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Contribution of Islamic Commercial Bank Financing to East Java Economic Growth in the Era of Branchless Banking

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Abstract: This study aims to determine and analyze the contribution of Islamic Commercial Bank's (BUS) financing to East Java Province's economic growth in the era of branchless banking. Three types of financing are channeled by the BUS. Namely, working capital financing, investment, and consumption are used as the independent variables and tested each effect on the dependent variable, which is economic growth in East Java with a proxy of GDRP in the quarter-I 2010 period quarter-I 2020. Ordinary Least Square (OLS) with dummy variable of branchless banking (0 = before the implementation of the branchless banking program (before November 2014) and 1 = after the implementation of the branchless banking program (after November 2014) is used as a data analysis technique. The study results show that only consumer financing has a positive and significant impact on the economic growth of East Java. At the same time, productive financing is known to have a positive impact but not significant on the economic growth of East Java. Meanwhile, the branchless banking program is known to have a positive and significant impact on economic growth in East Java compared to economic growth before enacting it. This study's results are beneficial for both the BUS and the regulator to evaluate the level of inclusiveness of the BUS's financing to economic growth and the implementation of branchless banking in an Islamic bank.

Keywords: Productive Financing; Consumer Financing; Economic Growth; Branchless Banking; East Java

JEL Classification: E02, G21

Introduction

Islamic banking as part of the financial industry is a contributor to Indonesia's economic growth. Islamic banking's role in contributing to economic growth is manifested through mobilizing a surplus of third party funds to the real sector through financing distribution (Deti, Samin, Amiruddin & Salenda, 2017). In other words, at the microeconomic level, banks are the primary source of financing for entrepreneurs and individuals that will have an impact on increasing production output, employment, and consumption, which will ultimately drive the economic cycle and determine the level of economic growth (Wibowo, 2013).

The contribution of Islamic banking financing to economic growth in this study was evaluated with East Java Province's object as one of 8 provinces in Indonesia.

Those are considered to have great potential in developing Islamic economics and finance, as stated in the 2019-2024 Indonesian Sharia Economic Master Plan (Badan Perencanaan Pembangunan Nasional, 2019). However, based on Bank Indonesia data (2020), the distribution of Sharia Commercial Bank (BUS) financing in East Java Province from the first quarter of 2018 to the first quarter of 2020 is not optimal. Because the composition of financing is still dominated by conventional commercial bank (BUK) credit disbursements, namely reaching an average of 94 percent. In comparison, the distribution of financing by BUS only reached an average of 6 percent.

Supposedly, the composition of financing distribution by BUS at the regional level could be higher considering that in 2014 and 2015, the banking authorities had issued POJK Number 19/POJK.03/2014 (Otoritas Jasa Keuangan, 2014) and SEOJK Number 6/SEOJK.03/2015 (Otoritas Jasa Keuangan, 2015) concerning Officeless Financial Services in the Context of Inclusive Finance (LAKU PANDAI/branchless banking). The branchless banking program is an activity to provide banking services and other financial services that are carried out not through an office network but cooperation with other parties (agents) by providing simple financial products in the form of savings with the characteristics of a Basic Saving Account (BSA), credit or microfinance and other financial products such as micro-insurance according to the needs of people who have not been able to reach financial services so that it is hoped that people's economic activities will run smoothly and encourage economic growth and equitable development between regions in Indonesia (OJK, 2015a).

The realization of the distribution of financing by BUS in East Java Province with a composition that is not yet optimal indicates that the branchless banking program cannot be said to be effective in encouraging the distribution of BUS financing that can be beneficial to society and have a positive impact on the macroeconomy. Therefore, this study seeks to scientifically prove the difference between the potential and realization of BUS financing distribution to economic growth in East Java as one of the crucial indicators in the macroeconomy to measure the inclusiveness of BUS financing era of branchless banking.

However, research on the contribution of BUS financing to the economic growth of East Java in the era of branchless banking has not been conducted by previous researchers. Research with this topic tends to be segmented into two discussions, namely the contribution of BUS financing to economic growth both at the regional level (Hayet, 2016; Deti et al., 2017), national (Hasyim, 2016; El Ayyubi, Anggraeni, & Mahiswari, 2018; Atika, 2018; Afandi & Amin, 2019) as well as comparisons between regional countries (Boukhatem & Ben Moussa, 2017; Jawad & Christian, 2019). Meanwhile, research with the topic of branchless banking in Islamic banks tends to discuss the impact of branchless banking on internal bank conditions, such as research conducted by Sarah (2015); Al Arif & Firmansyah (2018) and the impact of COVID-19 on the development of branchless banking such as research conducted by Shahabi, Azar, Faezy Razi, and Fallah Shams (2020).

