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Internal and External Factors Influencing Financing for MSMEs by Islamic Banks in Indonesia

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Abstract

This study aims to analyze the internal and external factors influencing financing for Micro, Small, and Medium Enterprises (MSMEs) by Islamic banking in Indonesia. The internal factors include Third Party Funds (DPK), Non-Performing Financing (NPF), and Return On Assets (ROA). Meanwhile, the external factors consist of the inflation rate and the rate of return on Sharia Bank Indonesia Certificates (SBIS).This research employs a quantitative approach and is classified as explanatory research. We analyze time series data from January 2015 to December 2021, obtained from Sharia Banking Statistics (SPS) and Indonesian Financial Economic Statistics (SEKI). Multiple linear regression is used to assess the influence of both internal and external factors on MSME financing. The results indicate that DPK, NPF, ROA, inflation, and SBIS collectively affect MSME financing. When examined individually, DPK and inflation have a significant positive impact, while ROA and SBIS have a significant negative effect. In contrast, NPF shows no significant effect. Based on the coefficient of determination, 87.80 percent of MSME financing by Islamic banking in Indonesia is influenced by the variables included in the model.

Keywords: *Micro and Small Enterprise, MSME Financing, Sharia Banking, SEKI, SBIS.*

1. Introduction

Islamic banking in Indonesia has played a crucial role in accelerating the country's economic growth by providing financial services to communities and businesses (Hasan et al., 2021; Nuriyah et al., 2018). However, compared to conventional banking, the contribution of Islamic banking in providing financial support remains relatively low. According to Sharia Banking Statistics (SPS), total Islamic banking financing reached 409.878 trillion rupiah in December 2021 (SPS, 2022). In contrast, total credit from conventional banks during the same period was 4,939.920 trillion rupiah (SEKI, 2022).

Despite the smaller volume of Islamic bank loans compared to conventional loans, the growth of Islamic banking financing in Indonesia continues to rise (Widarjono et al., 2022). For instance, in 2015, the total amount of MSME financing from Islamic banks was only 50.291 billion rupiah. This figure significantly increased to 76.009 billion rupiah by 2021 (SPS, 2022), indicating an average annual growth rate of 8.52 percent in MSME financing during this period.

Bank financing, including MSME financing, is influenced by both internal and external factors (Bella, 2020). Internal factors affecting Islamic banking MSME financing are related to financial management aspects such as Third Party Funds (DPK), Return on Assets (ROA), and Non-Performing Financing (NPF) (Bella, 2020; Widarjono et al., 2022). External factors include inflationary conditions and Bank Indonesia Syariah Certificates (SBIS), which are Islamic securities issued by Indonesia's central bank (Anto et al., 2022; Iriani et al., 2015).

DPK refers to funds collected from the broader community (Danupranata, 2013: 90). The collection of Third Party Funds (TPF) by Islamic banks in Indonesia has consistently increased from 2015 to 2021. This rise in TPF aligns with the growth in MSME financing. In 2021, the total TPF collected amounted to 536.993 trillion rupiah, which is double the 231.177 trillion rupiah collected in 2015 (SPS, 2022). This trend indicates that Islamic banking serves as a viable alternative for investing the excess liquidity held by the community in Indonesia.

Meanwhile, Non-Performing Financing (NPF) is defined as the percentage of non-performing financing relative to total Islamic banking financing (Wangsawidjaja, 2012: 90). Islamic banks are particularly concerned about the risks associated with non-performing financing, as it can significantly impact their financing performance. The NPF of Islamic banking in Indonesia decreased during the period from 2015 to 2018. However, it increased in 2019 before dropping again in 2020 and 2021 (SPS, 2022). The rise in NPF in 2019 was largely attributed to the COVID-19 pandemic, which severely affected many MSMEs (Hamdan, 2020). Due to restructuring efforts implemented by the banking industry over the past two years, the NPF rate has been substantially reduced (Anto, 2022).

Return on Assets (ROA) is a percentage that indicates how effectively a bank's assets generate profits. It is also used to assess the overall soundness of a bank (Dendawijaya, 2001: 120). The ROA of Islamic banking in Indonesia decreased from 7.23 percent in 2015 to 7.06 percent in 2016. However, from 2017 to 2019, ROA steadily increased from 7 percent to 14 percent. In contrast, during the COVID-19 pandemic in 2020 and 2021, ROA fell again due to the cautious approach of Islamic banks in disbursing financing and the rise in non-performing financing (SPS, 2022).

