MACROECONOMIC IMPACT ON NON-PERFORMING FINANCING IN ISLAMIC BANKING IN 2011-2021

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Abstract: This study aims to determine the effect of Gross Domestic Product (GDP), unemployment rate, inflation and debt on non-performing financing in the Middle East, Central Asia, and Indonesia for the 2011-2021 period. This research uses descriptive quantitative research methods. The data used in this study are secondary data with documentation data collection techniques and literature studies sourced from www.imf.org and financial statements. The data analysis technique used is multiple linear regression with Eviews 12 software. The results of this study show that GDP, unemployment rate, and inflation partially have not significant of non-performing financing. Meanwhile, debt has a positive and significant of non-performing financing.

Keywords: GDP, Unemployment Rate, Inflation, Debt, Non-performing Financing

A. INTRODUCTION

In the last ten years, the Islamic banking financial industry has experienced rapid growth. This is evidenced by the increase in 2020, Islamic financial assets globally increased by 14%. Furthermore, it is supported by assets owned by Islamic banks amounting to 24 trillion USD. With the increasing growth rate of Islamic banking, financial experts have a question, whether this has an influence on economic growth in a country. Because a bank with a high level of profitability indicates that the bank has sufficient capital and can help an economy.

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5Ledhem and Mekidiche.
The United States was the mastermind behind the global economic crisis that occurred from 2007 to 2008⁶. This condition causes recession and the world economy towards economic uncertainty or Volatility, Uncertainty, Complexity, Ambiguity (VUCA)⁷ and results in hyperinflation in several countries⁸. This hyperinflation makes it difficult for people to get the goods or services needed, so that people's purchasing power decreases⁹. However, inflation in some countries has decreased slowly¹⁰. The average data on the increase in GDP, unemployment rate, inflation, and debt in Middle Eastern, Central Asian, and Indonesian countries in 2011-2021 are shown in figure 1 below:

**Figure 1. Average Increase in GDP, Unemployment Rate, Inflation, and Debt in the Middle East, Central Asia, and Indonesia**

![Graph showing average increase in GDP, unemployment rate, inflation, and debt from 2011 to 2021 in the Middle East, Central Asia, and Indonesia](image)

*Source: Data processed, 2022*

In 2013, average of GDP, unemployment rate, inflation, and debt in the Middle East, Central Asia, and Indonesia decreased¹¹. GDP decreased by -4.84%, the unemployment rate decreased by 0.14%, inflation decreased by 0.19%, and debt decreased by 0.28%. This condition is contrary to the legal theory of *okun* described by Qomariyah (2013), which says that if the unemployment rate increases, then GDP decreases¹².

At the end of 2019, a new virus called Covid-19 was first discovered in Wuhan, China¹³. With the rapid spread of the virus, the World Health Organization (WHO) is trying to

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⁸Herni Hernawati and Oktaviani Rita Puspasari, “Pengaruh Faktor Makroekonomi terhadap Pembiayaan Bermasalah,” *Journal of Islamic Finance and Accounting* 1, no. 1 (May 17, 2018), hlm. 29–44.
⁹Ekawati Ramadhani and Guntur Kusuma Wardana, “Pengaruh Inflasi, BI 7 Day Repo Rate Dan Nilai Tukar Terhadap Margin Pembiayaan Murabahah Perbankan Syariah,” *Jurnal Masharif Al-Syariah: Jurnal Ekonomi dan Perbankan Syariah* 6, no. 3 (December 6, 2021), hlm. 676–90.
¹¹International Monetary Fund.
overcome this virus, one of which is by closing the area (lockdown)\textsuperscript{14}. This policy is followed by various countries in the world, including Indonesia\textsuperscript{15}, countries in the Middle East\textsuperscript{16} and Central Asia region\textsuperscript{17}. This policy has led to an increase of non-performing financing in banks because many people have lost their jobs \textsuperscript{18}. High unemployment rates\textsuperscript{19} and geopolitical conflicts\textsuperscript{20} are triggers for high non-performing financing. The total non-performing financing in Middle East, Central Asia, and Indonesia countries is shown in the following figure 2:

**Figure 2. Total Non-Performing Financing in the Middle East, Central Asia, and Indonesia**

![Figure 2](image)

*Source: Data processed, 2022*

A bank with a high level of financing risk, indicating that profitability has increased and the ability to disburse funds has decreased\textsuperscript{21}. Based on the data in figure 2, it is explained that the total non-performing financing has increased since the Covid-19 pandemic and geopolitical conflicts. This increase in total non-performing financing lasts until 2021. The highest total non-performing financing occurred in 2021 with a total of $2,506,076,515.72. If


\textsuperscript{18}Noveria and Romdiati.


non-performing financing continues to increase, then the profitability of banks will decrease. Therefore, it is necessary to conduct an in-depth analysis of non-performing loans and how to handle them, this is because it can harm banks, both financially and non-financially.

