.07	104.33
IR	(%)	5.36	5	7.75	3.5
NPF	(%)	4.29	4.44	6.17	3.13
FDRMQU	(%)	2.6	2.64	3.68	1.61
FDRPRIND	(%)	9.32	9.38	10.34	8.07
FDRCONS	(%)	8.92	9.17	11.77	5.96
FDRWSRT	(%)	13.71	13.46	16.07	12.1
FDRTRWCOM	(%)	4.78	4.07	8.6	3.31
FDRFINI	(%)	7.96	7.61	11.44	4.3

Source: Author's elaboration

Figure 1 displays the comparison between ROA, BI rate and NPF during the study period. It can be seen from this figure that from January 2015 to June 2021, BI rate and NPF moved downward while the trend of ROA movement is upward. Overall based on this trend, it can be inferred that the fall in interest rate and non-performing finance was associated with the rise in Islamic Bank's profitability in Indonesia.

Figure 1. Comparison of percentage between ROA, BI Rate and NPF

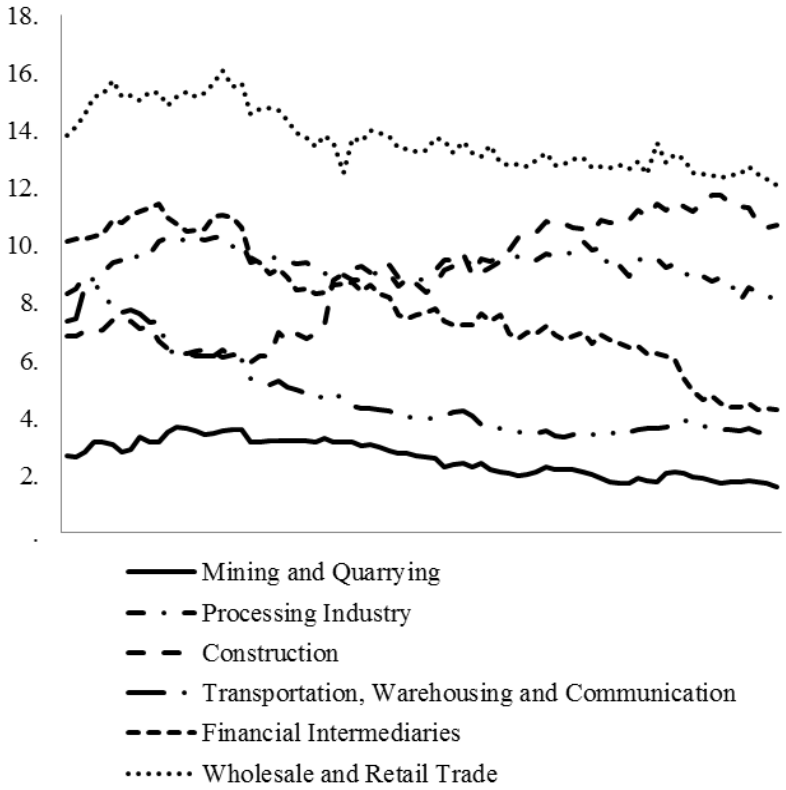


Source: Author's elaboration

Meanwhile, Figure 2 shows the comparison between FDR among different business sector. It can be seen that the trend of FDRMQU, FDRWSRT and FDRTRWCOM is downward. This implies that increase in FDRs in mining and quarry sector, financial industry sector and transportation, warehousing and communication sector were associated with the increase in Islamic Bank profitability. On the other hand, the increase in

Islamic Bank profitability was associated with the increase in FDR in construction sector as displayed by an upward trend of FDRCONS. FDR in processing industry sector and mining and quarry remained stable over the period of study.

Figure 2. Comparison between FDRs among business sectors



Source: Author's elaboration

Unit Root Test and Cointegration Test

Table 2 shows the result of stationary test using ADF. It shows the t-value of ADF test for each variable in the model. It can be seen from the result of the test that all variables are not stationary. Therefore, all variables are transformed into first-difference level

form and retest them. The result of the test shows that all variables are stationary at 1 percent level of significance. Hence, the ARDL method to co-integration is used since all variables are integrated in difference stationary I (1).