Furthermore, inflation is defined as a general and continuous increase in the prices of goods (Ambarini, 2015: 201). The inflation rate from 2015 to 2021 ranged from 1 to 3 percent, categorizing it as mild inflation. The inflation rate during 2020 and 2021, coinciding with the COVID-19 pandemic, was the lowest recorded. This low level of inflation indicates weak purchasing power and sluggish business activities within the community (Wahid, 2020).

Lastly, Bank Indonesia Syariah Certificates (SBIS) are monetary instruments used by Indonesia's central bank to stabilize the monetary base and control the amount of money in circulation (Wahid et al., 2020). In addition, the central bank uses SBIS to manage the liquidity of Islamic banks by adjusting the SBIS rate of return. The SBIS reward rates in Indonesia have fluctuated and generally declined from 2015 to 2021. From 2015 to 2017, the rate of return for SBIS was 7 percent, which decreased to 5 percent, but then increased again to 6 percent in 2018. However, from 2019 to 2021, the SBIS reward rate fell again to between 3 and 5 percent (SPS, 2022).

Research on the influence of internal and external factors on MSME financing has been conducted by several researchers, yielding varied results. Destiana (2016) and Aziz et al. (2021) demonstrated that Third Party Funds (DPK) significantly impact the ability of banking institutions to provide financial support for MSMEs. In contrast, Lestari et al. (2020) found that DPK has a very weak influence on MSME financing. Similarly, Zaimsyah et al. (2020) and Aziz et al. (2021) confirmed that Non-Performing Financing (NPF) significantly affects the volume of MSME financing, while Destiana (2016) and Lestari et al. (2020) disagreed with this finding. The internal factor of Return on Assets (ROA) also showed conflicting results; Lestari et al. (2020) found a strong influence of ROA on MSME financing, whereas Destiana (2016) and Zaimsyah et al. (2020) did not observe the same effect.

Similarly, previous studies have reported contradictory findings regarding the impact of external factors on MSME financing. Zaimsyah et al. (2020), Lestari et al. (2020), and Aziz et al. (2021) established that inflation affects MSME financing. However, Dahlan (2014), Dahlan et al. (2015), and Lestari et al. (2021) reached different conclusions, stating that inflation does not influence MSME financing. Finally, Qolby (2013), Dahlan (2014), Dahlan et al. (2015), and Aziz et al. (2021) confirmed that Bank Indonesia Syariah Certificates (SBIS) impact MSME financing. Conversely, Dyatama et al. (2015) found that investments in SBIS did not significantly affect MSME financing.

Given these discrepancies and the identified research gaps regarding the influence of internal and external factors on MSME financing, the researchers are interested in conducting more in-depth studies on the relationship between these factors and MSME financing by Islamic banks, particularly before and during the COVID-19 pandemic.

2. Literature Review

2.1 Islamic Banks

Islamic banks are financial institutions that operate in accordance with Islamic law. Unlike conventional banks, they do not charge or pay interest; instead, they engage in profit and loss sharing (Abdul-Rahman et al., 2014). The returns received or paid to customers are determined by the terms of the contract between the two parties (Ismail, 2011: 32).

According to Law Number 21 of 2008, an Islamic bank is defined as a bank that conducts business operations in compliance with Islamic principles, as outlined in the fatwa issued by the Indonesian Ulama Council. Islamic banking encompasses all aspects related to Islamic banks and sharia business units, including institutions, business activities, methods, and processes involved in their operations (Article 1).

Sharia Commercial Banks (BUS) are Islamic banks that operate independently, as specified in their establishment deeds, and are not under the coordination of conventional banks. This independence allows them to maintain separate activities and reporting from their parent banks. In contrast, the Sharia Business Unit (UUS) is a division within the head office of a conventional bank that conducts business activities based on sharia principles. Additionally, UUS can refer to a division within a branch office of a foreign bank that engages in conventional business activities while serving as the main office for the sharia sub-branch or sharia unit (Ismail, 2011: 51-53).