Based on the previous research, a research gap can be filled through this research so that it becomes a novelty value. The novelty's location in this research is that this research is a preliminary study that discusses the contribution of BUS financing to the economic growth of East Java Province in the era of branchless banking in a comprehensive manner. Simultaneously, the discussion of this research topic in previous studies tends to be segmented into two discussions. This study's results are expected to be useful for both BUS and regulators as material for evaluating the level of inclusiveness of BUS financing on economic growth and the implementation of branchless banking in Islamic banking.

Research Method

This study uses a quantitative research approach that aims to determine and analyze the contribution of BUS financing to East Java Province's economic growth in the era of branchless banking. The data used in this study are secondary data with time-series data in the form of working capital financing, investment financing, and consumption financing distributed by BUS based on bank location as independent variables collected through the East Java Provincial Economic Report published by the Provincial Bank Indonesia Representative Office. East Java.

The branchless banking dummy variable is denoted by 0 = before implementing the branchless banking program (before November 2014) and 1 = after implementing the branchless banking program (after November 2014), referring to POJK Number 19/POJK.03/2014 concerning LAKU PANDAI. Meanwhile, the dependent variable used is economic growth with a proxy for PDRB East Java ADHK 2010 according to expenditures from the first quarter of 2010 to the first quarter of 2020, collected through the Central Statistics Agency's publication East Java Province.

After data collection is carried out, the data is processed using the Ordinary Least Square (OLS) method. The OLS method is a statistical testing method that predicts a change in conditions by using at least two independent variables as predictor factors for the dependent variable (Sumantri & Yudawisastra, 2019). However, OLS models generally have weaknesses, one of which is that it is complicated to interpret the intercept value, resulting in the interpretation not being by the real conditions. Therefore, to minimize the weaknesses of the multiple linear regression analysis, logarithmic transformations of all independent and dependent variables are used, known as the double log model or constant elasticity model (Nachrowi & Usman, 2018)

Furthermore, after data transformation is carried out, the parameters become linear. The theories used in the OLS model can be reused, including techniques for estimating coefficients and interpreting the obtained models (Nachrowi & Usman, 2018). However, before the OLS output can be used. It is necessary to carry out a classic assumption test consisting of normality, multicollinearity, heteroscedasticity, and autocorrelation tests to ensure that the OLS model is valid as a predictor or meets the best linear unbiased

estimator (BLUE) (Sumantri & Yudawisastra, 2019). The regression model used in this study is as follows:

$$Y_i = b_0 + b_1X_{1i} + b_2X_{2i} + b_3X_{3i} + b_4X_{4i} + e_i \dots \dots \dots (1)$$

Double log regression model:

$$\ln Y_i = b_0 + \ln b_1 X_{1i} + \ln b_2 X_{2i} + \ln b_3 X_{3i} + \ln b_4 X_{4i} + e_i \dots \dots \dots (2)$$

Where:

Y_i = East Java economic growth by proxy PDRB East Java ADHK 2010 according to expenditure (Billions of Rupiah)

i = number of observations (41-time series data from quarter-I 2010 to quarter-I 2020)

b_0 = constant

X_{1i} = working capital financing (Billion Rupiah)

X_{2i} = investment financing (billion Rupiah)

X_{3i} = consumption financing (Billion Rupiah)

X_{4i} = *dummy branchless banking* (0 = before the implementation of the branchless banking program (before November 2014) and 1 = after the implementation of the branchless banking program (after November 2014))

e_i = error term

The framework used in this study is shown in the following figure 1.