Table 2. Stationary Test

Variable	At Level	1st Difference Form	
LnROA	-0.972	-6.746	*
LnCOVID	-0.477	-6.124	*
LnINF	-1.145	-6.082	*
LnIR	-1.151	-6.086	*
LnNPF	-1.419	-9.812	*
LnFDRMQU	-0.337	-7.293	*
LnFDRPRIND	-1.309	-5.878	*
LnFDRCONS	-0.804	-4.892	*
LnFDRWSRT	-0.667	-6.927	*
LnFDRTRWCOM	-1.573	-7.251	*
LnFDRFINI	0.167	-4.942	*

Note: * shows significance at 1% level

After conducting stationary test, there is a need to do lag order selection in order to find an appropriate optimum lag for the model which implies sequential interrelationship in error terms. In addition, lag order selection is necessary to deal with the problem of parameterization (Pesaran, et al., 2001). Based on the result showed in Table 3, it can be inferred that the optimal lag length is three according to LL, Eigenvalue, SBIC, HQIC and AIC. After conducting stationary test, there is a need to do lag order selection in order to find an appropriate optimum lag for the model which implies sequential interrelationship in error terms. In addition, lag order selection is necessary to deal with the problem of parameterization (Pesaran, et al., 2001). Based on the result showed in Table 3, it can be inferred that the optimal lag length is three according to LL, Eigenvalue, SBIC, HQIC and AIC.

Table 3. Lag Order Selection Criteria

Lag	LL	Eigen value	SBIC	HQIC	AIC
0	343.14506		-1.508333	-3.938626	-5.556449
1	526.55544	0.99199	-5.138272*	-7.955202	-9.830406
2	561.4971	0.60129	-4.975106	-8.141851	-10.24992
3	587.95549	0.50156	-4.702663	-8.1824*	-10.49883
4	608.52124	0.41795	-4.389117	-8.145024	-10.6453
5	621.59216	0.29105	-3.992305	-7.987559	-10.64716

Note: * shows lag order chosen by the criterion

Regarding the co-integration test, the ARDL bound test is employed to uncover the integration among variables in the model. The result of the test in Table 4 shows that the calculated F-statistic value is 4.206 which is higher than upper-bound critical value at the level of 1 per cent level. This indicates the existence of con-integrating relationship between all variables in the model.

Table 4. ARDL Bound Test Result

Significance	I(0) Bound	I(1) Bound
10%	1.83	2.94
5%	2.06	3.24
2.50%	2.28	3.5
1%	2.54	3.86
F-Statistic	4.206	

Estimation Result

The results of analysis are grouped into two, namely long-run and short-run. The result of estimation in the short-run is displayed in Table 5. It can be seen that financing to transportation, warehousing and communication is the only variable significant at 5 per cent in the short-run with positive sign. This means that financing to this business sector will give a better profitability to Islamic Bank in the short run. On the other hand, the remaining variables are not significant in the short run. The coefficient of the lagged error-correction term (−0.6202) is significant at the 1 per cent level of significance. This indicates that there is a long-run

relationship between the variable with the return on asset (ROA). It also shows the existence of digression from the equilibrium level of ROA in the current period will be made up of 62.02 per cent in the coming period to resort to the equilibrium.

Table 5. Result of Estimation in Short-Run

Variable	Coefficient	Std. Error	t. Value	P-Value
DLn(IR)	-0.0363	0.1085	-0.33	0.739
DLn(NPF)	-0.0953	0.1097	-0.87	0.389
DLn(NPF (-1))	0.0632	0.0902	0.7	0.486
DLn(NPF (-2))	0.0309	0.0789	0.39	0.697
DLn(FDRPRIND)	-0.0883	0.0893	-0.99	0.327
DLn(FDRWSRT)	0.115	0.072	1.6	0.116
DLn(FDRTRWCOM)	0.2806	0.1199	2.34	0.023
DLn(FDRTRWCOM (-1))	-0.0055	0.096	-0.06	0.954
DLn(FDRTRWCOM (-2))	0.1494	0.0899	1.66	0.102

Note: * , ** and * show siginficant at 1%, 5% and 10% level respectively**

However, Table 6 shows the long run estimation result of ARDL test. The result demonstrates that probability value of COVID is 0.09 meaning that the COVID-19 pandemic significantly affects ROA at 10 per cent level of significance. INF has 0.00 p-value which implies that ROA is significantly affected by inflation at one percent level of significance. Furthermore, the p-value of FDRWSRT is 0.041 which means that financing to wholesale and retail trade significantly influences ROA at 5 per cent level of significance. Unlike the former variables, the rest of variables are not significant in affecting ROA.

