Islamic Fintech Growth Prospects in Accelerating MSMEs Growth during the Covid-19 Pandemic: Evidence in Indonesia

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Abstract

Islamic fintech plays a role in encouraging the growth of MSMEs in Indonesia with its financing segment. The more Islamic fintech develops, the faster the growth of MSMEs in Indonesia will be. This study aims to identify macroeconomic factors such as gross domestic product (GDP), interest rates, and inflation in encouraging the growth of Islamic fintech. Using the OLS regression method, the results show that GDP has a positive effect on the growth of Islamic fintech, while interest rates have a negative effect on the growth of Islamic fintech. Improving macroeconomic conditions will encourage the growth of Islamic fintech which will ultimately contribute to the growth of MSMEs which are the main segment of Islamic fintech financing. In general, the growth of Islamic fintech assets in Indonesia tends to decline in line with the decline in GDP during the Covid-19 pandemic period. However, fintech assets can still grow, supported by declining interest rates and other factors such as the growth of the digital ecosystem in Indonesia.

Keywords: Islamic Fintech, Gross Domestic Product, Interest Rate, Inflation

Jel Codes: E31, E43, G23

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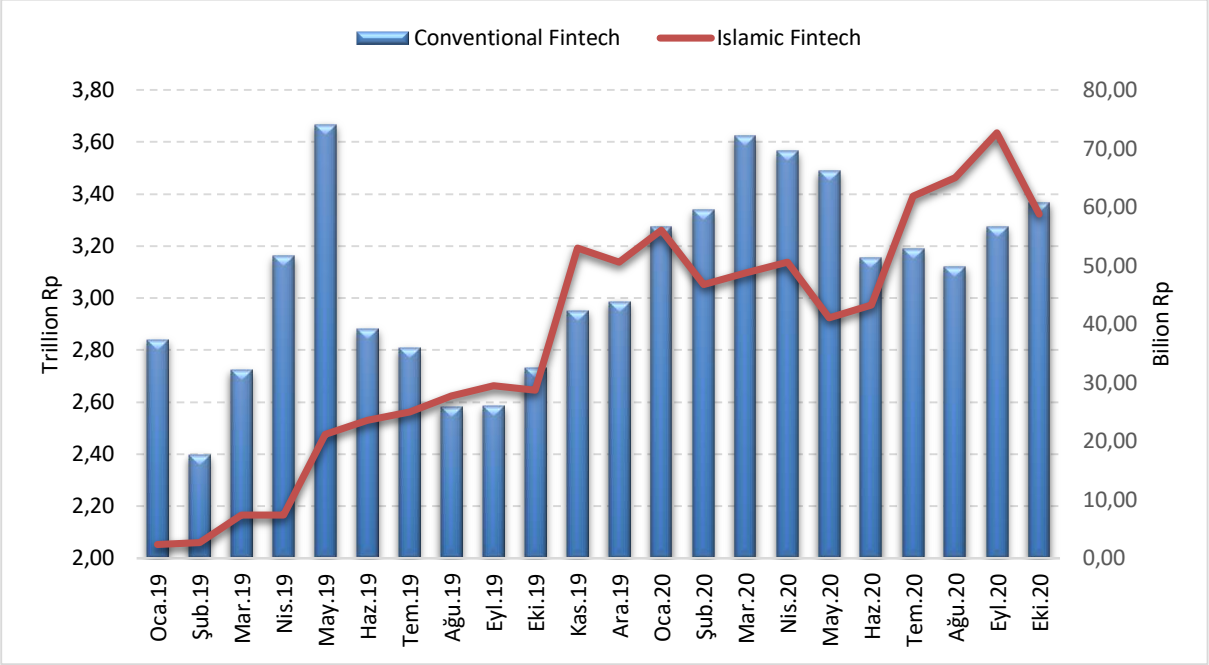
Introduction

