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Does Financial Inclusion Increase MSME Financing at Islamic Banks During Covid 19?

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Abstract

The impact of Covid-19 on MSME has necessitated solutions through MSME financing at Sharia Banks, involving the role of financial inclusion to address their financial challenges. The purpose of this study is to analyze the role of financial inclusion in stimulating MSME financing during Covid 19 with a focus on the effect of financial inclusion on MSME financing at Islamic banks during covid 19. The method used is Panel Data Analysis with the best model chosen, namely the Fixed Effect Model with GLS weights used Seemingly Uncorrelated Regression to solve autocorrelation problems and a higher adjusted R-Square value. The object of research is Islamic Banks using secondary data from 33 provinces in Indonesia during the Covid-19 period, from March 2020 to December 2022 with total of 1122 observations. The results of this study imply that any increase in financial inclusion will increase Islamic Bank Financing for the MSME sector in each province in Indonesia. Furthermore, during this period, an increase in DPK can enhance the distribution of inclusive financing, while a rise in NPF ratio can reduce it. This research contributes by demonstrating that the increased inclusivity of financial services can enable easier and more affordable access to financial products and services offered by formal institutions, particularly in the context of financing for MSME, with the aim of improving overall well-being and addressing the impact of COVID-19.

Keywords: Islamic Banking, Financial Inclusion, MSME Financing, Covid-19.

Introduction

Micro and Small Enterprises (MSMEs) hold a critical position within Indonesia's economy, constituting a substantial 64.19 million enterprises. Among them, Micro and Small Enterprises (MSEs) stand out as the majority with 64.13 million, making up almost 99.92% of the business landscape. Nevertheless, the

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COVID-19 pandemic has unleashed significant hardships on MSMEs, with 82.9% experiencing detrimental consequences, while only a meager 5.9% have managed to register positive growth, as documented by the Katadata Insight Center (KIC). Surveys conducted by various institutions like the Central Bureau of Statistics (BPS), the National Development Planning Agency (Bappenas), and the World Bank illustrate that the pandemic has precipitated challenges encompassing loan repayments, utility expenditure, staff layoffs, raw material procurement difficulties, capital acquisition, dwindling customer bases, and interruptions in distribution and production for numerous MSMEs (Kementerian Koordinator Bidang Perekonomian Republik Indonesia, 2021).

In response to these challenges, the government encourages financial inclusion to provide MSME access to working capital and investment financing, including through Islamic banks. In a study conducted by (Evanoff, 1988) stated that the existence of many branch offices facilitates MSME access to banking services, facilitates MSME business transactions, and contributes to improving MSME performance. Therefore, the presence of Islamic bank branch offices close to the location of MSME entrepreneurs is expected to be a solution in supporting the financing and growth of the MSME sector.

Aside from financial inclusion, financing disbursed to MSMEs is influenced by several factors including Third Party Funds and NPF. First, according to a study by (Pradesyah & Triandhini, 2021), it is mentioned that an increase in the amount of Third-Party Funds (TPF) gathered by Islamic banks will also lead to an increase in the financing disbursed. Furthermore, one of the goals of banks is to seek profit, so banks do not let idle funds sit without being utilized. Banks tend to allocate their funds as efficiently as possible to maximize their profits. To be able to disburse financing optimally, banks must have the ability to gather DPK because the primary source of liquidity for financing disbursement is DPK. However, this finding contrasts with research conducted by (Saputri & Wibowo, 2018) and (Suhel et al., 2018), who found opposite results, and (Setiawan et al., 2023) found that there is no influence of DPK on the distribution of MSME financing.

Second, in disbursing financing to the MSME sector, BUS also assesses the ability of MSMEs to meet their agreed-upon obligations. If customers experience delays in repaying financing installments to the Islamic bank, the Non-Performing Financing (NPF) ratio of the Islamic bank will increase. This is because the NPF ratio is an indicator that evaluates a customer's ability to repay obligations along with the agreed-upon margin. A high NPF ratio leads a bank to reconsider providing financing to customers, ultimately reducing MSME financing in Islamic banking (Suhel et al., 2018). However, this research contradicts the findings of (Setiawan et al., 2023).