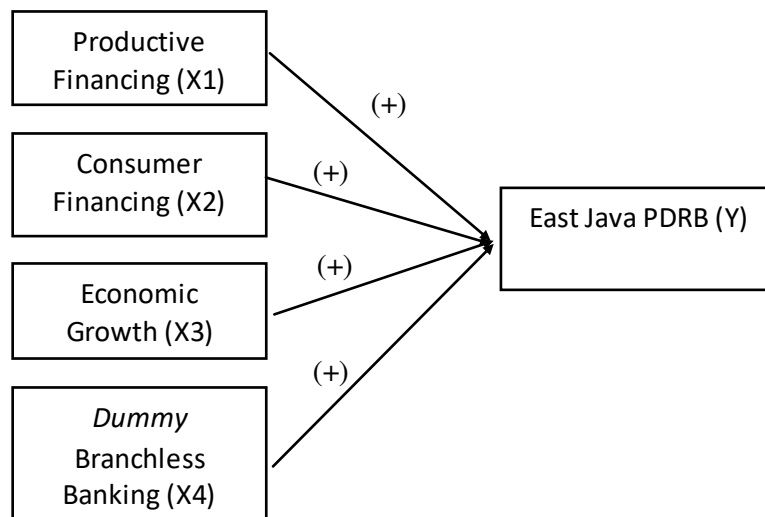


Figure 1 Illustration Framework
Source: Author's Analysis (2020)

Result and Discussion

This study uses three types of financing distributed by BUS, namely working capital, investment, and consumer financing, used as independent variables. Also, to determine the impact of the branchless banking program implementation on economic growth in East Java, the branchless banking dummy variable was used with the notation 0 = before the implementation of the branchless banking program (before November 2014) and 1 = after the implementation of the branchless banking program (after November 2014). All of these independent variables are then associated with the dependent variable, namely economic growth with the East Java GRDP proxy with the following results and discussion:

After processing data using the OLS method, the OLS test output used in this study is shown in the table 1.

Table 1 Test Output Ordinary Least Square (OLS)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.210545	0.041961	124.1749	0.0000
LOGMODAL_KERJA	0.019799	0.046511	0.425678	0.6729
LOGINVESTATION	0.009460	0.005008	1.888832	0.0670
LOGONSUMPTION	0.266097	0.049362	5.390730	0.0000
DUMMY_BB	0.048306	0.022601	2.137338	0.0394
R-squared	0.955466			
Adjusted R-squared	0.950518			
F-statistic	193.0941			
Prob (F-statistic)	0.000000			

Source: Processed by Researchers (2020)

From the table 1, it can be written that the OLS model used in this study is as follows:

$$PDRB = 5.210 + 0.019 \text{ Modal Kerja} + 0.009 \text{ Investasi} + 0.266 \text{ Konsumsi} + 0.048 \text{ Dummy BB} \dots(2)$$

H_0 : $b_1, b_2, b_3, b_4 = 0$ (X doesn't affect Y)

H_1 : $b_1, b_2, b_3, b_4 \neq 0$ (X affects Y)

Model interpretation partially (T-statistic test) and simultaneous (F-statistic test):

- A constant value of 5,210 means the average economic growth of East Java before the implementation of branchless banking in November 2014.
- The b_1 value of the working capital financing variable is 0.019, which means that any increase in the distribution of working capital financing by the BUS of IDR 1 billion will increase the economic growth of East Java by 0.019 percent. Based on the OLS test output, it is known that the p-value is 0.6729 > 0.05. According to the hypothesis, it can be concluded that H_0 is accepted. It can be concluded that working capital financing has a positive but insignificant effect on economic growth in East Java.
- The b_2 value of the investment financing variable is 0.009, which means that every increase in the distribution of investment financing by the BUS of Rp. 1 billion will

increase the economic growth of East Java by 0.009 percent. Based on the OLS test output, it is known that the p-value is $0.0670 > \alpha 0.05$. According to the hypothesis, it can be concluded that H_0 is accepted. In other words, it can be concluded that investment financing has a positive but not significant effect on East Java's economic growth.

- d. The b_3 value of the consumption financing variable is 0.266, meaning that every increase in the distribution of consumption financing by the BUS of IDR 1 billion will increase the economic growth of East Java by 0.266 percent. Based on the OLS test output, it is known that the p-value is $0.0000 < \alpha 0.05$. According to the hypothesis, it can be concluded that H_0 is rejected, or in other words, it can be concluded that consumption financing has a positive and significant effect on economic growth in East Java.
- e. The b_4 value of the branchless banking dummy variable is 0.048, meaning that the average economic growth of East Java after the implementation of branchless banking is higher than the economic growth of East Java before the implementation of branchless banking, which is 0.048 percent. Based on the OLS test output, it is known that the p-value is $0.0394 < \alpha 0.05$. According to the hypothesis, it can be concluded that H_0 is rejected, or in other words, it can be concluded that there is a positive and significant difference between the economic growth of East Java after the implementation of branchless banking and before the implementation.
- f. Based on the F-statistic test, it is known that the F-statistic probability value is $0.000000 < \alpha 0.05$, which means that simultaneously BUS financing has a significant effect on the economic growth of East Java Province.
- g. The R-squared value of 0.955 means that the independent variable used in this study can explain the dependent variable's variation by 95.5 percent. In comparison, the remaining 4.5 percent is explained by other variables that are not considered in this research model.