2.1 MSME Financing

According to Law No. 10 of 1998 concerning Banking, Article 1 (12), financing is defined as the provision of money or equivalent instruments based on an agreement between the bank and the parties receiving the financing, with the expectation that the money or instruments will be returned after a specified period, along with compensation or profit sharing. Ismail (2011:105) further explains that financing involves the distribution of funds by Islamic banks to other parties in accordance with sharia principles and based on mutual trust.

Micro, Small, and Medium Enterprises (MSMEs) are defined as small-scale economic activities that meet specific criteria regarding net worth, annual sales, and ownership as outlined in the law (Hamdani, 2020:1). From the definitions of financing and MSMEs, it can be concluded that MSME financing refers to the funds provided by Islamic banks to independent businesses managed by the community or business entities that are not affiliated with large corporations, and that meet the relevant legal criteria. According to Sharia Banking Statistics (SPS, 2022), MSME financing is exclusively allocated for investment and working capital purposes, rather than for consumption, as it is intended for businesses rather than individual owners.

2.2 Internal factors

Internal factors affecting MSME financing include the financial management practices of Islamic banks. This encompasses various aspects of management, such as general management, marketing management, human resource management, operational management, financial management, and risk management. Specifically, financial management involves the management of fundraising, investment and financing, as well as liquidity management within Islamic banks (Danupranata, 2013:36).

2.2.1 Third-Party Funds (DPK)

Third-Party Funds (DPK) refer to the funds deposited by the public in banks, which can take the form of demand deposits, savings deposits, and time deposits (Bank Indonesia, 2006). For banks, DPK serves as a crucial source of funds that can be utilized for financing activities, placements with other banks, and other purposes. Given that DPK is a primary source of financing, it is believed to significantly impact MSME financing. Islamic banks gather deposits from the public through demand deposits, savings, and time deposits, utilizing sharia-compliant contracts such as wadiah and mudharabah (Wangsawidjaya, 2012).

2.2.2 Non-Performance Financing (NPF)

Non-Performing Financing (NPF) is defined as the percentage of non-performing financing relative to the total financing provided by Islamic banks (Wangsawidjaja, 2012: 90). Non-performing financing refers to loans that exhibit substandard collectability, are doubtful, or are classified as losses (Dendawijaya, 2001: 86). NPF reflects the rate of credit repayment from depositors to the bank; in other words, it indicates the level of bad debts within the bank. NPF is calculated by determining the ratio of non-current financing to total financing. A lower NPF indicates a higher profitability for the bank, while a higher NPF level suggests potential losses due to increased bad credit (Margaretha, 2007).

$$NPF = \frac{\text{Non-Current Funding}}{\text{Total Financing}} \times 100\%$$

2.5 Return On Assets

Profitability is a crucial indicator for assessing a bank's performance (Nuriyah, 2018). Return on Assets (ROA) is calculated as the percentage of profit relative to total assets. It serves as one of the key metrics for measuring a bank's profitability, reflecting the level of profit generated from all the funds held by the bank. ROA assesses the effectiveness of bank management in generating overall profit. A higher ROA indicates a greater level of profit achieved and signifies a better position for the bank in terms of asset utilization. The ROA figure is a vital indicator of the health of the banking sector, with improved health enhancing the bank's capacity to provide financing (Dendawijaya, 2001: 120).

ROA compares earnings to total assets and can be calculated using the following formula (Bank Indonesia, 2006):

$$ROA = \frac{\text{Profit After Tax}}{\text{Total Assets}} \times 100\%$$

2.6 External Factors

Factors originating from outside that affect MSME financing include macroeconomic indicators. Key macroeconomic benchmarks used to measure economic performance are GDP, national income, national product, employment, inflation, and the balance of payments or foreign exchange (Prasetyo, 2009:5-6).

2.6.1 Inflation

Inflation is characterized by a general and continuous rise in prices (Ambarini, 2015: 201; Perdana, 2018: 136). Based on its severity, inflation can be classified into several categories: mild inflation (below 10%), moderate inflation (10-30%), severe inflation (30%-100%), and hyperinflation (over 100%) (Ambarini, 2015:202).

Inflation impacts individuals and economic activities, with the effects varying according to its severity. Controlled inflation can positively influence the economy by stimulating economic activity, increasing production enthusiasm, and creating new job opportunities. Entrepreneurs may take advantage of rising prices to invest, produce, and engage in transactions involving goods and services.