The study of financing in the MSME sector is interesting to investigate further. Based on the results of previous studies, there are different views regarding the effect of DPK and NPF on MSME financing, as well as findings on the role of Financial Inclusion on MSME financing. The different approaches in this study involve a more recent research period as well as the use of different variables. This study has appeal because it fills the gap of previous research that reflects the misalignment of results. The new approach in this study is an analysis of the role of financial inclusion in the support of MSME financing during the Covid-19 period. Taking into account this information, the researcher is interested in researching about "Does Financial Inclusion Increase MSME Financing at Islamic Banks During Covid 19?".

Literature Review

The Covid-19 pandemic has had a profound impact on Micro, Small, and Medium Enterprises (MSMEs) globally, including in Indonesia. The resulting financial instability has necessitated a re-evaluation of financing mechanisms, particularly through Islamic banks, to ensure the survival and growth of these enterprises. Financial inclusion, which refers to the access and usage of financial services by all segments of society, has been identified as a key driver in this context. This review examines existing literature on the role of financial inclusion in enhancing MSME financing, particularly during the Covid-19 pandemic, with a focus on Islamic banking.

Several studies have highlighted the importance of financial inclusion in supporting MSME growth. According to Demirgüç-Kunt et al. (2020), financial inclusion can mitigate the negative impacts of economic shocks by providing MSMEs with access to credit and other financial services. In the context of Islamic banking, financial inclusion is not only about access to financial services but also ensuring that these services comply with Sharia principles (Obaidullah & Khan, 2021). The unique characteristics of Islamic finance, such as risk-sharing and profit-loss sharing, make it a suitable model for MSME financing during periods of economic uncertainty.

The pandemic exacerbated existing challenges faced by MSMEs, such as limited access to finance, which has been a longstanding issue in Indonesia (Rahayu & Herlambang, 2022). Studies conducted during the pandemic have shown that financial inclusion played a crucial role in providing a lifeline to MSMEs. For instance, research by Sahay et al. (2020) demonstrated that countries with higher levels of financial inclusion were better able to support their MSMEs through various financing schemes during the pandemic. In the context of Islamic banks, studies have shown a mixed impact. Some research indicates that

Islamic banks, due to their conservative risk approach, were initially hesitant to extend financing during the pandemic (Ali & Hassan, 2021). However, other studies argue that Islamic banks have the potential to lead in inclusive financing due to their focus on social justice and equitable distribution of wealth (Ismail et al., 2022).

The methodology employed in analyzing the relationship between financial inclusion and MSME financing often involves panel data analysis. Panel data allows for the examination of data across time and entities, providing a comprehensive view of the impact of financial inclusion (Hsiao, 2014). The Fixed Effect Model, as mentioned in the study, is particularly useful in controlling for unobserved heterogeneity when this heterogeneity is constant over time but varies across entities (Baltagi, 2008). The use of GLS weights in Seemingly Unrelated Regression (SUR) further refines the analysis by addressing potential autocorrelation issues, thereby ensuring more robust results (Zellner, 1962).

Recent studies have explored the role of Islamic banks in promoting financial inclusion during the Covid-19 pandemic. Research by Mohieldin et al. (2020) suggests that Islamic banks, with their focus on ethical finance, are well-positioned to support MSMEs during economic crises. Furthermore, empirical studies have shown that financial inclusion positively influences Islamic bank financing to MSMEs, particularly in regions with higher levels of financial literacy and awareness (Abduh & Omar, 2021). The findings of this research are consistent with previous studies, indicating that an increase in financial inclusion is associated with higher levels of MSME financing by Islamic banks during the Covid-19 period.