Before analyzing and discussing the OLS model, it is necessary to test classical assumptions to ensure that the model is valid as a predictor. The first test in the classical assumption test is the normality test. Based on the normality test output shown in the figure 1, it is known that the Jarque-Bera probability value is $0.128555 > \alpha 0.05$, which means that the residuals of this research data have been normally distributed.

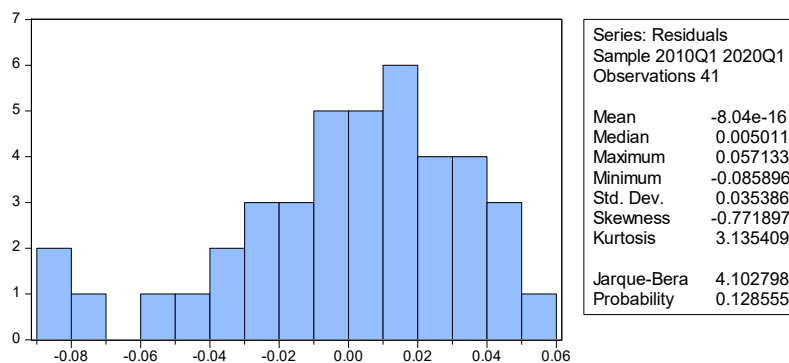


Figure 2 Normality Test Output
Source: Processed by Researchers (2020)

After the research data residual meet the normality test assumption, it can be continued with another classic assumption test: multicollinearity. Based on the multicollinearity test shown in the table 2, it is known that the correlation value between the independent variables used does not exceed 0.8. It can be concluded that there is no multicollinearity problem in the independent variables used and can be continued with testing other classical assumptions, namely the autocorrelation test.

Table 2 Multicollinearity Test Output

DMODAL_KERJA	DCONSUMPTION	INVESTMENT	DUMMY_BB
1	-0.466	-0.138	-0.278
-0.466	1	0.032	-0.068
-0.138	0.032	1	0.097
-0.278	-0.068	0.097	1

Source: Processed by author (2020)

Next is the autocorrelation test, which is useful for knowing the correlation between residuals in one observation data to other observational data, often in time series data types. Based on the autocorrelation test output using the method Breusch-Godfrey Serial Correlation LM Test shown in the table 3, it is known that the chi-square probability value is $0.6156 > \alpha 0.05$. It means that the residual does not contain serial correlations or is free from autocorrelation.

Table 3 Autocorrelation Test Output

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.215696	Prob. F (1.34)	0.6453
Obs * R-squared	0.252160	Prob. Chi-Square (1)	0.6156

Source: Processed by author (2020)

The fourth test in the classical assumption test is the heteroscedasticity test, which aims to determine the residuals' variance inequality of the observed data. Based on the heteroscedasticity test output with the method Breusch-Pagan-Godfrey shown in the table 4, it can be seen that the chi-square probability value is $0.5313 > \alpha 0.05$. It means that all residuals have the same variant or homoscedasticity.

Table 4 Heteroscedasticity Test Output

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.751705	Prob. F (4.36)	0.5635
Obs * R-squared	3.160462	Prob. Chi-Square (4)	0.5313
Scaled explained SS	2.601591	Prob. Chi-Square (4)	0.6265

Source: Processed by author (2020)

Based on the classical assumption test, it can be concluded that the regression model used in this study has met the classical assumption test. Based on the normality test, multicollinearity, autocorrelation, and heteroscedasticity so that the regression model used is valid as a predictor.

Based on the OLS test output, it can be seen that only consumer financing has a positive and significant effect on economic growth in East Java. Meanwhile, productive financing with the type of working capital financing and investment financing is known to have a positive but insignificant effect on economic growth in East Java. It confirms the research results conducted by Hayet (2016) and Afandi & Amin (2019).