Table 6. Result of Estimation in Long-Run

Variable	Coefficient	Std. Error	t. Value	P-Value
COVID	-0.4624078	0.267482	-1.73	0.09
DLn(INF)	-3.792912	0.8236962	-4.6	0.00
DLn(IR)	0.1020645	0.0845747	1.21	0.233
DLn(NPF)	-0.2231185	0.159618	-1.4	0.168
DLn(FDRPRIND)	0.214606	0.1572336	1.36	0.178
DLn(FDRWSRT)	-0.3079441	0.147459	-2.09	0.041
DLn(FDRTRWCOM)	-0.1064465	0.1064915	-1.00	0.322
DLn(FDRFINI)	-0.0907288	0.101316	-0.9	0.374
DLn(FDRMQU)	0.0321622	0.1964743	0.16	0.871
DLn(FDRCONS)	-0.0800102	0.064592	-1.24	0.221

Note: * , ** and * show siginficant at 1%, 5% and 10% level of significant respectively**

Robustness Check

In this section, the diagnostic test is conducted and the result can be seen in Table 7. In term of autocorrelation, the probability value resulted from Breusch-Godfrey LM test is 0.7832 implying that there is no autocorrelation in the model. Aside from that, probability value for the heteroscedasticity test is 0.2927 indicating that the model is homoscedastic.

Table 7. Diagnostic Tests

Breusch-Godfrey LM Test for Autocorrelation	
Chi-squared	1.075
Probability	0.7832

Breusch-Godfrey LM Test for Autocorrelation	
Chi-squared	69.67
Probability	0.2927

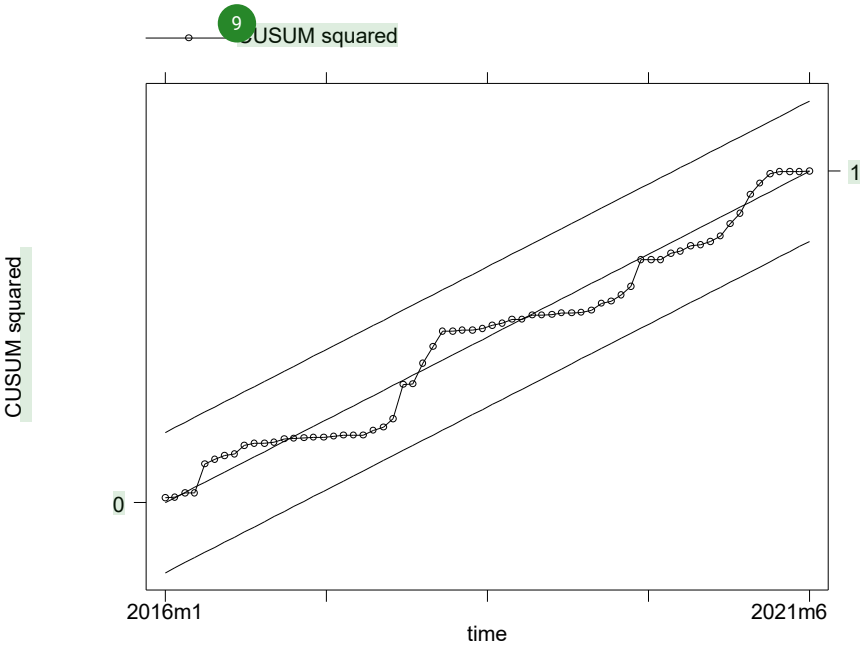


Figure 3. CUSUMQ Test for Stability

Following the diagnostic test, CUSUMSQ test is employed in analyzing the steadiness of long- and short-run parameters. Based on the result as seen in Figure 3, the CUSUMSQ plots are between critical boundaries which indicate stability of the long and short-run parameters influencing the profitability of Islamic Bank. Therefore, it can be concluded that the model is steady and appropriate.