Conversely, high levels of inflation can have detrimental effects on the economy, particularly concerning the prosperity of the populace. It can negatively impact income distribution and production. Inflation tends to encourage speculation, raises interest rates, reduces investment, creates uncertainty about future economic conditions, and exacerbates balance of payments issues (Ambarini, 2015: 205).

Several policies can be implemented to control and mitigate inflation, one of which is monetary policy. Monetary policy involves actions taken by the central bank to adjust the money supply (Dahlan et al., 2015). According to classical monetary theory, inflation arises from an increase in the money supply. Therefore, controlling the money supply is essential for addressing inflation. When the money supply is excessive, inflation can rise sharply, prompting the central bank to implement policies aimed at reducing the circulation of money. This approach is known as a tight money policy. Conversely, when the

money supply is insufficient, leading to recession and depression, the central bank may adopt a policy of increasing the money supply, referred to as an easy money policy (Ambarini, 2015: 57).

2.6.2 Bank Indonesia Sharia Certificates

According to Bank Indonesia Regulation Number 10/11/PBI/2008, Bank Indonesia Sharia Certificates (SBIS) are short-term securities issued in rupiah currency that adhere to sharia principles (Article 1). SBIS serves as one of the instruments for open market operations aimed at monetary control based on sharia principles (Article 2). As stated in Article 4, SBIS can only be owned by Islamic Commercial Banks (BUS) and Sharia Business Units (UUS). For these entities, SBIS acts as a liquidity facility, a short-term financing option, and provides other necessary resources.

The rate of return on SBIS is governed by Bank Indonesia Circular Letter No. 10/16/DPM of 2008, dated March 31, 2008. Bank Indonesia pays fees for SBIS held by BUS and UUS upon maturity. The calculation of the SBIS rate of return is based on the discount rate of the same term SBI issued concurrently with the SBIS, under the following conditions: *First*, if the SBI auction employs the fixed rate tender method, the SBIS return is set to match the discount rate resulting from the SBI auction. *Second*, if the SBI auction uses the variable rate tender method, the SBIS return is determined to be equal to the weighted average discount rate from the SBI auction results. *Third*,in the absence of an SBI auction, the rate of return provided will refer to the most recent data between the SBIS rate of return and the discount rate of the same term SBI (SE BI No.10/16/DPM/2008) .

3. Research Method

The type of research used in this study is descriptive research with a quantitative approach. Data collection was conducted using the documentation method, where data was obtained from various publicly available and accessible documents. Thus, the data used is secondary data sourced from the official websites of the Financial Services Authority at www.ojk.go.id and Bank Indonesia at www.bi.go.id. The data consists of monthly time series data, totalling 84 data points.

The variables used in this study consist of dependent and independent variables. The dependent variable is MSME financing (PUMKM), while the independent variables include both internal and external factors. The internal factors are Third Party Funds (DPK), Non-Performing Financing (NPF), and Return On Assets (ROA). The external factors consist of inflation (INF) and the rate of return on Sharia Bank Indonesia Certificates (SBIS).

To analyze the data, multiple linear regression analysis is employed using the Ordinary Least Squares (OLS) estimation method. The regression model used is as follows:

$$PUMKM_i = \beta_0 + \beta_1 DPK_i + \beta_2 NPF_i + \beta_3 ROA_i + \beta_4 INF_i + \beta_5 SBIS_i + \varepsilon_i$$

Where:
- $PUMKM_i$ = MSME financing (in billion rupiah)
- β_0 = constant
- β_1-β_5 = regression coefficients
- DPK_i = Third Party Funds (in billion rupiah)
- NPF_i = Non-Performing Financing (in percentage)
- ROA_i = Return On Assets (in percentage)
- INF_i = inflation (in percentage)
- $SBIS_i$ = Sharia Bank Indonesia Certificates (in percentage)
- ε_i = error term

To verify the estimation results, t-tests and F-tests are conducted. The t-test is performed to determine whether the independent variable (X) has a significant partial effect on the dependent variable (Y). This test is conducted by comparing the t-statistical probability value with the critical value at 5% (α=0.05).

Meanwhile, the F-test is conducted to determine whether the independent variables (X) have a significant simultaneous effect on the dependent variable (Y). The F-test is performed by comparing the F-statistic probability value with the critical value at 5% (α=0.05). In addition, to measure the extent to which the independent variable (X) can explain the variation in the dependent variable (Y), or to test the model fit, the coefficient of determination (R^2) test is conducted.