The disruptive era marked by the rapid development of digital has begun. Various changes in the business world that were previously unimaginable have occurred and changed many people's lifestyles. Financial technology (fintech) is one of them. Based on data from the Financial Services Authority (OJK), over the past 3 years, there has been a significant development in peer to peer lending (P2P lending) in Indonesia, it can be seen from the total number of fintech assets as well as the number of players (OJK, 2020a). This is in line with data from the survey results which show that 25.71% of respondents, who are all MSME players, agree that P2P lending fintech is the top main source of funding compared to other financing instruments (DSInnovate, 2021). As well as the results of a survey aimed at fintech business players, where for consumer loans 40.8% of fintech companies have borrowers in the range of 25,000 to 500,000 people who are consumptive borrowers, and 15.8% have borrowers of more than 500,000 people, while productive loans are dominated by companies with 1,000 to 25,000 borrowers, which is 40.7% (DSResearch, 2020). Digital transactions are considered as a solution in addressing the problems of community needs when most places of business experience closure due to this policy (EconMark, 2020).

In Indonesia, fintech regulations are regulated in the OJK Regulation Number 13 of 2018 concerning Digital Financial Innovation in the Financial Services Sector. There are also other regulations, namely POJK Number 37 of 2018 concerning Crowdfunding Services through Information Technology-Based Shares and POJK Number 35 of 2018 concerning Financing Company Business Operations. Both were created because fintech crowdfunding and fintech P2P lending activities are very prevalent in Indonesia, especially P2P lending, in November 2020 there was 153 fintech in Indonesia with total assets of 3.57 trillion rupiahs. Of these, there is 10 Sharia fintech with total assets of 1.66% of the total assets (OJK, 2020b).

The existence of Islamic fintech is still relatively new when compared to conventional fintech, however, its growth is relatively progressive when compared to conventional fintech. As shown in Figure 1, the growth chart of Islamic fintech assets has increased rapidly when compared to conventional fintech. Similarly, at the end of 2020 Islamic fintech financing reached IDR 1.7 trillion (Mediatama, 2021), and the growth of Islamic fintech assets in March 2021 was 38.50%, far exceeding the growth of conventional fintech assets which was only 11.10% (OJK, 2021). This good prospect can also be seen from the optimism of the Islamic fintech industry, where the space for Islamic fintech growth is still quite wide, as well as support from Islamic financial institutions to collaborate as well as a demographic bonus in the form of the largest Muslim population in the world (Mediatama, 2021). Of course, this indicates an ever-increasing movement towards the existence of Islamic fintech.

Figure 1: Comparison of Conventional Fintech and Islamic Fintech Assets



Source: OJK (2020)

Based on a report from PricewaterhouseCoopers or PwC (2019), with the world's fourth-largest population and a productive age of more than 60%, Indonesia has great growth potential, but there is a gap that causes Indonesia's growth achievement in 2031 is estimated to be only 32% of that of the United States. This gap can be covered by community productivity in its real form, namely entrepreneurship, where micro and small enterprises (MSEs) contribute 99% of the total number of companies in Indonesia (Kemenkop & UKM, 2019).

In Indonesia, the high number of companies included in micro, small and medium enterprises (MSMEs) is that the majority of MSMEs have not yet had access to financial services. Therefore, the role of fintech in accelerating financial inclusion for the public is very significant because fintech has various approaches in assessing creditworthiness or financing for its customers (Fenwick et al., 2017). Based on the DSResearch (2020), one of the biggest consumers of fintech lending is MSMEs. Fintech supports financial inclusion programs in which two-thirds of Indonesians do not yet have access to financial institutions and the majority of these two-thirds are MSMEs. The lack of access is because MSMEs cannot yet reach banking services and the presence of fintech can bridge the needs of MSMEs that do not yet have this capability (Fenwick et al., 2017; Jagtiani & Lemieux, 2017; Saripudin et al., 2021). On the other hand, Sharia fintech has great potential for growth because, in Islamic countries, including Indonesia, the number of people who have not accessed banking services is still large (World Bank Group, 2020). However, a fintech with the offer of easy access to finance for MSMEs provides a new climate in entrepreneurship with the entry of new players into the business world (Sathish et al., 2011).

Research in 2019 has proven that the existence of fintech start-ups for 10 years has a positive correlation with economic growth in Indonesia (Narayan, 2019). Fintech was able to reduce inflation and cause a real appreciation of the rupiah, although its effect on exchange rate changes was delayed (Narayan & Sahminan, 2018). In measuring the impact of financial inclusion on economic growth, by comparing the impact of the access, depth, and efficiency variables on the gross domestic product (GDP), it is found that the relaxation of these three variables separately can have a positive impact on GDP, but the relaxation of the three has a negative impact (Dabla-Norris et al., 2015).