DISCUSSION

In the short-run, financing to transportation, warehousing and communication significantly affects profitability of Islamic Bank in Indonesia. The result displayed in Table 5 shows in that 1 per cent increase in financing to this sector is associated with 0.2806 per cent increase in Islamic Bank profitability. This result support Izhar & Asutay (2007) finding of the positive impact of financing activities on Islamic Bank profitability. Apart from that, the determination of particular business sector for financing is important to improve the Islamic Bank profitability

as transportation; warehousing and communication are effective compared to other business sectors.

The coefficient of COVID-19 pandemic is significant at 10 per cent level of significance in the long run. It is estimated that the existence of COVID-19 pandemic lead to lower profitability of Islamic Bank by 0.46 per cent. Such an impact is low as compared to the other variables which have greater value. This result supports Almonifi et al. (2021) who discovered negatively minimum impact of COVID-19 on Islamic Bank in Saudi Arabia. Such a low impact is caused by the nature of Islamic Bank which is based on interest-free system and avoiding toxic asset that hugely influence the performance of mainstream Bank in the middle of crisis Hassan et al., (2020). The existence of Profit and loss sharing (PLS) system in the Islamic Bank also minimizes the effect suffered by the Islamic Bank as the return for investors are determined by the profit gained (Chapra, 2011).

In addition, the coefficient of inflation is significant at 1 per cent level of significance. The estimation result in Table 6 demonstrates that when inflation rises by 1 per cent, return on asset of the Islamic Bank declines by 3.79 per cent. This result is in line with the study conducted by Zarrouk et al. (2016). Such an impact may be explained due to lacking for anticipation against inflation which entails difficulty for Islamic Bank to make adjustment on the profit rate according to the inflation and therefore cost rises faster than revenue reducing profitability. Staikouras and Wood (2003) viewed that inflation may have direct impacts on bank profitability like for example an increase in labor price, and indirect impacts like for instance changes in interest rates and asset prices.

There is no impact of interest rate on Islamic Bank profitability. This result contradicts with study conducted by Tumewang et al., (2019) who found a negative significant relationship between them. The absent effect of interest rate on Islamic Bank profitability may be explained by the prohibition of interest rate in Islam which is categorized as riba. In this case, the changes in interest rate may not affect the decision of Muslims

to save their money in Islamic Bank and therefore creating the stability of its performance.

In terms of bank-specific variables, Not Performing Finance has no impact on profitability. This result supports studies conducted by Handayani et al. (2019 and Wahyudi et al. (2021). It can be explained that such an issue in Islamic Bank may be minimized due to profit and loss sharing system that raise fairness between the Bank and the customers.

Apart from NPF, financing to deposit ratio (FDR) to business sector shows different results in the long-run. FDR in wholesale and retail trade is the only variable significant to profitability. This result strengthen studies conducted by Handayani et al. (2019) and Wahyudi et al. (2021) that uncover no relationship between FDR and the profitability. It may be explained by the work of PLS system which entails minimum profit generated from financing ratio for Islamic Bank.

CONCLUSION

The result of the study shows that COVID-19 pandemic has a negatively relationship with Islamic Bank profitability in the long-run. The effect is relatively low due to the application of interest-free system, avoiding toxic asset and the fairness in the PLS system.

Furthermore, financing to transportation, warehousing and communication sectors is associated with higher profitability in the short-run. On the other hand, financing to wholesale and retail trade sectors hurt Islamic Bank profitability. The rest of financing to business sectors has no impact on the profitability of Islamic Bank either in short-run or long-run. This gives an insight that determination of financing ratio channeled to business sector is important to improve profitability.

Inflation has significant impact on profitability in the long-run while interest rate and non performing finance are not significant both in the long-run and short-run.

It is recommended to regulator to implement some measures to keep the stability of Islamic Bank during COVID-19 period. In addition, Islamic Banks are expected to make adjustment on

financing to business sectors ratio accordingly in order to maintain the profitability of Islamic Bank.

Writing an academic article is a challening, but very fulfilling, endeavor. Hopefully the guidelines presented here will enable you to write your first academic article with relative ease. Students, however, often underestimate the time required to produce a "poished" first effort. You cannot write a proper research article in a weeekend or even in aweek. It is, therefore, extremely important to allow yourself enough time –at least three to four weeks—to work on the successive draft.

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