There are differences in the results of previous studies on the effect of Gross Domestic Product (GDP), unemployment rate, inflation, and debt on non-performing financing. Based on research on the effect of GDP on non-performing financing conducted by Staehr & Uusküla, Arham et al., Li et al., Giammanco et al., Umar & Sun, and Leka et al. concludes that GDP have an impact on non-performing financing. The results of research conducted by Kumar et al., Asmara, Purwaningtyas & Hartono, Lubis & Mulyana, dan Priyadi et al. explaining that GDP not have an impact on non-performing financing.

26Renyu Li, Li Li, and Peijiang Zou, “Credit Risk Shocks and Banking Efficiency: A Study Based On a Bootstrap-DEA Model with Nonperforming Loans as Bad Output,” Journal of Economic Studies 48, no. 1 (December 23, 2020), hlm. 1–19..
29Brikena Leka, Etleva Bajrami, and Ejona Duci, “Key Macroeconomic Drivers on Reducing Non Performing Loans in Albania,” Academic Journal of Interdisciplinary Studies 8, no. 2 (July 1, 2019), hlm. 88–95.
34Unggul Priyadi et al., “Determinants of Credit Risk of Indonesian Shari‘ah Rural Banks,” ISRA International Journal of Islamic Finance 13, no. 3 (December 17, 2021), hlm. 284–301.
Based on research on the effect of the unemployment rate on non-performing financing conducted by Staehr & Uusküla\textsuperscript{35}, Kumar et al.\textsuperscript{36}, and Arham et al.\textsuperscript{37} states that the unemployment rate have an impact on non-performing financing. The result of research conducted by Lubis & Mulyana\textsuperscript{38} and Leka et al.\textsuperscript{39} revealed that the unemployment rate not have an impact on non-performing financing.

Research on the effect of inflation on non-performing financing conducted by Asmara\textsuperscript{40}, Purwaningtyas & Hartono\textsuperscript{41}, Staehr & Uusküla\textsuperscript{42}, and Priyadi et al.\textsuperscript{43} concluded that inflation have a significant impact on non-performing financing. The result of research conducted by Nugrohowati & Bimo\textsuperscript{44}, Leka et al.\textsuperscript{45}, and Kumar et al.\textsuperscript{46} reveals that inflation not have an impact on non-performing financing.

Based on research on the effect of debt on non-performing financing conducted by Ben Saada\textsuperscript{47}, Giammanco et al.\textsuperscript{48}, and Lee et al.\textsuperscript{49} states that debt have an impact on non-performing financing. The result of research conducted by Umar & Sun\textsuperscript{50} explained that debt not have an impact on non-performing financing.

The increase in the level of non-performing financing that occurs in Middle East, Central Asia, and Indonesian countries has increased in recent years. In the Middle East, Central Asia, and Indonesia there is a discrepancy in conditions that occur with the idea of