On the other hand, research by Yang & Chang (2020) found that there is an asymmetrical impact on the development of financial intermediaries on economic growth in various countries classified according to their per capita income, specifically, progress in finance is the driving force for the economy in developed countries. However, not in developing countries, similarly, Cheng & Hou (2020) found similar research results and recommended non-financial intermediary activities to drive economic growth.

Apart from GDP and inflation, the benchmark interest rate is also an important macroeconomic instrument. Although interest is prohibited in the practice of Islamic finance, it cannot be denied that the investor community still refers to the interest rate in placing their funds, including Sharia financial institutions. Sudarsono & Saputri (2018) proves that interest rates have a positive effect on Islamic banking financial performance, although according to Mohd Yusof et al. (2015) the effect is only in the short term and is more due to its attachment to the real economy.

Therefore, this study was made to examine the relationship between the growth of Islamic fintech in Indonesia and economic indicators, namely GDP, inflation, and interest rates. Some of the questions in this study are summarized as follows: 1) How does GDP affect Islamic fintech assets ?; 2) How does inflation affect Islamic fintech assets ?; 3) How does the interest rate affect Islamic fintech assets?

1. Methodology

Based on the type, this study uses an associative quantitative approach to explain the relationship between variables (Sugiyono, 2019). Meanwhile, based on the objective, this research is categorized as hypothesis-testing research that wants to provide empirical evidence of an existing theory (Sekaran & Bougie, 2016), in this case, the relationship between macroeconomic variables and the growth of Islamic fintech assets. The type of data used is secondary data which includes Islamic fintech assets (SIZE), Gross Domestic Product (GDP), interest rate (RATE), and inflation (INF). Data is collected from various sources, such as Islamic fintech statistics issued by the Financial Services Authority (OJK), the benchmark interest rate from Bank Indonesia (BI), and inflation from Statistics Indonesia (BPS). The sample data period available for Islamic fintech assets is from December 2018 to September 2020, so other variables are adjusted accordingly.

The data analysis technique used is multiple linear regression with the ordinary least squared (OLS) approach. Where this technique requires classical assumptions to ensure that the proposed model is suitable to be used to explain the effect of the independent variable on the dependent variable (Gujarati et al., 2017). Fulfillment of the classical assumptions of the OLS model includes the assumption of normally distributed residuals, and the freedom of the model from autocorrelation, heteroscedasticity, and multicollinearity. In addition, given the lack of research data, it is assumed that Islamic fintech assets grow linearly by ignoring other variables outside the model (ceteris paribus). The equation of the regression model from this study is as follows:

$$SIZE_t = \beta_0 + \beta_1 GDP_t + \beta_2 RATE_t + \beta_3 INF_t + e_t$$

2. Result

2.1. Description of Research Variables

Based on the results of the data analysis conducted, Table 1 presents descriptive statistics of each research variable. Islamic fintech assets during the observation period had an average of 38.39 billion rupiahs. The highest value of Islamic fintech assets occurred in December 2020. When compared to conventional fintech assets, the value of Islamic fintech assets is still very far away. The market share of Islamic fintech is only 2.01% of the total fintech assets in Indonesia, which is already more than 3,711.16 billion rupiahs. The same is the case with the Islamic banking industry in Indonesia, whose market share is also relatively small, even though Muslims in Indonesia are the majority. When viewed from its growth, the average growth of Islamic fintech assets can reach 22.73% every month, even more than 500% annually. However, this value is not high enough to increase the market share of Islamic fintech in Indonesia.