To verify whether the estimation results from the regression model meet classical assumptions, normality tests, heteroscedasticity tests, multicollinearity tests, and autocorrelation tests are performed. The normality test is used to check whether the residuals of the collected data are normally distributed. The normality test employed is the Jarque-Bera (J-B) test. The heteroscedasticity test is conducted to examine the variation of data among individuals in the cross-sectional data. The multicollinearity test aims to assess the existence of linear relationships among the independent variables (X) in the multiple regression model. Finally, the autocorrelation test is intended to examine the correlation between members of a series of observations, or between data at time t and time t-1 (previously). Software employed to multiple regression analysis is EViews.

4. Results and Discussion

4.1. Results

The estimation results obtained after processing the data are as follows:

Table 1: Linear Regression Analysis Estimation

No.	Variable	Coefficient	Std. Error	t stat	Prob
1	C	51339,79	16585,70	3,0955425	0,0027
2	DPK	0,071859	0,019404	3,703315	0,0004
3	NPF	-2172,720	1670,491	-1,300647	0,1972
4	ROA	-285,1230	101,7522	-2,802131	0,0064
5	INF	911,2184	3976276	2,291638	0,0246
6	SBIS	-1492,478	732,8183	-2,036627	0,0451

Source: Processing Data

From the table above, we can derive the equation for the ideal condition (white noise) of the multiple linear regression model as follows:

$$PUMKM\_i = \beta\_0 + \beta\_1\ DPK\_i + \beta\_2\ NPF\_i + \beta\_3\ ROA\_i + \beta\_4\ INF\_i + \beta\_5\ SBIS\_i + \varepsilon\_i$$
$$PUMKM\_i = 51339.79 + 0.071859\ DPK\_i - 2172.720\ NPF\_i - 285.1230\ ROA\_i + 911.2184\ INF\_i - 1492.478\ SBIS\_i + \varepsilon\_i$$

The intercept or constant in the model is 51,339.79, which means that if DPK, NPF, ROA, inflation, and SBIS are all equal to 0, then MSME financing by Islamic banking in Indonesia from 2015 to 2021 would amount to IDR 51.34 trillion. The regression coefficient (β_1) is 0.071859, indicating that if DPK increases by IDR 1 billion while keeping other independent variables constant, MSME financing will increase by IDR 71.859 million. Meanwhile, the regression coefficient (β_2) is -2172.720, meaning that if NPF rises by 1 percent while other independent variables remain constant, MSME financing will decrease by IDR 21.727 trillion.

Similarly, the regression coefficient (β_3) is -285.1230, which indicates that if ROA increases by 1 percent while other independent variables are held constant, MSME financing will decrease by IDR 285.123 million. On the other hand, the regression coefficient (β_4) is 911.2184, suggesting that if monthly inflation rises by 1 percent while other independent variables remain constant, MSME financing will increase by IDR 911.2184 million.

Lastly, the regression coefficient (β_5) is -1492.478, indicating that if the SBIS (the rate of return on SBIS with a 9-month maturity) increases by 1 percent while other independent variables are held constant, MSME financing will decrease by IDR 1.49 trillion.

Based on the **t-Test** results, the probability value for DPK is 0.0027, which is less than α = 0.05, indicating that DPK has a significant positive effect on MSME financing. In contrast, the probability value for NPF is 0.1972, which is greater than α = 0.05, meaning that NPF does not have a significant negative effect on MSME financing. The probability value for ROA is

0.0064, which is less than α = 0.05, indicating that ROA has a significant negative effect on MSME financing. The probability value for inflation is 0.0246, which is less than α = 0.05, suggesting that inflation has a significant positive effect on MSME financing. The probability value for SBIS is 0.0451, which is also less than α = 0.05, indicating that SBIS has a negative effect on MSME financing.

Meanwhile the results of **F-Test** show a probability value for the F-statistic of 0.000000, which is less than α = 0.05, indicating that the independent variables significantly affect the dependent variable simultaneously. The results of F-test align with the high value of $\mathbf{R^2}$ (R square)- 0.878023. This means that the variation in the independent variables (DPK, NPF, ROA, INF, SBIS) explains 87.80% of the variation in the dependent variable (PUMKM). The remaining 12.20% is influenced or explained by other variables outside the model.