\textsuperscript{35}Staehr and Uusküla, “Macroeconomic and Macro-Financial Factors as Leading Indicators of Non-Performing Loans.”
\textsuperscript{36}Kumar et al., “Determinants of Non-Performing Loans in Banking Sector in Small Developing Island States.”
\textsuperscript{37}Arham et al., “Impact of Macroeconomic Cyclical Indicators and Country Governance on Bank Non-Performing Loans in Emerging Asia.”
\textsuperscript{38}Lubis and Mulyana, “The Macroeconomic Effects on Non-Performing Loan and Its Implication on Allowance for Impairment Losses.”
\textsuperscript{39}Leka, Bajrami, and Duci, “Key Macroeconomic Drivers on Reducing Non Performing Loans in Albania.”
\textsuperscript{40}Asmara, “Analisis Faktor Internal dan Eksternal terhadap Non Performance Financing (NPF) Perbankan Syariah di Indonesia Periode Tahun 2015 - 2018.”
\textsuperscript{42}Staehr and Uusküla, “Macroeconomic and Macro-Financial Factors as Leading Indicators of Non-Performing Loans.”
\textsuperscript{43}Priyadi et al., “Determinants of Credit Risk of Indonesian Shari’ah Rural Banks.”
\textsuperscript{45}Leka, Bajrami, and Duci, “Key Macroeconomic Drivers on Reducing Non Performing Loans in Albania.”
\textsuperscript{46}Kumar et al., “Determinants of Non-Performing Loans in Banking Sector in Small Developing Island States.”
\textsuperscript{47}Moufida Ben Saada, “The Impact of Control Quality on the Non-Performing Loans of Tunisian Listed Banks,” Managerial Auditing Journal 33, no. 1 (January 19, 2018), hlm. 2–15.
\textsuperscript{48}Giammanco, Gitto, and Ofria, “Government Failures and Non-Performing Loans in Asian Countries.”
\textsuperscript{50}Umar and Sun, “Determinants of Non-Performing Loans in Chinese Banks.”
In addition, there is a research gap in the results of previous research. Therefore, researchers conducted a study entitled Macroeconomic Impact on Non-Performing Financing In Islamic Banking In 2011-2021.

B. METHOD

This research is a type of quantitative research with a descriptive approach. The data used in this study was taken from the website of each Islamic banking which became a sample of the research and the official website of the International Monetary Fund (IMF) https://www.imf.org on the 2011-2021 period. The population in this study consisted of Islamic banks located in the Middle East, Central Asia, and Indonesia regions and won nominations in Islamic Retail Banking (IRBA) with a total of 33 Islamic banks.

This study uses a non-Probability Sampling approach with purposive sampling techniques. The criteria used for sampling are Islamic banks that are members of the Association of Middle East, Central Asian, and Indonesian countries; data on Islamic banks in the Middle East, Central Asia, and Indonesia countries published during the 2011-2021 period; and Islamic banks that provide the data needed by researchers. Based on these criteria, 9 research samples were selected, namely Alinma Bank, Bank Islami Pakistan, Boubyan Bank, Masraf Al-Rayan, Bank Aljazira, UBL Ameen, Al Salam Bank Bahrain, Bank Alfalah Islamic, and Bank BCA Syariah.

The variables used in this study are independent variables and dependent variables. Independent variables consist of Gross Domestic Product (GDP), unemployment rate, inflation, and debt. Meanwhile, the dependent variable is non-performing financing. In this study, researchers used multiple linear regression analysis techniques using Eviews 12 software. This study used multiple linear regression rather than panel data regression because the data used was time series based with annual increases. The multiple linear regression formula used in this study is

\[ Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e \]

Description:
- \( Y \) = non-performing financing
- \( X_1 \) = Gross Domestic Product (GDP)
- \( X_2 \) = Unemployment rate
- \( X_3 \) = Inflation
- \( X_4 \) = Debt
- \( a \) = constant
- \( b \) = regression coefficient
- \( e \) = residue

C. RESULTS AND DISCUSSION

1. Research Result
a. Multiple Linear Regression Test
Table 1. Multiple Linear Regression Test Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>T-test</th>
<th>Significance</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>17.81374</td>
<td>2.100271</td>
<td>0.0897</td>
<td></td>
</tr>
<tr>
<td>GDP</td>
<td>0.130136</td>
<td>0.553712</td>
<td>0.6036</td>
<td>Rejected</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>-1.505474</td>
<td>-0.354635</td>
<td>0.7373</td>
<td>Rejected</td>
</tr>
<tr>
<td>Inflation</td>
<td>0.500302</td>
<td>1.413139</td>
<td>0.2167</td>
<td>Rejected</td>
</tr>
<tr>
<td>Debt</td>
<td>1.478475</td>
<td>2.970990</td>
<td>0.0311</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

R-Square          = 0.870622
Adjusted R²       = 0.767119
F-test            = 8.411605
Significance      = 0.019125

Source: Data processed, 2022

Based on table 1 above which is the result of multiple linear regression tests processed with Eviews 12 software on the variables used in this study, the regression equation can be arranged:

\[ Y = 17.81374 + 0.130136 X_1 - 1.505474 X_2 + 0.500302 X_3 + 1.478475 X_4 \]

Based on the value of the linear regression equation above, it shows that

1) The constant value is 17.81374, which states that independent variables (GDP, unemployment rate, inflation, and debt) are considered constant or zero, then the average non-performing financing in Islamic Banking in Middle Eastern, Central Asian, and Indonesian countries is 17.81374%.

