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Comparison of Financial Ratios Before and During the COVID-19 Pandemic in Islamic Banking in Indonesia

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A B S T R A C T

The COVID-19 pandemic has not only changed the global economic landscape but also forced Islamic banks to reevaluate their strategies, operations and policies. In this context, a comparison of financial ratios before and during the pandemic is very important to identify significant changes that have occurred in Islamic banking performance. This pandemic has forced Islamic banks to review their business strategies. They must consider how to deal with declines in economic activity, changes in consumer behavior, and market fluctuations. This study aimed to compare financial ratios before and during the COVID-19 pandemic on Islamic Banking in Indonesia. This type of research is quantitative research with a descriptive approach. In this study, the sample size was all Islamic commercial banks at core capital adequacy Bank 1 in Indonesia, namely the ratio of operational costs - operational income (BOPO), allowance for impairment losses (CKPN), financing to deposit ratio (FDR), net operating margin (NOM), non-performing financing gross (NPF Gross), net non-performing financing (NPF Netto), return on asset (ROA) and return on equity (ROE) in the period before the COVID-19 pandemic and during the COVID-19 period. There is no difference in the financial performance of Islamic banks as measured by the BOPO, NOM, NPF, and ROE ratios before and during the COVID-19 pandemic. There are differences in the financial performance of Islamic banks as measured by the CKPN, FDR, and ROA ratios before and during the COVID-19 pandemic.

1. Introduction

Islamic banking in Indonesia, like other financial sectors, has experienced significant changes since the emergence of the COVID-19 pandemic. This pandemic has had an unexpected impact on various aspects of life, including the global economy. For Islamic banks, this pandemic has become a test and an opportunity to understand the extent of their resilience and adaptability in facing difficult economic situations. Financial ratios are an important tool for understanding the health and performance of Islamic banking before and during the COVID-19 pandemic. BOPO (operating costs - operating income) measures a bank's operational efficiency. If BOPO increases, this could indicate increased operational costs that may be due to efforts to adapt to the pandemic, such as improving technology infrastructure for digital services. CKPN (reserve for impairment losses) reflects credit risk. The pandemic has caused an increase in credit risk, so a comparison of CKPN before and during the pandemic can help assess the impact. FDR (financing to deposit ratio) measures the level of bank dependence on third-party funds. The pandemic may affect available third-party funds. NOM (net operating margin) measures a bank's net operating margin. The pandemic affected interest margins and operating income. NOM comparison will reveal the impact of the pandemic on margins and profitability. NPF (non-performing financing) measures the quality of bank assets to see changes in the quality of the financing portfolio. ROA (return on assets) measures bank profitability in relation to total assets, while ROE (return on equity) measures profitability in relation to shareholder equity (Antonio, 2001; Banker, 2012; Ihsan, 2020).

The COVID-19 pandemic has not only changed the global economic landscape but also forced Islamic banks to reevaluate their strategies, operations, and policies. In this context, a comparison of financial ratios before and during the pandemic is very important to identify significant changes that have occurred in Islamic banking performance. This pandemic has forced Islamic banks to review their business strategies. They must consider how to deal with declines in economic activity, changes in consumer behavior, and market fluctuations. This could include increasing focus on digital banking services, diversifying the financing portfolio, or increasing collaboration with the real sector. Operational adjustments have become important during the pandemic. Islamic banks must identify ways to run their operations safely in unstable situations. This could include changes in how staff work, the launch of remote banking services, or beefing up cybersecurity to protect customer data. The COVID-19 pandemic has also triggered changes in financial regulations. Islamic banks must understand and comply with these changes and adapt quickly. This could include higher loss reserve requirements, changes in capital requirements, or incentives for banks to support economic recovery. This pandemic has introduced unprecedented risks. Islamic banks need to strengthen their risk management to deal with increased credit risks, liquidity risks, and operational risks associated with the pandemic. Continuous evaluation and improvement in risk management are key. During the pandemic, there has been an increased need for financial inclusion. Islamic banks must look for ways to provide more inclusive financial services and support economically impacted communities. This could mean the development of more affordable and accessible products and services (Damara, 2022; Hakim, 2016; Kozak, 2021). This study aimed to compare financial ratios before and during the COVID-19 pandemic on Islamic Banking in Indonesia.

2. Literature Review

Operating expenses/operating income ratio (BOPO)

Operating expenses are the total costs incurred by the bank to run its daily business. This includes employee salary costs, branch office operational costs, information technology costs, marketing costs, and various other costs required to carry out banking activities. Operating income is the total income earned by a bank from its main operational activities. This includes income from interest, commissions, and other income generated from core banking activities such as granting loans, accepting deposits, and other services. BOPO has great significance because it helps in measuring how efficient a bank is in managing its operational costs in relation to the income generated. A low BOPO usually indicates high efficiency because operational costs are relatively small compared to the income generated. This is a desirable target for most banks. A high BOPO can indicate that the bank is facing problems in controlling its operational costs. This can reduce bank profitability because high costs can eat into revenues (Handoko, 2021; Hari, 2020; Hery, 2019).

Allowance for impairment losses

CKPN is a reserve created by banks to anticipate potential losses that may arise from a decrease in the value of productive assets, especially loans provided to customers. CKPN reflects banks' recognition of the credit risks inherent in their financing portfolios. The main objective of CKPN is to produce financial reports that are accurate and reflect the true value of bank assets. It also helps banks in risk management, identifying potential credit problems, and anticipating their impact on bank finances. CKPN must be recognized in the bank's financial statements as part of their obligations. This reflects the bank's commitment to protecting its shareholders and depositors by anticipating and managing credit risk.