Table 1: Descriptive Statistics

Variable	Mean	Std. Dev.	Maximum	Minimum
SIZE	38.391	22.742	74.677	2.328
GDP	901.929	24.294	941.266	860.260
RATE	4.980	0.826	6.000	3.750
INF	2.556	0.706	3.490	1.320

In macroeconomic terms, Indonesia is one of the countries with relatively high economic growth rates. In 2019, in the emerging market and developing countries group, Indonesia ranks fourth after India, the Philippines, and China with economic growth reaching 5% per year. The average GDP per month is 901,929.25 billion rupiahs or the equivalent of 62.09 billion dollars. Meanwhile, the interest rate in Indonesia is relatively stable at 5.14%, with a maximum

value of 6% and a minimum of 3.75% in the last two years. Meanwhile, the inflation rate in Indonesia is also relatively stable at less than 3%. The highest inflation in the study period occurred in August 2019, while the lowest inflation also occurred in the same month a year later. The inflation rate has decreased in line with the decline in people's economic activity during the Covid-19 pandemic which began at the end of the first quarter of 2020.

2.2. Classic Assumption Test

The three macroeconomic variables that are indicators of Islamic fintech asset growth will be proxied in the regression model. To get a regression model with a proper OLS approach or Best Linear Unavailable Estimate (BLUE), a test will be carried out on the fulfillment of classical assumptions which include normality, multicollinearity, autocorrelation, and heteroscedasticity.

The results of the normality test can be seen in Table 2. The normal distribution test of the OLS model residuals has a Jarque Bera (JB) t-statistic value of 0.2628 with a probability of 0.88. The probability value is greater than alpha 0.05, thus it can be said that the residual is normally distributed. This means that the OLS model that is formed has met the assumption of normality.

Table 2: Normality Test Result: Jarque Bera

	t-Statistic	**Prob.**
Residual	0.2628	0.8769

The next classical assumption test is multicollinearity. The multicollinearity test results in Table 3 show that the VIF values for the three independent variables of Gross Domestic Product (GDP), interest rate (RATE), and inflation (INF) are relatively small. The VIF value of the three variables is below 10 and even below 5. This indicates that multicollinearity does not occur, so the assumption that is free from multicollinearity has been fulfilled.

Table 3: Multicollinearity Test Result: Variance Inflation Factors (VIF)

Variable	**VIF**
GDP	1.2120
RATE	2.7461
INF	3.0354

The autocorrelation assumption test uses the Breusch-Godfrey Langrage Multiplier (LM) test. The autocorrelation test results are shown in Table 4, showing that the F-statistics number is not that big. Even so, the probability value of F-statistics is still greater than alpha 0.05, which

means that there is no autocorrelation in the model. So it can be concluded that the OLS model is free from autocorrelation.

Table 4: Autororrelation Test Result: Breusch-Godfrey

	F-Statistic	**Prob. F**	**Obs*R-Squared**	**Prob. Chi-Squared**
Islamic Fintech Model	1.6592	0.2167	3.7171	0.1559

The last assumption test is the heteroscedasticity test. Table 5 shows the results of the heteroscedasticity test using the Breusch-Pagan-Godfrey approach. The F-Statistics and Obs*R-Squared values that are not too large have the same probability value. Both the F probability and the Chi-Squared probability are above 0.05. This shows that the model does not occur heteroscedasticity, thus the assumption of the model is free from heteroscedasticity has been fulfilled. This means that the four classical assumptions have been fulfilled, thus the regression model for the growth of Islamic fintech assets can be continued to the next stage.

Table 5: Heteroscedasticity Test Result: Breusch-Pagan-Godfrey

	F-Statistic	**Prob. F**	**Obs*R-Squared**	**Prob. Chi-Squared**
Islamic Fintech Model	1.7067	0.1962	4.9006	0.1792

2.3. Goodness of Fit Model

The results of the regression model estimation with the OLS approach can be seen in Table 6. The results of the F-test as a form of model feasibility test have an F-statistics value of 56.78 which is significant at 1% alpha (because the probability value is less than 0.01). This means that the estimated OLS model can be used to explain the effect of the independent variable Gross Domestic Product (GDP), interest rate (RATE), and inflation (INF) on the dependent variable of Islamic fintech assets (SIZE). Of the three independent variables that have a significant effect on the dependent variable of Islamic fintech assets, only GDP and RATE with a probability value of GDP t-statistics less than 0.05 while RATE is less than 0.01. This shows that GDP has a significant effect on alpha 5% while interest rate has a significant effect on alpha 1%. For the INF variable itself, the statistical probability value reaches 0.77, which means that inflation has no significant effect on the Islamic fintech asset variable.

