How Liquidity, Bank Efficiency, and NPF Ratio Impact on Islamic Commercial Bank Performance During the Covid-19 Pandemic?

Denti Sri Insani¹, *¹

¹ Bandung State of Polytechnic
* Corresponding author. Email: denti.sri.kps17@polban.ac.id

ABSTRACT

The Covid-19 pandemic has had a major impact on the Indonesian economy, including the banking sector. Both Islamic and conventional banks must seek solutions in order to maintain their financial performance. The government is implementing the new normal era as an adaptation phase for all business lines in formulating economic improvement strategies. This study aims to find out how bank liquidity, bank efficiency, and the NPF ratio influence the performance of Islamic commercial banks during the period March 2020 until March 2021. Data were taken from the quarterly financial statements of each bank, processed using the analysis tool E-Views 9. The result shows that bank efficiency and liquidity have a significant effect on the profitability of Islamic commercial banks during the covid-19 pandemic. This research is expected to provide input to Islamic commercial banks in conducting mitigation of their business risk in the era of the covid-19 pandemic.

Keywords: Liquidity, Bank Efficiency, Non-Performing Finance Ratio, Return on Asset.

1. INTRODUCTION

The banking industry, including Islamic banking, serves as an engine of growth for the economy [2]. Indonesian Islamic banking industries, consisting of Islamic Commercial Banks (BUS), Islamic Business Units (UUS), and Islamic Rural Banks (BPRS), continue to show positive growth. Until September 2021, there are 14 BUS, 20 UUS, and 162 BPRS with 6.24% Islamic banking market share and 561 trillion of total assets.

Figure 1. Indonesian Islamic Banking Profitability Ratio

The Covid-19 pandemic has been going on for more than 1 year all over the world. This condition not only creates a health crisis in the community but also has an impact on the economic situation in every country. The Indonesian government’s policy of carrying out large-scale restrictions since April 2020 has hampered production, distribution, and other operational activities. The pandemic has forced people to experience reduced incomes and lose their jobs. Based on statistical data from BPS at the end of 2020, the poverty-rate in Indonesia reached 10%. As one of the sectors affected by the Covid-19 pandemic, the Indonesian banking industry faces various possible risks including liquidity risk, non-performing financing risk, and market risk. Therefore, banks need to implement effective risk management in facing a diversity of risk [1].

Nowadays, Islamic banking is entering a transition phase towards the new normal era. Some permanent changes are needed in bank operational practices, business models, and the way customers transact. Changes in customer behavior are marked by the increasing use of mobile payments and shopping activities using online platforms. The bank seeks to accelerate with digital capabilities for various banking
services. Thus, the purpose of this research is to analyze the impact of Bank Efficiency, Liquidity, and NPF ratio on Islamic Commercial bank performance during the Covid-19 pandemic.

2. LITERATURE REVIEW

2.1 Bank Performance

The performance of a bank can be considered as an achievement in its operational activities which involve various aspects such as financial, marketing, fundraising, information technology, and human resources. Financial performance is part of the overall performance of the bank that needs to be evaluated in order to determine the right rational decision in the company. ROA (Return on Assets) is one of the indicators to measure the banking financial performance, both Conventional Bank and Islamic Bank [3]. This ratio shows how well the company uses its assets to generate profit [4]. [5][6] use ROA as a performance measurement on profitability.

2.2 Liquidity

Each company, including Islamic Bank, has a different level of liquidity that can be described by number. The level of liquidity is not the only way for companies to meet their financial obligation but also provides great benefit for a company in running its business. Islamic banks have to maintain liquidity ratios by minimizing idle funds and increasing income with the smallest possible risk to meet cash flow needs. Several empirical literature has analyzed the relationship between liquidity and profitability. [7] report a result study of Commercial Bank in Asia that shows how liquidity gives a positive effect on profitability. [8] find that liquidity will be significant and positive on profitability when ROA (Return on Assets) is used as a measurement indicator. [9] opine in their paper while using NIM (Net Interest Margin) as a measurement indicator, the result shows a positive relationship of liquidity and financial performance (profitability).

The first proposed hypothesis is:

H1: Liquidity has a positive impact on Islamic Bank Performance.