2) The debt regression coefficient is 1.478475, meaning that every 1% increase in debt will increase non-performing financing by 1.478475%.

In the model, researchers only interpret variables that affect non-performing financing and variables that affect is debt variable. Because there is a variable that has a significant effect and there are three variables that not have a significant effect, the variable is not interpreted by researchers.

b. Uji t

The basis for drawing conclusions from the test results is carried out with if the significance level is less than 0.05, then H0 is rejected and Ha is accepted. Whereas if the significance level is more than 0.05, then H0 is accepted and Ha is rejected. Based on table 5, it is described as follows:

1) Variable GDP to Non-Performing Financing

A calculated value on t-test of 0.55 is obtained with a significance value of 0.60 > 0.05. So it can be concluded that the research hypothesis is rejected, which means that GDP has no significant effect on non-performing financing.

2) Variable Unemployment Rate to Non-Performing Financing

A calculated value on t-test of -0.35 was obtained with a significance value of 0.73 > 0.05. So it can be concluded that the research hypothesis is rejected, which means that the unemployment rate has no significant effect on non-performing financing.

3) Variable Inflation to Non-Performing Financing
A calculated value on t-test of 1.41 was obtained with a significance value of 0.21 > 0.05. So it can be concluded that the research hypothesis is rejected, which means that inflation has no significant effect on non-performing financing.

4) Variable Debt to Non-Performing Financing
A calculated value on t-test of 2.97 was obtained with a significance value of 0.03 < 0.05. So it can be concluded that the research hypothesis is accepted, which means that debt has a significant effect on non-performing financing.

2. Research Discussion
a. Gross Domestic Product and Non-Performing Financing
Based on partial testing, it can be concluded that GDP has no effect on non-performing financing. The results of this study are in line with the research conducted by Kumar et al.\textsuperscript{51}, Asmara\textsuperscript{52}, Purwaningtyas & Hartono\textsuperscript{53}, Lubis & Mulyana\textsuperscript{54}, and Priyadi et al.\textsuperscript{55} stating GDP has no impact on non-performing financing.

According to the Regional Economic Outlook report published by www.imf.org\textsuperscript{56} and the results presented by Purwaningtyas & Hartono\textsuperscript{57} said that economic growth in terms of overall expenditure, people spend most of their funds on health and education consumption. Based on this analysis, the size or size of non-performing financing is not affected by the rise or fall of the GDP variable.

b. Unemployment Rate and Non-Performing Financing
Based on partial testing, it can be concluded that the unemployment rate has no effect on non-performing financing. The results of this study are in line with the research conducted by Lubis & Mulyana\textsuperscript{58} and Leka et al.\textsuperscript{59} stating that the unemployment rate has no impact on non-performing financing.

Arham et al.\textsuperscript{60} said that high unemployment rates reflect unstable economic conditions that lead to increased non-performing financing. However, this opinion was refuted
by Lubis & Mulyana. Lubis & Mulyana said that there are groups of people who have incomes beyond the basic salary, so the unemployment rate does not affect non-performing financing. Income beyond the basic salary in question such as the results of investments or micro-enterprises that can help in paying their obligations. So that the high or low unemployment rate has no impact on non-performing financing variable.

c. Inflation and Non-Performing Financing

Based on partial testing, it can be concluded that inflation has no effect on non-performing financing. The results of this study are in line with the research conducted by Nugrohowati & Bimo, Leka et al., and Kumar et al. stating that inflation has no impact on non-performing financing.

Inflation occurs because the amount of money in circulation is greater than the amount of goods or services offered. Therefore, to control it, the central bank will raise interest rates to stabilize economic growth. Inflation in the research period was not as severe as in 1997 and occurred in a short time. Short inflation does not affect significant price changes. Based on this explanation, inflation has an impact on interest rates on bank loans, but does not have an impact on non-performing financing.

d. Debt and Non-Performing Financing

Based on partial testing, it can be concluded that debt affects non-performing financing. The results of this study are in line with the research conducted by Ben Saada, Giammanco et al., and Lee et al. stating that debt has an impact on non-performing financing.