Table 6: OLS Estimation Result

Variable	Coefficient	t-Statistic	Prob.	Information
C	-5.9118	-0.0865	0.9319	
GDP	0.1921	2.5787	0.0175	Significant
RATE	-26.5216	-8.0386	0.0000	Significant
INF	1.2177	0.3000	0.7671	Not Significant
R-squared = 0.89025 F-statistic = 56.78255 Prob(F-statistic) = 0.0000				

The ability of GDP, interest rate, and inflation in predicting the size of Islamic fintech assets is not more than 90%, however, the value is relatively large, up to 89.03%. There is still around 10.97% which is influenced by other variables outside the model. These variables are likely to be obtained from the fintech performance indicators themselves, such as the number of borrowers, lenders, and outstanding financing channeled by Islamic fintech.

3. Discussion

3.1. Macroeconomic Influence on Islamic Fintech Growth

From the estimation results of the OLS model, it can be seen that GDP has a positive effect on the growth of Islamic fintech assets. The greater the economic growth, the greater the growth of Islamic fintech assets, while slower economic growth in Indonesia will hold back the growth rate of Islamic fintech assets. These results indicate that the growth of Islamic fintech in Indonesia is highly dependent on Indonesia's economic growth itself. Every increase in GDP of 1 trillion rupiahs (68.84 million US dollars) will encourage an increase in Islamic fintech assets by 192.12 million rupiahs (13.26 thousand US dollars) and vice versa, every reduction in GDP of 1 trillion rupiahs will reduce the number of Islamic fintech assets by 192.12 million rupiahs.

The growth of Islamic fintech assets indicates the significance of the addition of current assets in the form of funds loaned or invested to borrowers, where the borrower is MSE entrepreneurs whose numbers dominate the Indonesian economy so that the growth of these assets is indicated to boost GDP by spurring production, on the other hand, with higher production. increase, the household expenditure also increases. This finding is in line with the theory put forward by Narayan & Sahminan (2018), and not in line with that put forward by Cheng & Hou (2020) and Yang & Chang (2020).

The interest rate has a negative effect on the growth of Islamic fintech assets. Every increase in the interest rate will hold back the growth rate of Islamic fintech assets, and vice versa, any decrease in the interest rate will encourage the growth rate of Islamic fintech assets. A decrease in the interest rate by one percent will encourage an increase in Islamic fintech assets by 26.52 billion rupiahs. Meanwhile, an increase in the interest rate of 1% will reduce Islamic fintech assets in Indonesia by 26.52 billion rupiahs.

Interest rate is one of the government policy instruments in regulating supply-demand financing or credit. Even though Islamic financing activities do not use an interesting instrument, business actors indirectly still use the interest rate as a comparison to the size of the capital costs required from the proposed financing. Like other Islamic banks and Islamic financial institutions, Islamic fintech also charges a fee for financing disbursed either in the form of a margin or profit-sharing. A decrease in the interest rate will reduce the cost of capital which will then be followed by an increase in the amount of financing. The higher the financing channeled by Islamic fintech, the greater the profits will be obtained and in the end, the fintech assets will increase themselves. This is in line with the findings of Vučinić (2020) revealing that the benchmark interest rate has a negative effect on fintech growth. This is in line with what was stated by the research results of Mohd Yusof et al. (2015) and is not in line with Sudarsono & Saputri (2018) research which states that interest rates have a positive and significant effect on the development of deposits in financial institutions.

Inflation does no effect the growth of Islamic fintech assets. The increasing inflation rate will not have an impact on the growth of Islamic fintech assets, as well as decreasing inflation will also not have an impact on the growth of Islamic fintech assets. Based on the model carried and the sample observation period, inflation has not yet seen its impact on the growth of Islamic fintech assets. Nevertheless, changes in inflation may have an impact on the growth of Islamic fintech assets as stated by Narayan & Sahminan (2018).