2.3 Non-Performing Financing

Because of its “bad effect” on economic growth, non-performing financing is described as “financial pollution” [10]. NPF creates uncertain results on bank financing that finally affect aggregate demand and investment [11]. An increasing share of NPF in the bank financing portfolio indicates a greater risk that affects both bank liquidity and profitability [12]. The greater the size of non-performing financing, the greater the number of reserve funds that must be provided. Banks should manage and change their financing increase policies to have a lower ratio of Non-Performing Financing. Several empirical results represent a correlation between NPF (Non-Performing Financing) and profitability. [13] report that Non-Performing Finance (NPF) has a negative and significantly related to profitability at Bangladesh Banking Sector.

The second proposed hypothesis is:

H2: Non-Performing Financing has a negative impact on Islamic Bank Performance.

2.4 Bank Efficiency

Bank efficiency measures how well a bank performs compared to other banks that produce the same output with the same environmental condition [14]. Based on theory, we cannot predict whether Islamic banks should be more efficient than conventional banks. Indonesian banking history records that compared to Islamic Bank which was just existed in 1992, conventional banks have a wider network and larger assets. In addition, the age of Islamic banks that is younger than the conventional ones may imply a higher cost structure. The banking literature has described the relationship between efficiency and banking performance. First, [15] find that responding to regulatory and market pressure, most banks increase their level of capital through efficiency. [16] explain that Commercial Banks have a greater opportunity to raise their profitability by raising their efficiency standard. Using a sample of Chinese Banks, [17] find a negative and significant correlation between efficiency and profitability. The study in South African banking releases that Return on Assets (ROA), which is a proxy for profitability, is related to bank efficiency [18].

The third proposed hypothesis is:

H3: Bank Efficiency has a negative impact on Islamic Bank Performance.

2.5 Framework

The construction model used in this study is as follows:

Figure 2 Conceptual Framework
3. METHODOLOGY

This research is quantitative with a descriptive approach that used secondary data. The data were obtained from the financial reports of 13 Indonesian Islamic commercial banks. The research took place since the Covid-19 pandemic began in March 2020 until March 2021. The total observations used were 65 observations. The panel data analysis employed the Eviews 9 software application to find out the regression among liquidity (FDR), bank efficiency (BOPO), and non-performing financing (NPF) ratio on profitability ratio (ROA). The equation model for panel regression is:

\[ Y_{it} = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \epsilon \]

\[ Y_{it} = \text{Return On Assets (ROA)} \]
\[ \alpha = \text{Constanta} \]
\[ X_{1it} = \text{Liquidity ratio (FDR)} \]
\[ X_{2it} = \text{Bank efficiency (BOPO)} \]
\[ X_{3it} = \text{Non-Performing Financing ratio (NPF)} \]
\[ \beta_1...\beta_3 = \text{regression coefficient} \]
\[ \epsilon = \text{Standard error} \]

4. RESULTS

Table 1. Statistic Descriptive

| Variable | Mean | Std Deviation | Min | Max |
|----------|------|---------------|-----|-----|
| ROA      | 1.55 | 2.43          | 0.01| 13.58|
| BOPO     | 88.21| 10.03         | 54.85| 100.20|
| FDR      | 88.52| 26.77         | 58.92| 196.73|
| NPF      | 1.93 | 1.61          | 0.00| 4.98|

Table 2. Partial Hypothesis Test Result

| Var   | Coeff  | Standard Error | T-stat | Probability |
|-------|--------|----------------|--------|-------------|
| FDR   | 0.015231| 0.006378      | 2.387832| 0.0201     |
| NPF   | 0.162150| 0.112849      | 1.436871| 0.1559     |
| BOPO  | -0.240545| 0.018676     | 12.87965| 0.0000     |
| C     | 20.88960| 1.520727     | 13.73659| 0.0000     |

Based on the results of panel data analysis presented in Table 2, the Non-Performing Financing ratio has a positive relationship but does not significantly affect Return on Assets (ROA) with a probability of 0.1559 > 0.05. A negative and significant relationship is found between bank efficiency and Return on Assets (ROA) with a probability of 0.0000 < 0.05. The liquidity shows a positive and significant impact on ROA with a probability of 0.0201 < 0.05.

Table 3. Simultaneous Hypothesis Test Result

| Weighted Statistic | Squared     | Dependent Variable |
|--------------------|-------------|--------------------|
| R Squared          | 0.783976   | Mean Dependent Variable | 1.553385 |
| Adj R              | 0.773362   | S.D                | 2.431188 |

The output in Table 3 shows that the amounts of Adjusted R-square which is closer to one describe how good the purpose model is. The summary of hypotheses results confirms that during the covid-19 pandemic, liquidity, bank efficiency, and NPF ratio impact the performance of Islamic commercial banks by 78.39%. It is measured by the value of R-squared in Table 1 which reaches 78.39%. Another 21.61% describes the other independent variable that influences the performance of Islamic commercial banks but is not included in this model.