The literature suggests that financial inclusion is a critical factor in enhancing MSME financing, especially during periods of economic turmoil such as the Covid-19 pandemic. Islamic banks, with their unique financial principles, can play a pivotal role in this process. However, the extent of their contribution depends on various factors, including the regulatory environment, the level of financial literacy, and the availability of inclusive financial products. This study adds to the growing body of literature by providing empirical evidence on the relationship between financial inclusion and MSME financing in the context of Islamic banks during the Covid-19 pandemic.

Methods

To answer the research questions above, this study employs a panel data approach to estimate an empirical model using the population consisting of

Islamic commercial bank (abbreviated as BUS). operating in 33 provinces throughout Indonesia during the period from March 2020 to December 2022. In this study, the authors chose to use a saturated sample, which comprised a total of 1122 observations. The data source used by the author is secondary data obtained through documentation data collection techniques from the official OJK and BPS websites.

In addition, the variables in this study include MSME Financing at BUS including working capital and investment which are transformed in logarithmic form as dependent variables, while the independent variables consist of Third Party Funds which are transformed in logarithmic form; NPF MSME Financing at BUS including working capital and investment in percentage form; and Financial Inclusion which is proxied by the Index of Sharia Financial Inclusion which adopts the IFI (Sarma, 2012) developed by (Umar, 2017), in this study it is then adjusted to the availability of Islamic commercial bank data which is then transformed in logarithmic form. The calculation of ISFI for each province per month based on BUS data is as follows:

1. Find the value of each dimension:

$$d_i = w_i \frac{D_i - m_i}{M_i - m_i}$$

Where

di is the dimension; wi is the weight attached for all dimensions of the same value (wi =1); mi is the lowest limit of the value of dimension i (value mi = 0); Mi is the highest limit of the value of dimension i (the highest Di value of 33 provinces per month); and Di is the actual value of dimension i. As for calculating Di using the following provisions:

a. The dimension of Banking Penetration is the ratio of total deposits of BUS in millions of rupiah every month per 1,000 population.
Formula:

$$D_1 = \frac{Total\ third\ party\ funds\ of\ BUS\ (month_t)}{Total\ Population\ (month_t)} \times 1.000$$

b. The Avability of banking services dimension is the ratio of the number of KC, KCP, KK of BUS per month per 100,000 population.
Formula:

$$D_2 = \frac{Total\ number\ of\ KC, KCP, KK\ of\ BUS\ (month_t)}{Total\ Population\ (month_t)} \times 100.000$$

Where

KC, KCP, KK is branches, sub-branches, and customer service points of the Islamic commercial bank (BUS)

c. The Usage dimension is the ratio of the amount of BUS financing each month to PDRB.
Formula:

$$D_3 = \frac{Total\ Financing\ of\ BUS\ (month_t)}{GRDP\ (month_t)} \times 1.000$$

2. Calculating the values of X1 and X2

$$X_1 = \frac{\sqrt{{d_1}^2 + {d_2}^2 + {d_3}^2}}{\sqrt{{w_1}^2 + {w_2}^2 + {w_3}^2}}$$

$$X_2 = 1 - \frac{\sqrt{(w_1 - d_1)^2 + (w_2 - d_2)^2 + (w_3 - d_3)^2}}{\sqrt{{w_1}^2 + {w_2}^2 + {w_3}^2}}$$

3. Calculating the value of the Index of Syariah Financial Inclusion (ISFI)

$$ISFI = \frac{1}{2}[X_1 + X_2]$$

Result and Discussion

The panel data regression model in this study, where index *i* refers to province *i* and index *t* refers to the monthly period, is estimated as follows:

$$Log(msmeF)_{it} = \beta_0 + \beta_1 Log(TPF)_{it} + \beta_2 NPFmsme_{it} + \beta_3 Log(ISFI)_{it} + \varepsilon_{it}$$

Where β_0 is the regression coefficient and ε_{it} is the error. The following are the estimation results of 3 panel data models.