Inflation is an indicator of the ups and downs of economic activity in a region. One of the causes of inflation is the high demand which is a result of growing economic activity in the economy in the region. The high level of economic activity will encourage the high demand for capital supplied by financing, where Islamic fintech is one of the alternatives. Along with the high level of financing channeled by fintech, it will automatically increase the growth of fintech assets itself. The Indonesian government has set an inflation target for 2020 and 2021 at 3% (PMK, 2017) where starting from the onset of the first Covid-19 case in Indonesia, the inflation rate that is getting closer to the target has decreased, then fluctuated along with the uncertainty of the pandemic condition.

The growth of Islamic fintech is in line with the macroeconomic conditions of a country. The better the macroeconomic condition of a country, the better the growth of Islamic fintech in that country. At least this is happening in Indonesia. This harmonious and in-tune condition creates a harmonious synergy between government programs in advancing the MSME sector with the growth of Islamic fintech. The fintech segment in MSME financing is a common

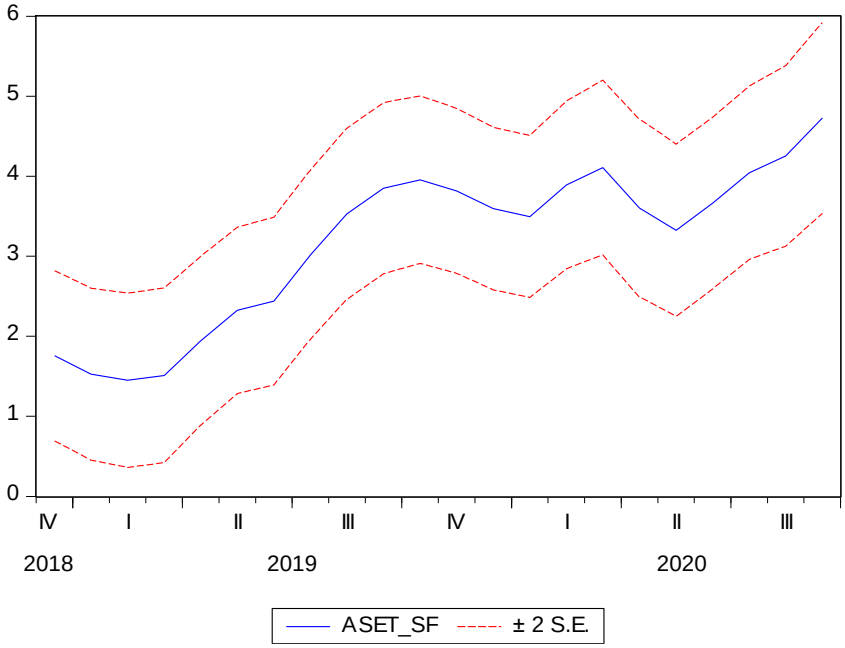
thread that the economic growth of a country will be enjoyed by MSME players. Thus, when the inflation trend declines to an average below the inflation target during a pandemic condition by the WHO statement, there is an indication of a decline in business in the MSME and fintech sectors.

Apart from conducive macroeconomic conditions, the growth of Islamic fintech must also be supported by several other factors, such as regulations, technology development, and the digital financial ecosystem. Completeness of the rules for implementing fintech will maintain sustainability and security for both fintech actors and customers (Minerva, 2016; Vartsaba & Zaslavska, 2020). Technology development to optimize service and security is the key to fintech development (Hiyanti et al., 2020; Mukhlisin, 2019; Prestama et al., 2019; Rusydiana, 2018). Meanwhile, continuous collaboration in the digital financial ecosystem is believed to be able to accelerate the growth of fintech (Haris et al., 2020; Rusydiana, 2018). Strengthening these factors becomes a complete package to encourage the growth of Islamic fintech in Indonesia.

3.2. The Impact of the Covid-19 Pandemic on the Growth of Islamic Fintech

As previously explained, the growth of Islamic fintech assets can reach 22.73% every month. However, the growth of Islamic fintech assets does not always show a positive trend. As seen in Figure 2, the trend of changes in Islamic fintech assets has fluctuated. Fluctuations also occurred at the beginning of 2020, which initially went down, then increased again. But it fell back, and in the end, it continued to increase.