To verify whether the estimation results from the regression model meet classical assumptions, normality tests, heteroscedasticity tests, multicollinearity tests, and autocorrelation tests are conducted. The normality test is used to check whether the residuals of the collected data are normally distributed, employing the Jarque-Bera (J-B) test. The heteroscedasticity test examines the variation of data among individuals in the cross-sectional data. The multicollinearity test aims to assess the existence of linear relationships among the independent variables (X) in the multiple regression model. Finally, the autocorrelation test is intended to examine the correlation between members of a series of observations, or between data at time t and time t-1 (previously).

Based on the results of the Jarque-Bera (J-B) normality test, the probability value for Jarque-Bera is 0.000000, indicating that the data does not follow a normal distribution. However, according to empirical experience from several statistical experts, data with a sample size greater than 30 (n > 30) can be assumed to be normally distributed, as it falls under the category of large sample distributions (Basuki, 2016:57).

From the results of the heteroscedasticity test using the White test, the probability value for the chi-square statistic is 0.0841, which is greater than 0.05. Therefore, it can be concluded that the model is free from heteroscedasticity issues and exhibits homoscedasticity.

Based on the results of the multicollinearity test using the Variance Inflation Factor (VIF), it was found that the VIF values for the DPK and NPF variables are greater than 10. This indicates the presence of multicollinearity between these two variables. However, theoretically, there is no direct relationship or collinearity between DPK and NPF, allowing us to disregard the multicollinearity between these two variables. Additionally, even though the model shows signs of multicollinearity, the nearly perfect linear relationship does not alter the properties of the model, which remains Best Linear Unbiased Estimator (BLUE). This property is still valid and can accurately reflect the population conditions within a model, remaining the best among linear estimators (Wahyudi, 2016:140).

Based on Autocorrelation Test, the d-statistic value is 0.675180. Referring to the Durbin-Watson table with n = 84, k = 5, and α = 0.05, we find dL = 1.5219, dU = 1.7732, 4-dL = 2.4781, and 4-dU = 2.2268. Since the value falls within the range of 0 < d-statistic < dL, we can conclude that the model exhibits positive autocorrelation issues. According to Gujarati (2004) and Baltagi (2008), a regression model experiencing autocorrelation will still yield OLS estimators that are unbiased, consistent, and asymptotically normally distributed. However, the model will no longer be considered BLUE due to the minimum variance of the regression residuals. As a result, the t-statistic values may become biased or misleading (Wahyudi, 2016:167).

4.2. Discussion

4.2.1. Impact of DPK on MSME Financing

During the period from 2015 to 2021, DPK had a significant positive impact on MSME financing by Islamic banks in Indonesia. This finding is supported by previous research, including studies by Destiana (2016) and Aziz and Tri (2021), which also indicated that DPK significantly positively affects MSME financing by Islamic banks.

In accordance with its role as a financial intermediary, the primary activities of Islamic banks involve collecting and distributing funds. Islamic banks gather funds from the public in the form of savings, current accounts, and deposits through *Wadiah* and *Mudarabah* contracts. Subsequently, these banks distribute the collected funds as financing through various

Islamic financing schemes such as *Mudarabah*, *Murabaha*, *Musyaraka*, and others. Therefore, DPK significantly influences the financing provided, both for MSMEs and non-MSMEs.

From 2015 to 2021, the growth of DPK collected by Islamic banks showed a consistent increase, rising from IDR 231.177 billion in 2015 to IDR 536.993 billion in 2021. Similarly, MSME financing grew from IDR 50.291 billion in 2015 to IDR 76.009 billion in 2021. During this period, the growth of DPK was directly proportional to the growth of MSME financing. The theory, facts, and research results prove that DPK has a positive relationship and a significant effect on MSME financing by Islamic banks in Indonesia from 2015 to 2021.

4.2.2. The Effect of NPF on MSME Financing

During the period from 2015 to 2021, NPF (Non-Performing Financing) did not have a significant negative effect on MSME financing by Islamic banks in Indonesia. This finding is supported by previous research, including studies by Destiana (2016) and Lestari and Afandi (2020), which also indicated that NPF does not significantly impact MSME financing by Islamic banks. Conversely, this study contradicts earlier research by Zaimsyah and Herianingrum (2020), which found that NPF has a significant negative effect on MSME financing by Islamic banks.