Table 1. Estimation Results

Independent Variable	*Common Effects Model*		*Fixed Effects Model*		*Random Effects Model*	
	Coefficient	*t-Statistic*	*Coefficient*	*t-Statistic*	*Coefficient*	*t-Statistic*
Constant	-3.337466	-12.95709***	1.807442	5.580857***	1.384372	4.093057***
Log(TPF)	1.162738	55.16069***	0.643813	17.43985***	0.697906	20.29219***
NPFmsme	-0.011204	-1.574523	-0.013443	-5.025495***	-0.013282	-4.975110***
Log(ISFI)	-0.146330	-3.611863***	0.249262	6.766804***	0.251875	6.934380***
Adjusted R^2	0.832116		0.988354		0.324675	
F-statistic	1853.080		2719.158		180.6473	

Notes: *,**,***= significant at 0.10; 0.05; and 0.01.

Based on the table above, it is known that the results of the fixed effects model have a greater adjusted R^2 value compared to other models.

Table 2: Best Model Selection Test

Type of Testing	Prob. of Panel Data Regression Equation	Description
Uji F	0.0000	If the results are significant, then choose FEM
Uji Hausman	0.0000	If the results are significant, then choose FEM
Uji LM	-	Because the F-test and Hausman test choose FEM, this test is not necessary to be conducted
Conclusion	Fixed Effect Model	

Source: Data processed with Eviews 12, 2023

Based on the table above, it is known that the best model chosen is the Fixed Effects Model. It is known that the durbin watson value of the fixed Effect Model estimation results is 0.241706 which indicates a positive autocorrelation problem. So that the weights in the FEM estimation were selected Cross Section-SUR (*Seemingly Uncorrelated Regression*) and obtained a durbin Watson value of 2.058258 which means that the positive autocorrelation problem has been resolved..

Table 3. Comparison of FEM Before and After GLS Weights: Cross Section-SUR

Independent Variable	*Fixed Effects Model*		*Fixed Effects Model GLS Weights: Cross Section-SUR*	
	Coefficient	*t-Statistic*	*Coefficient*	*t-Statistic*
Constant	1.807442	5.580857***	1.808435	382.0698***
Log(TPF)	0.643813	17.43985***	0.643694	1308.344***
NPFmsme	-0.013443	-5.025495***	-0.013435	-526.7797***
Log(ISFI)	0.249262	6.766804***	0.249295	576.1216***
Adjusted R^2	0.988354		0.999962	
F-statistic	2719.158		835296.9	

Notes: *,**,***= significant at 0.10; 0.05; and 0.01.

Based on the comparison table of the FEM estimation results before and after GLS Weights Cross Section-SUR above, it is known that the greater adjusted R^2 is after the GLS Weights Cross Section-SUR is selected, namely 0.999962, which means that the model is able to explain MSME Financing in

Islamic Banks during the Covid-19 period by 99.99%. In addition, the F-statistic is known with a value of 835296.9 explaining that there is a simultaneous influence of TPF, NPFmsme and financial inclusion on MSME Financing in Islamic Banks during the Covid-19 period. The results of other findings are that all independent variables partially have a significant effect at the 0.01 level on the dependent variable.

Table 4. Summary of Results and Match with Main Hypothesis

No	Hypothesis	Regression Results	Match with Main Hypothesis
1	H1: TPF positively affects MSME Financing	Positive Significant	according to the main hypothesis
2	H2: NPF negatively affects MSME Financing	Negative Significant	according to the main hypothesis
3	H3: Financial inclusion positively affects MSME Financing	Positive Significant	according to the main hypothesis

Source: Data processed with Eviews 12, 2023

Based on the table above, it is evident that the findings align with the research hypothesis. The interpretations of the regression results are as follows: 1) When Third-Party Funds at Islamic Banks increase, it leads to an increase in financing extended to MSMEs during the Covid-19 period, in line with the initial hypothesis of a significant and positive effect; 2) When the NPF of MSME financing at Islamic Banks rises, it results in a decrease in financing extended to MSMEs during the Covid-19 period, consistent with the initial hypothesis of a significant and negative effect; 3) When financial inclusion improves, it leads to an increase in financing extended to MSMEs during the Covid-19 period, in accordance with the initial hypothesis of a significant and positive effect.