Figure 2: Forecast Result: Asset Islamic Fintech



The turmoil that occurred in the early quarter of 2020 was allegedly an effect of the enactment of Large-Scale Social Restrictions (PSBB) which caused sluggish economic activity. However, this incident did not have a deep effect on the growth of Islamic fintech. Although there had

been a decline in Islamic fintech assets from the beginning of the emergence of the Covid-19 pandemic (February 2020), the number could still grow until the end of 2020. Even at the end of 2020 the growth of Islamic fintech assets year on year was recorded at 47.5%. This growth rate is indeed very far compared to the growth of Islamic fintech assets in 2019, which year on year was more than 2,000%.

During 2020, the growth of Islamic fintech assets continued to decline, even though if you look at a relatively young age, the growth of Islamic fintech assets should be more progressive. This of course cannot be separated from the condition of the Covid-19 pandemic that has hit the world. The Covid-19 pandemic is a health crisis that has a multidimensional impact on every aspect of life, including the economy. One of the indicators is the global economic growth rate in 2020 which is concentrated at 3.5%. While in Indonesia itself, economic growth in 2020 contracted by 1.9%. Slowing economic growth is of course followed by a decrease in the inflation rate, which in turn forces the government to make a policy of lowering interest rates. At the end of 2020, the benchmark interest rate in Indonesia touched the level of 3.75 percent, the lowest level in history and it's still possible to go down again. This is quite a clear signal of the sluggish growth of financing in Indonesia. The Central Bank of Indonesia noted that the growth in financing distribution reached a negative level of 2.7% (YoY).

Based on the above conditions, it is clear that the growth of Islamic fintech assets will slow down amid slowing economic conditions in Indonesia. As long as Indonesia's economic growth is negative (the value of GDP falls), during that time Islamic fintech assets will also decrease which in turn slows down the growth rate of Islamic fintech. Fortunately, the government lowered interest rates, which at least stimulated people to apply for financing amid sluggish economic activity. In the end, Islamic fintech as a financial institution was helped by this condition.

Islamic fintech, in which almost 100% of its financing is channeled to the MSME sector, is also affected by the sluggish MSMEs. During the Covid-19 pandemic, the MSME sector was the most affected. According to the Ministry of Cooperatives and Small and Medium Enterprises, there are at least around 30% whose businesses that are disrupted. While those who are disturbed but create creative innovations are around 50-70 percent, although they are also affected. Most of the MSMEs that survive to utilize digital platforms. Around 13% or 8 million MSMEs have entered the digital ecosystem. This is also one of the reasons fintech financing can still grow (14% YoY) even though national financing growth has been negative. So amid conditions such as the Covid-19 pandemic, the importance of the digital ecosystem in economic activity is a must for P2P fintech to be a part of it.

In addition, the slowing down of the impact of macroeconomic conditions on the growth of Islamic fintech assets can still be masked by the high public awareness of using Islamic fintech services. This has contributed to the continued growth of Islamic fintech assets, although not as fast as before the pandemic. The growth of Islamic fintech assets will increase their

management capacity, which in turn will increase the outstanding loans extended to MSMEs. Thus, Islamic fintech can still support the growth of MSMEs even during the pandemic.

Conclusion

GDP and interest rates affect the growth of Islamic fintech assets linearly, while inflation does no effect the growth of Islamic fintech assets. Sustainable economic growth will encourage the growth of Islamic fintech assets which in turn will contribute to the growth of financing to the MSME sector so that it can accelerate the growth of MSMEs themselves. Likewise, lowering low-interest rates will stimulate the distribution of financing and Islamic fintech is one of the motors in the distribution of financing in the MSME sector.

The Covid-19 pandemic has slowed the growth of Islamic fintech assets caused by slowing economic growth (down in GDP). Nevertheless, several government stimuli in boosting the economy, one of which is lowering interest rates, also encourage economic growth through the growth of financing, which in the end can be enjoyed by P2P fintech players such as Islamic fintech.

Although the growth of Islamic fintech is relatively slow, it is still in line with changes in macroeconomic conditions. To accelerate the role of Islamic fintech in growing MSMEs in Indonesia, the government must make policies that are pro to economic growth and stability. In addition, it also stimulates the development of fintech, especially in terms of regulations that facilitate the development of Islamic fintech while still paying attention to aspects of customer security and convenience.

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