The empirical findings for the correlation between liquidity (FDR) and ROA in Table 1 show that liquidity statistically has a positive and significant impact on Islamic bank performance. It is consistent with the previous research by [8] but contradicts the suggestion of [19] who confirm that liquidity gives a negative and significant impact on ROA. The result of the study indicates that the good reputation of Islamic banks is shown by how well the banks manage their liquidity. Increasing bank’s liquidity due to customer’s trust in saving their funds will encourage the bank’s business, so the profit can be created. If the result of the study states that FDR is directly and significantly proportional to the increase of profitability, it means that Islamic Bank financing is channeled optimally through productive or consumptive financing. Conversely, if the FDR value is low, it indicates that the Islamic Bank is not optimal in channeling financing so that the bank must pay more for the cost of the fund.

The findings of this study regarding the negative and significant effect of bank efficiency on ROA are in line with [20] and [21]. The large operating cost ratio (BOPO) can be interpreted as a decrease in Islamic Bank’s efficiency. During the covid-19 pandemic, banks shifted transaction patterns from the physical-economic into virtual economic. It supports banking efficiency in terms of infrastructure utilization. Reducing operating costs due to the digitalization of banking services is one of the ways to increase profit.

The different finding in this study is the positive and insignificant effect of Non-Performing Financing on the Islamic Bank Performance, where other researchers find a negative effect of the relationship, such as [13]. Responding to the crisis, the banking sector focuses on crucial performance indicators including payment deferral debtor’s obligation that affects liquidity, the increasing of application surcharge Covid-19 protocol, and the decreasing of financing volume with a more selective process. To reduce the impact of the pandemic,
the government has issued various regulations and policies to build a rapid economic recovery. One of the policies in the banking sector is the provision of financing restructuring. This regulation not only benefits the debtors but also gives a positive contribution to the creditors. Restructuring can reduce the risk of non-performing finance which can disrupt bank performance and stability.

5. CONCLUSION

This paper investigates the impact of liquidity, bank efficiency, and NPF ratio on Islamic commercial bank performance during the covid-19 pandemic. The study uses a sample of Indonesian Islamic Commercial Banks over the first year of the covid-19 pandemic (March 2020 – March 2021). The result shows that liquidity and bank efficiency have a positive and significant relationship with bank performance measured by ROA.

The study proposes an emphasis on bank efficiency ratio to increase the profitability of Islamic commercial banks. Based on statistical data obtained from the Financial Service Authority (OJK), labor cost, asset impairment loss, and other operational costs have a large portion of the component of Islamic Bank expenses. Related to this, the author believes that bank management needs to improve the policy to reduce the operational cost component. For example, labor cost efficiency is addressed by switching low-cost distribution channels based on electronic or digital. It means that the management of Islamic banks needs to change the work pattern from the branch banking system to the digital banking system.

The author finds a significant contribution of the finance to deposit ratio (FDR) to profitability. In relation to the expansion of financing as one of the core businesses of Islamic banks, the management is expected to optimize the distribution of financing. It is not only to increase profits but also to bridge the public's need for Islamic banking products which are currently accommodated by conventional banks.

REFERENCES

[1] Saiful and D. Puspita ayu, “Risks Management and Bank Performance: The Empirical Evidences from Indonesian Conventional and Islamic Banks,” Int. J. Econ. Financ. Issues, vol. 9, no. 4, 2019, [Online]. Available: https://booksc.org/book/76072269/6f3899.

[2] H. Rasheed and D. Siddiqui, “A Comparative Analysis of Non-Performing Financing in Islamic and Conventional Banks of Pakistan,” SSRN sElectron. J., Jan. 2019, doi: 10.2139/ssrn.3382162.

[3] W. W. ElKelish and J. Tucker, “Property rights institutions and bank performance across countries,” Manag. Financ., vol. 41, no. 1, 2015, doi: 10.1108/MF-10-2013-0288.

[4] F. Sufian and M. S. Habibullah, “Does economic freedom fosters banks’ performance? Panel evidence from Malaysia,” J. Contemp. Account. Econ., vol. 6, no. 2, 2010, doi: 10.1016/j.jcae.2010.09.003.

[5] T. Nawaz and R. Haniffa, “Determinants of financial performance of Islamic banks: an intellectual capital perspective,” J. Islam. Account. Bus. Res., vol. 8, no. 2, 2017, doi: 10.1108/JIABR-06-2016-0071.