The positive and significant contribution of consumption financing to the economic growth of East Java indicates that BUS has succeeded in driving the real sector through consumption. During the COVID-19 pandemic, consumption performance, especially household consumption, experienced a decline due to socio-economic restrictions, which resulted in a decrease in the level of community income as reflected in the income index value. The decrease in community income impacts decreasing the community's purchasing power, or some people have chosen to postpone their consumption. In this condition, the banking intermediary function in East Java tends to slow down due to higher TPF growth than credit/financing disbursements by banks (Bank Indonesia, 2020).

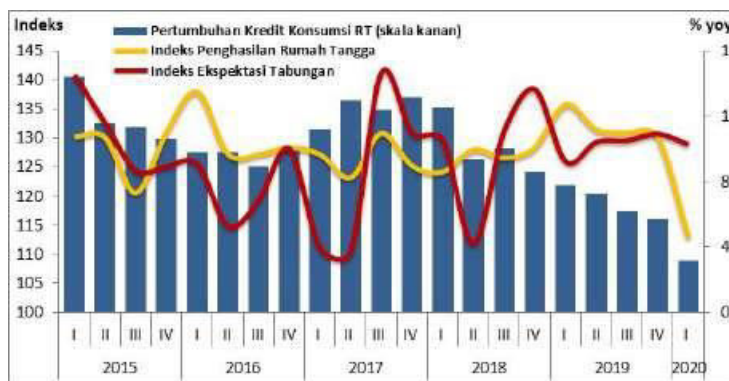


Figure 3 Comparison between Household Credit Growth Rate, Household Income Index, and Expectation Index for Savings in East Java
Source: Bank Indonesia (2020)

Another practical explanation regarding the insignificant contribution of BUS financing to East Java Province's economic growth was because of a decline in the growth in the distribution of BUS financing. In the first quarter of 2020, with a value of 15.51 percent compared to the fourth quarter of 2019 with 19.40 percent. The decline in the growth in distribution of BUS financing was indicated by an increase in credit risk, especially in the type of investment financing in the real estate sector, leasing and corporate services from 6.42 percent in the fourth quarter of 2019 to 7.47 percent in the first quarter of 2020 (Bank Indonesia, 2020).

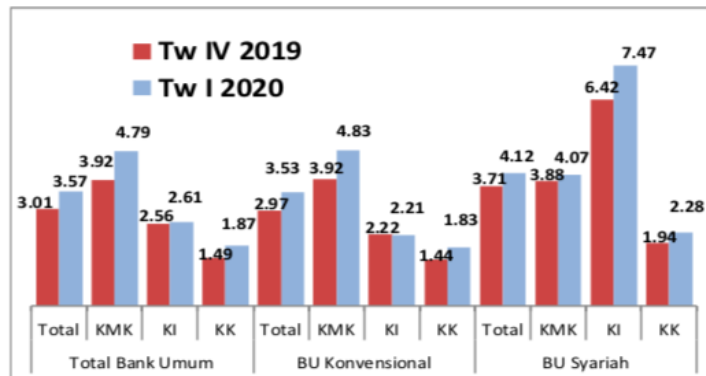


Figure 4 Comparison of Credit Risk between BUK and BUS in East Java
Source: Bank Indonesia (2020)

The non-optimal contribution of BUS financing to East Java's economic growth can also be caused by the relatively small composition of BUS financing. Which is an average of 6 percent compared to the composition of BUK lending, which reached an average of 94 percent from the first quarter of 2018 to the first quarter. I 2020 (Bank Indonesia, 2020).

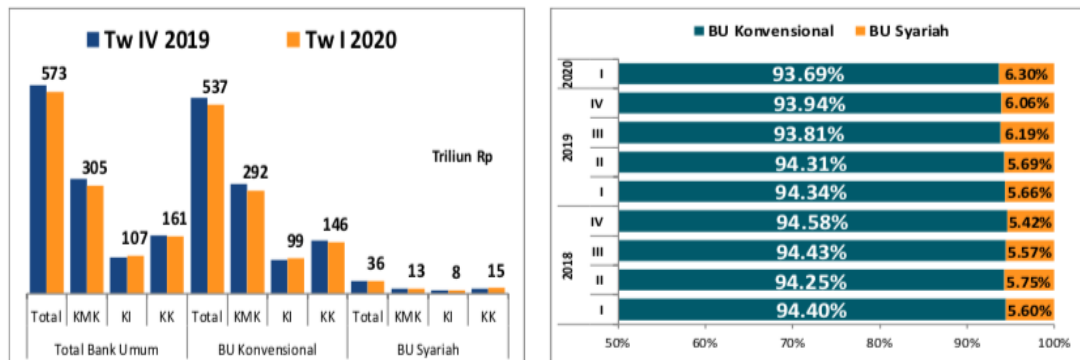


Figure 5 Comparison of BUS and BUK Financing Composition in East Java
Source: Bank Indonesia (2020)