Bank Indonesia, through Regulation No. 15/2/PBI/2013 regarding the Status Determination and Follow-Up Supervision of Conventional Commercial Banks, states that banks with a net NPL (Non-Performing Loan) percentage exceeding 5 percent of their total loans are considered to be at risk of difficulties and require intensive supervision (Article 4). Therefore, if an Islamic bank has an NPF percentage greater than 5 percent, the regulator will require the bank to refrain from accepting new financing, avoid business activities that contribute to NPF, and undertake restructuring efforts for existing financing.

From 2015 to 2021, the NPF of Islamic banks showed a fluctuating but generally declining trend, decreasing from 4.34 percent in 2015 to 2.57 percent in 2021. In contrast, MSME financing tended to increase during this period. As a result, the trend of NPF was inversely related to the trend of MSME financing. The research also yielded a negative slope for the NPF variable coefficient. Theory, empirical evidence, and the results of this study demonstrate that NPF has a negative relationship with MSME financing. However, during the 2015-2021 period, it was found that NPF did not significantly affect MSME financing by Islamic banks. This is because the NPF of Islamic banks during this period did not exceed 5 percent. The relatively low percentage of NPF did not significantly influence the decisions of Islamic banks to disburse MSME financing.

4.2.3. The Effect of ROA on MSME Financing

During the period from 2015 to 2021, ROA (Return on Assets) had a significant negative effect on MSME financing by Islamic banks in Indonesia. This finding is supported by previous research, including studies by Dyatama and Yuliadi (2015) and Abusharbeh (2020), which indicated that ROA has a significant negative impact on financing by Islamic banks. In contrast, this study contradicts the findings of Qolby (2013), which stated that ROA has a significant positive effect on financing by Islamic banks in Indonesia.
From 2015 to 2021, the ROA of Islamic banks in Indonesia showed considerable fluctuations but generally increased, rising from 7.23 percent in 2015 to 10.08 percent in 2021. This trend is directly related to the development of MSME financing. However, the research results indicate a negative coefficient for the ROA variable. The discrepancies between theory, empirical evidence, and research findings suggest a complex relationship.

The negative relationship between ROA and MSME financing is suspected to arise from the fact that the income generated is not solely allocated for MSME financing. Islamic banks are also profit-oriented financial institutions aiming to achieve profits through margins, rents, profit-sharing, and other means. Therefore, to pursue higher profits, Islamic banks tend to expand their investments in more lucrative opportunities, such as corporate financing. The amounts allocated for MSME financing are significantly smaller compared to non-MSME financing, resulting in lower profit margins from MSME financing. Consequently, it can be stated that the profitability of non-MSME financing is higher than that of MSME financing.

This negative relationship is further illustrated by the observation that as ROA for Islamic banks increases, the proportion of MSME financing to total financing decreases. Specifically, from 2015 to 2021, the share of MSME financing as a percentage of total financing was 23.61 percent, 21.99 percent, 20.64 percent, 19.43 percent, 18.68 percent, 18.11 percent, and 18.54 percent, respectively. Thus, it can be concluded that the negative relationship between ROA and MSME financing is driven

by the Islamic banks' orientation toward larger profits, which results in a declining proportion of MSME financing relative to total financing.

4.2.4. The Effect of Inflation on MSME Financing

During the period from 2015 to 2021, inflation had a significant positive effect on MSME financing by Islamic banks in Indonesia. This finding is supported by previous studies, including those by Zaimsyah and Herianingrum (2020) and Aziz and Tri (2021), which also indicated that inflation positively impacts MSME financing by Islamic banks. However, this research contradicts the findings of Anisa and Tripuspitorini (2019) and Abusharbeh (2020), which stated that inflation has a significant negative effect on financing by Islamic banks.

From 2015 to 2021, inflation in Indonesia fluctuated but generally trended downward, decreasing from 3.35 percent in 2015 to 1.87 percent in 2021. This trend is inversely related to the development of MSME financing by Islamic banks. However, the research results indicate a positive coefficient for the inflation variable (INF). The discrepancies between theory, empirical evidence, and research findings highlight the complexity of the relationship between inflation and MSME financing.