The Role of Third Party Funds (TPF) in influencing MSME Financing in Islamic Banks during the Covid-19 period

The research findings indicate that Third-Party Funds have a significant positive influence on MSME Financing in Islamic banks. This implies that when Third-Party Funds obtained from customers in the form of savings, current accounts, deposits, or the like increase in Islamic banks, the financing provided by Islamic banks to MSMEs, both for Working Capital and Investment financing, will also increase. This is in line with the research conducted by (J. Effendi et al., 2018; Indrawati & Basuki, 2017; Pradesyah & Triandhini, 2021). However, these findings differ from the research conducted by (Saputri & Wibowo, 2018; Suhel et al., 2018) as they found results contrary to the findings of this study.

Furthermore, findings from (I. Effendi & RS, 2020) regarding the impact of COVID-19 on Islamic Banks indicate that there are no signs of anxiety or panic among customers in the current pandemic situation. The level of trust among customers, both depositors and borrowers, remains high despite facing the crisis caused by the COVID-19 pandemic. The demand for loans remains steady, as does the amount of deposits held by customers.

Returning to the consistency of research findings, it is evident that an increase in Third-Party Funds (TPF) results in an uptick in financing for the MSME Financing in Islamic banks. This is observed in the rising TPF levels within Islamic banks, which reflect the public's trust in Islamic Banking. Thus, in maintaining customer trust, Islamic banks, as an intermediary institution, channels DPK to enhance funding allocation to the MSME Sector, a productive sector contributing approximately 60.51% to the GDP and employing nearly 96.92% of the total national workforce (Limanseto, 2023).

The Role of NPF in influencing MSME Financing in Islamic Banks during the Covid-19 period

The research findings indicate a significant negative impact of NPF on MSME Financing in Islamic banks. This means that an increase in the NPF percentage for MSMEs leads to a decrease in MSME Financing in Islamic banks. This is due to the adverse effects of MSME NPFs, which can affect the liquidity of Islamic banks, ultimately reducing the allocation of MSME Financing. It is suggested that risk diversification is necessary, such as allocating funds to corporate financing, other types of financing, SBIS, PUAS, and other Shariah monetary instruments. This should be done while considering that the funds provided for financing are also channeled from third-party funds, taking into account the institution's profitability.

Additionally, it is observed that Islamic banks reduce SME financing when NPF percentages increase, in line with previous research by (Indrawati & Basuki, 2017; Pradesyah & Triandhini, 2021; Saputri & Wibowo, 2018; Suhel et al., 2018). However, this contrasts with the findings of (Setiawan et al., 2023), who argue that banks with high NPFs will be more cautious in financing. As NPFs increase, Islamic banking financing to MSMEs consistently grows, supporting MSME recovery from the impact of Covid-19. Another study by (I. Effendi & RS, 2020) shows that delayed financing payments can impact overall bank performance, but Islamic banks demonstrate resilience to the effects of the Covid-19 pandemic from an NPF perspective. Despite the crisis, Islamic banks maintain customer trust in deposits and loans, and demand for loans and deposits remains stable, indicating a positive overall condition. No signs of customer panic are evident in this situation.

During the Covid-19 pandemic, the government, represented by OJK, implemented restructuring and financing scheduling policies to stimulate the economy. These policies aimed to optimize the role of banks as financial intermediaries, maintain financial system stability, and support national economic growth. It was emphasized that responsible responses from financing recipients are crucial to prevent significant losses in the banking sector that could lead to economic instability in Indonesia. Therefore, stimulus measures and financing relaxation should be carefully received, and the public is encouraged to act responsibly to avoid actions that could harm the collective economic interest (OJK, 2020)

The Role of Financial Inclusion in influencing MSME Financing in Islamic Banks during the Covid-19 period

The estimation results indicate that Inclusive Finance has a significant positive impact on MSME Financing in Islamic banks. This means that for each increase in the ISFI, MSME Financing in Islamic banks in every province in Indonesia is expected to increase. This aligns with the research conducted by (Ahyar, 2019; Isrowiyah, 2019), which demonstrates that Financial Inclusion, encompassing easier and more affordable access to financial services for a broader segment of the population, has a positive influence on MSME financing. In other words, the higher the level of inclusive finance in a region or country, the expected result is an increase in the quantity and accessibility of financing available to SMEs in that area.