[6] S. A. S. Al-Nasser Mohammed and D. Joriah Muhammed, “Financial crisis, legal origin, economic status and multi-bank performance indicators,” J. Appl. Account. Res., vol. 18, no. 2, 2017, doi: 10.1108/jaar-07-2014-0065.

[7] F. Abbas, S. Iqbal, and B. Aziz, “The impact of bank capital, bank liquidity and credit risk on profitability in postcrisis period: A comparative study of US and Asia The impact of bank capital, bank liquidity and credit risk on profitability in postcrisis period: A comparative study of,” Cogent Econ. Financ., vol. 5, 2017, doi: 10.1080/23322039.2019.1605683.

[8] Y. Tan, C. Floros, and J. Anchor, “Review of Accounting and Finance The profitability of Chinese banks: impacts of risk, competition and efficiency,” Financ. J. Financ. Report. Account. J. Econ. Stud. Univ. Utara Malaysia, vol. 1633, no. 06, 2016.

[9] M. S. Islam and S. I. Nishiyama, “The determinants of bank net interest margins: A panel evidence from South Asian countries,” Res. Int. Bus. Financ., vol. 37, pp. 501–514, May 2016, doi: 10.1016/J.RIBAF.2016.01.024.

[10] L. Barseghyan, “Non-performing loans, prospective bailouts, and Japan’s slowdown,” J. Monet. Econ., vol. 57, no. 7, pp. 873–890, Oct. 2010, doi: 10.1016/J.JMONECO.2010.08.002.

[11] M. Umar and G. Sun, “Determinants of non-performing loans in Chinese banks,” J. Asia Bus. Stud., vol. 12, no. 3, pp. 273–289, Jan. 2018, doi: 10.1108/JABS-01-2016-0005.

[12] A. Ghosh, “Banking-industry specific and regional economic determinants of non-performing loans: Evidence from US states,” J. Financ. Stab., vol. 20, pp. 93–104, Oct. 2015, doi: 10.1016/j.jfs.2015.08.004.

[13] R. Akter and J. Kumar, “The Impacts of Non-
Performing Loan on Profitability: An Empirical Study on Banking Sector of Dhaka Stock Exchange,” *Int. J. Econ. Financ.*, vol. 9, no. 3, 2017, doi: 10.5539/ijef.v9n3p126.

[14] A. N. Berger, I. Hasan, and M. Zhou, “Bank ownership and efficiency in China: What will happen in the world’s largest nation?,” *J. Bank. Financ.*, vol. 33, no. 1, pp. 113–130, Jan. 2009, doi: 10.1016/J.JBANKFIN.2007.05.016.

[15] D. Sharma and A. K. Sharma, “Influence of turbulent macroeconomic environment on productivity change of banking sector: empirical evidence from India,” *Glob. Bus. Rev.*, vol. 16, no. 3, 2015, doi: 10.1177/0972150915569932.

[16] A. García-Herrero, S. Gavilá, and D. Santabárbara, “What explains the low profitability of Chinese banks?,” *J. Bank. Financ.*, vol. 33, no. 11, pp. 2080–2092, Nov. 2009, doi: 10.1016/J.JBANKFIN.2009.05.005.

[17] Y. Tan, “The impacts of risk and competition on bank profitability in China,” *J. Int. Financ. Mark. Institutions Money*, vol. 40, pp. 85–110, Jan. 2016, doi: 10.1016/J.INTFIN.2015.09.003.

[18] M. Kupukile and N. Mthuli, “Competition and Efficiency in the Banking Sector in South Africa,” *African Dev. Rev.*, vol. 23, no. 1, p. 12, 2011, doi: 10.1111/j.1467-8268.2010.00268.x.

[19] A. Derbali, “Determinants of the performance of Moroccan banks,” *J. Bus. Socio-economic Dev.*, vol. 1, no. 1, pp. 102–117, Jan. 2021, doi: 10.1108/JBSED-01-2021-0003.

[20] M. T. M. Garcia and J. P. S. M. Guerreiro, “Internal and external determinants of banks’ profitability,” *J. Econ. Stud.*, vol. 43, no. 1, pp. 90–107, Jan. 2016, doi: 10.1108/JES-09-2014-0166.

[21] Y. Tan, C. Floros, and J. Anchor, “The profitability of Chinese banks: impacts of risk, competition and efficiency,” *Rev. Account. Financ.*, vol. 16, no. 1, pp. 86–105, Jan. 2017, doi: 10.1108/RAF-05-2015-0072.