The positive relationship between inflation and MSME financing can be observed through the declining proportion of MSME financing relative to total financing. Specifically, from 2015 to 2021, the proportion of MSME financing to total financing was 23.61 percent, 21.99 percent, 20.64 percent, 19.43 percent, 18.68 percent, 18.11 percent, and 18.54 percent, respectively. The decrease in the share of MSME financing corresponds with the decline in inflation rates. This situation indicates that low and decreasing inflation suggests a decline in the purchasing power of the public, which also affects business activities. Given these conditions, Islamic banks are likely to be more cautious in disbursing financing, particularly to MSMEs.

To maintain public purchasing power, the government and Bank Indonesia aim to increase the Money Supply (JUB). The government enhances the JUB by providing subsidies to the public, while Bank Indonesia increases the JUB by implementing an easy money policy, which involves loosening banking liquidity and issuing regulations to facilitate the distribution of financing, both to MSMEs and non-MSMEs.

4.2.5. The Effect of SBIS on MSME Financing

During the period from 2015 to 2021, SBIS (Sukuk Bank Indonesia Syariah) had a significant negative effect on MSME financing by Islamic banks in Indonesia. This finding is supported by previous research, including studies by Dahlan (2014) and Dahlan and Ardiyanto (2015), which indicated that SBIS has a significant negative impact on financing. Additionally, research by Aziz and Tri (2021) also confirmed that SBIS negatively affects MSME financing by Islamic banks.

SBIS is a type of security issued by Bank Indonesia to control monetary policy through Sharia-compliant open market operations. Through the SBIS yield, Bank Indonesia can influence the liquidity levels of Islamic banks. The liquidity of Islamic banks can be measured using the Financing to Deposit Ratio (FDR). The FDR for Islamic banks from 2015 to 2021 was 92.14 percent, 88.78 percent, 85.35 percent, 86.11 percent, 85.27 percent, 82.40 percent, and 76.33 percent, respectively. Despite the declining FDR, the nominal amount of financing, including MSME financing, continued to increase.

From 2015 to 2021, the development of SBIS fluctuated but generally decreased from 7 percent to 3 percent. In contrast, the financing disbursed, particularly MSME financing by Islamic banks, tended to increase. The development of SBIS is inversely related to the development of MSME financing. The research results also show a negative coefficient for the SBIS variable, indicating that an increase in the SBIS yield will reduce MSME financing, as Islamic banks prefer to invest in SBIS. Conversely, a decrease in the SBIS yield will increase MSME financing, as Islamic banks are more inclined to expand in the real sector rather than purchase securities.

It can be concluded that based on theory, empirical evidence, and research findings collectively demonstrate that SBIS has a significant negative impact on MSME financing by Islamic banks in Indonesia.

5. Conclusions

Based on the research findings, it can be concluded that internal factors, namely DPK (Third Party Funds), NPF (Non-Performing Financing), and ROA (Return on Assets), as well as external factors such as inflation and SBIS (Sukuk Bank Indonesia Syariah), significantly influence MSME financing by Islamic banks in Indonesia during the period from 2015 to 2021. Partially, the internal factor DPK has a significant positive effect on MSME financing by Islamic banks in Indonesia during the period from 2015 to 2021. This is closely related to the primary function of banks to collect and distribute funds.

The internal factor NPF does not have a significant negative effect on MSME financing by Islamic banks in Indonesia during the period from 2015 to 2021. The low and declining NPF does not affect the decisions of Islamic banks to disburse financing, including MSME financing. Meanwhile, the internal factor ROA has a significant negative effect on MSME financing by Islamic banks in Indonesia during the period from 2015 to 2021. The negative relationship between ROA and MSME financing is due to the profit-oriented nature of Islamic banks, which leads to a decrease in the proportion of MSME financing relative to total financing.

In addition, the external factor inflation has a significant positive effect on MSME financing by Islamic banks in Indonesia during the period from 2015 to 2021. The positive relationship between inflation and MSME financing occurs because inflation decreased during this period, indicating a decline in purchasing power and sluggish business activities. As a result, Islamic banks are more inclined to consider disbursing financing to MSMEs.

Lastly, the external factor SBIS has a significant negative effect on MSME financing by Islamic banks in Indonesia during the period from 2015 to 2021. A decrease in the SBIS yield will increase MSME financing, as Islamic banks prefer to expand in the real sector rather than invest in SBIS.

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