This situation was exacerbated by a slowdown in bank lending in East Java in 2018, which reached its lowest point in 2016. However, it is predicted that there is still potential for an increase in loan growth due to the estimated increase in domestic sales in 2020 so that demand for the financing of working capital by industry will increase (Bank Indonesia, 2020).

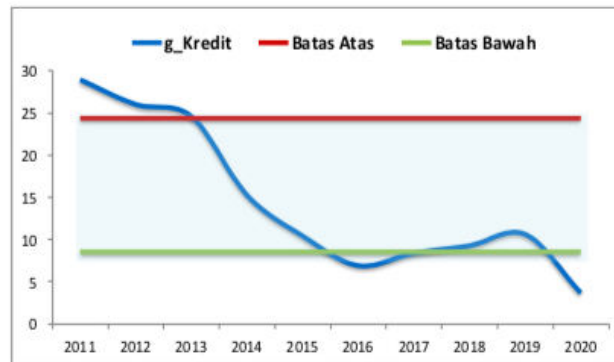


Figure 6 Trend and Normality of Banking Credit Growth in East Java
Source: Bank Indonesia (2020)

As an evaluation material for the implementation of the branchless banking program, the results of this study prove that the implementation of the branchless banking program, which has been in effect since 2014, has made a positive and significant contribution to East's economic growth in Java. However, the branchless banking program's development tends to still focus on fund collection services, not yet on credit/financing services through agents (Nurcaya & Elena, 2019).

Conclusion

Based on the discussion that has been done, it can be concluded that simultaneously the contribution of BUS financing to the economic growth of East Java is significant. However, only partially consumptive financing has a significant effect on economic growth in East Java. Meanwhile, productive financing with the type of working capital financing and investment financing has a positive but insignificant effect on the economic growth of East Java. Besides, the implementation of the branchless banking program that has been in effect since November 2014 has a positive and significant impact on East Java's economic growth.

Through this study's results, it can be indicated that BUS financing distribution cannot be inclusive. It has not been able to optimally improve the community's welfare, which impacts the economic growth of East Java. Besides, the branchless banking program's implementation also needs to be evaluated considering that implementation is still focused on the service side of raising funds, not yet on the distribution side of funds.

Recommendation

Based on the results of this study, it is known that the distribution of BUS financing can not be said to be inclusive due to a decrease in the growth of BUS financing distribution. BUS financing distribution is relatively small compared to the composition of BUK financing distribution. It is exacerbated by the COVID-19 pandemic, which has caused a decrease in consumer financing due to a decrease in public income or current

postponement of consumption, which has an impact on decreasing demand for consumptive financing and a slowdown in the intermediation function of banks due to excess deposits of deposits rather than lending. Besides, the implementation of the branchless banking program cannot be effective in increasing the distribution of BUS financing because it is still focused on raising funds.

Therefore, researchers can propose recommendations aimed at both industry, government, and banking regulators. Namely first for the industry, namely that in the future, BUS should continue to innovate products and begin to focus on increasing productive financing in the corporate segment to accelerate the increased distribution of financing, which positively impacts growth. Whereas now, an economy where the distribution of BUS financing is still focused on consumptive financing with individual customer segments and MSMEs.

Second, the realization of the government's partiality to BUS, which in its current condition is outlined in regulation of Kementerian Keuangan Number 64/PMK.05/2020 concerning Placement of Funds at Participating Banks in the Context of the National Economic Recovery Program. Third, banking regulators are expected to complete Sharia Restricted Intermediary Account (SRIA) regulation immediately. The return of Islamic banks to their khittah as an investment bank that differentiates them from conventional banks can open up opportunities for Islamic banks to finance large-scale projects. Fourth, the implementation of the branchless banking program should be evaluated by regulators by starting to focus on services for channeling funds to provide more significant benefits to the public.

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