Based on data taken from www.imf.org (2022), the highest debt occurred in 2020 with an increase of 4.73% compared to 2019. This was followed by an increase in total non-performing financing of $455,369,757.69 compared to the previous year. The results of this study are in accordance with the Intermediate financial theory, which states that debt and the
risk of disbursing funds are the main roles of banks that can encourage economic growth\textsuperscript{72}. If debt increases, so non-performing financing will increase. High debt will limit the ability to mitigate the impact of the crisis on banking\textsuperscript{73}. When a financial crisis occurs, in the sense that excessive credit growth will lead to an increase in the level of non-performing financing\textsuperscript{74}. Therefore, the rise or fall of debt affects the variable of non-performing financing.

D. KESIMPULAN

From the results of testing and discussion, it can be concluded that GDP, unemployment rate, and inflation partially do not have a significant effect on non-performing financing. However, debt partially affects non-performing financing. This is in line with research conducted by Kumar et al.\textsuperscript{75}, Asmara\textsuperscript{76}, Purwaningtyas & Hartono\textsuperscript{77}, Lubis & Mulyana\textsuperscript{78}, and Priyadi et al.\textsuperscript{79} stating that GDP has no impact on non-performing financing; Lubis & Mulyana\textsuperscript{80} and Leka et al.\textsuperscript{81} stating that unemployment rate has no impact on non-performing financing; Nugrohowati & Bimo\textsuperscript{82}, Leka et al.\textsuperscript{83}, and Kumar et al.\textsuperscript{84} stating that inflation has no impact on non-performing financing; and Ben Saada\textsuperscript{85}, Giammanco et al.\textsuperscript{86}, and Lee et al.\textsuperscript{87} stating that debt has an impact on non-performing financing.

Non-performing financing is a type of financing that falls into the category of less current, bad, and doubtful. The cause of non-performing financing based on this study is caused by debt. This is caused by the economic crisis that causes an increase in the credit growth rate that occurs in the banking industry.


\textsuperscript{73}Anil Ari, Sophia Chen, and Lev Ratnovski, “The Dynamics of Non-Performing Loans During Banking Crises: A New Database” (International Monetary Fund, 2019).

\textsuperscript{74}Lee et al., “Non-Performing Loans in European Union.”

\textsuperscript{75}Kumar et al., “Determinants of Non-Performing Loans in Banking Sector in Small Developing Island States.”

\textsuperscript{76}Asmara, “Analisis Faktor Internal dan Eksternal terhadap Non Performance Financing (NPF) Perbankan Syariah di Indonesia Periode Tahun 2015 - 2018.”


\textsuperscript{78}Lubis and Mulyana, “The Macroeconomic Effects on Non-Performing Loan and Its Implication on Allowance for Impairment Losses.”

\textsuperscript{79}Priyadi et al., “Determinants of Credit Risk of Indonesian Shari’ah Rural Banks.”

\textsuperscript{80}Lubis and Mulyana, “The Macroeconomic Effects on Non-Performing Loan and Its Implication on Allowance for Impairment Losses.”

\textsuperscript{81}Leka, Bajrami, and Duci, “Key Macroeconomic Drivers on Reducing Non Performing Loans in Albania.”

\textsuperscript{82}Nugrohowati and Bimo, “Analisis pengaruh faktor internal bank dan eksternal terhadap Non-Performing Financing (NPF) pada Bank Perkreditan Rakyat Syariah di Indonesia.”

\textsuperscript{83}Leka, Bajrami, and Duci, “Key Macroeconomic Drivers on Reducing Non Performing Loans in Albania.”

\textsuperscript{84}Kumar et al., “Determinants of Non-Performing Loans in Banking Sector in Small Developing Island States.”

\textsuperscript{85}Ben Saada, “The Impact of Control Quality on the Non-Performing Loans of Tunisian Listed Banks.”

\textsuperscript{86}Giammanco, Gitto, and Ofria, “Government Failures and Non-Performing Loans in Asian Countries.”

\textsuperscript{87}Lee et al., “Non-Performing Loans in European Union.”
This research is far from perfect. Therefore, the researcher advises the next researcher to add other variables as a measuring tool that is considered to affect non-performing financing in Islamic banks. In addition, it can also add a wider range of research objects as well as a longer period of time to get more accurate results.

**E. DAFTAR PUSTAKA**