Table 5. The ISFI values in each province in Indonesia

Province	Average	Province	Average
Aceh	0,80	Sulawesi Selatan	0,07
DKI Jakarta	0,53	Bangka Belitung	0,07
Nusa Tenggara Barat	0,30	Sumatera Utara	0,07
D.I Yogyakarta	0,16	Jawa Timur	0,07
Kalimantan Timur	0,14	Sulawesi Tengah	0,07
Kepulauan Riau	0,14	Kalimantan Tengah	0,06

Bengkulu	0,12	Gorontalo	0,06
Kalimantan Selatan	0,10	Lampung	0,06
Riau	0,10	Jawa Tengah	0,06
Banten	0,10	Bali	0,05
Sumatera Barat	0,09	Sulawesi Barat	0,04
Jawa Barat	0,09	Papua Barat	0,04
Maluku Utara	0,09	Sulawesi Utara	0,04
Jambi	0,09	Maluku	0,03
Kalimantan Barat	0,09	Papua	0,02
Sulawesi Tenggara	0,08	Nusa Tenggara Timur	0,01
Sumatera Selatan	0,08	Average Total	0,12

Source: Data processed using Microsoft Office Excel 16.

There are three categories of ISFI measurement results: first, ISFI is considered low when the ISFI value is < 0.3; second, ISFI is considered medium when its value falls between 0.3 to 0.6; and third, ISFI is considered high if its value ranges from 0.6 to 1 (Sarma, 2012). Based on Table 5, which represents the average ISFI values for each province from 2020 to 2022, it is evident that Aceh Province has a high ISFI index with a value of 0.80. This is followed by DKI Jakarta and Nusa Tenggara Barat Provinces, which fall into the medium ISFI category. Meanwhile, provinces other than these three have low ISFI values, below 0.3. While it is known that the average ISFI value in Indonesia is 0.12, which indicates that the ISFI in Indonesia is still low.

Returning to the research findings that demonstrate how an increase in financial inclusion can facilitate easy and affordable access to financial products and services from formal financial institutions, in line with the needs and capabilities of the community, particularly regarding access to financing for MSMEs in Islamic banks.

Conclusion

The COVID-19 pandemic has had severe repercussions on MSMEs, as evidenced by the Katadata Insight Center (KIC), which reported that 82.9% of them have faced adverse impacts, while only 5.9% have shown any positive growth. Surveys conducted by various institutions, including BPS, Bappenas, and the World Bank, have highlighted the challenges MSMEs are confronting, such as loan repayments, utility expenses, layoffs, difficulties in procuring raw materials, acquiring capital, declining customer bases, and disruptions in production and distribution. (Kementerian Koordinator Bidang Perekonomian Republik Indonesia, 2021). In response to these challenges, the government encourages financial inclusion to provide MSME access to working capital and investment financing, including through Islamic banks.

In addition, the results showed that 1) When Third-Party Funds at Islamic Banks increase, it leads to an increase in financing extended to MSMEs during the Covid-19 period, in line with the initial hypothesis of a significant and positive effect; 2) When the NPF of MSME financing at Islamic Banks rises, it results in a decrease in financing extended to MSMEs during the Covid-19 period, consistent with the initial hypothesis of a significant and negative effect; 3) When financial inclusion improves, it leads to an increase in financing extended to MSMEs during the Covid-19 period, in accordance with the initial hypothesis of a significant and positive effect. So, the research findings show how the role of increasing financial inclusion can facilitate easy and affordable access to financial products and services from formal financial institutions, in accordance with the needs and abilities of the community, especially related to access to MSME financing at Islamic banks during the Covid-19 period. For further research can consider looking at the role of inclusiveness of Sharia Microfinance.

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