Financing to deposit ratio (FDR)

FDR is a ratio that measures the extent to which a bank uses third-party funds, such as customer deposits, to fund financing and loans provided to customers or other parties. FDR has great significance as it reflects the primary resources used by banks to provide loans. The higher the FDR, the greater the bank's dependence on third-party funds. A low FDR (for example, below 100%) indicates that the bank can fund its financing with funds collected from customer deposits and its own internal funding sources. This can be considered a sign of a bank having a good level of liquidity. A high FDR (for example, above 100%) indicates that the bank is dependent on third-party funds, and this can indicate a liquidity risk if third-party funds are suddenly withdrawn by customers or third parties.

NOM (net operating margin)

Net operating margin (NOM) is a ratio that measures how much net operating margin is generated by a bank. This net operating margin is the difference between the bank's operating income and all its operational costs. NOM is an important indicator in assessing bank operational performance. It reflects the extent to which a bank can generate profits from its primary activities after considering all costs associated with day-to-day operations. A high NOM indicates that a bank has the ability to generate greater profits from its core operations after subtracting operational costs. This is a positive sign and indicates a good level of efficiency in running the business. A low NOM could indicate that the bank is having difficulty generating profits from its core operations or that its operating costs are too high. Banks may need to evaluate and improve their cost management.

Non-performing financing (NPF)

NPF is a term used in Islamic banking to describe financing or loans that no longer generate the income or interest payments expected by the bank. NPF is calculated by identifying financing or loans that have become problematic. Typically, financing or loans are considered problematic if interest or principal payments are late for a certain period of time or if there is doubt about the borrower's ability to repay. A low NPF ratio (for example, below 5% of the financing portfolio) is usually considered a sign of good asset quality. This shows that most of the financing or loans in the bank's portfolio are still paid on time. A high NPF ratio (for example, above 5%) can indicate problems in the bank's financing portfolio. This may be caused by economic factors, a decline in the borrower's business, or other problems that affect the borrower's ability to repay.

Return on assets (ROA)

ROA is a ratio that measures the level of bank profitability by comparing the net profit generated by the bank with the total assets it owns. ROA provides an overview of how efficient a bank is in generating profits from the assets it owns. A high ROA shows that the bank is efficient in generating profits from its assets. This can indicate good management and the bank's ability to maximize profitability. A low ROA may indicate that the bank is facing difficulties in generating profits from its assets. This can be caused by a variety of factors, including high operating costs, high-interest charges, or problems with a poor financing portfolio.

Return on equity (ROE)

ROE is a ratio that measures the level of profitability of a company or bank by comparing the net profit generated with shareholder equity. This gives shareholders an idea of the return on their investment in the form of equity. ROE has great significance because it reflects the extent to which a company is able to generate profits for its shareholders. This is one of the most important performance measures for shareholders and investors. A high ROE shows that the company is efficient in generating profits for its shareholders using the equity they own. This could be considered an indication of good management and strong performance. A low ROE may indicate that the company is having difficulty generating adequate profits for shareholders. This can be caused by various factors, including low net income, high shareholder equity, or problems in the company's financial management.

3. Methods

This type of research is quantitative research with a descriptive approach. In this study, the number of samples was all Islamic commercial banks at Core Capital Adequacy Bank 1, which consisted of 10 banks, namely PT. Bank Aceh Syariah; PT. BPD Nusa Tenggara Barat Syariah; PT. Bank Muamalat Indonesia, Tbk; PT. Bank Victoria Syariah; PT. Bank Jabar Banten Syariah; PT. Bank Mega Syariah; PT. Bank Panin Dubai Syariah, Tbk; PT. Bank Syariah Bukopin; PT. BCA Syariah; PT. Bank Aladin Syariah. The ratio value that will be analyzed is the net value of the 6 quarters (18 months) before the COVID-19 pandemic and 6 quarters (18 months) during the COVID-19 pandemic. The data analysis process in the research is by comparing the financial ratios of Islamic commercial banks with the scope limitations of core capital adequacy banks - 1 in Indonesia, namely the ratio of Operational Costs - Operational Income (BOPO), allowance for impairment losses (CKPN), financing to deposit ratio (FDR), net operating margin (NOM), non-performing financing gross (NPF Gross), net non-performing financing (NPF Netto), return on asset (ROA) and return on equity (ROE) in the period before the COVID-19 pandemic and during the COVID-19 period.

4. Results and Discussion

There are 6 BOPO ratio numbers before and during the COVID-19 pandemic which were used as research samples (N=6), with a mean result before the COVID-19 pandemic of 92.1067 and a mean during the COVID-19 pandemic of 106.3400 means on average, BKMI-1 Islamic banking experienced an increase in costs operational amounted to 15.54% during the COVID-19 pandemic. There are 6 CKPN ratio numbers before and during the COVID-19 pandemic that are used as research samples (N=6), with a mean result before the COVID-19 pandemic of 1.6867 and a mean during the COVID-19 pandemic of 1.6600 means on average, BKMI-1 Islamic banking experienced an improvement in reserves for impairment losses of 1.58% during the COVID-19 pandemic. There are 6 FDR ratio numbers before and during the COVID-19 pandemic that are used as research samples (N=6) with a mean result before the COVID-19 pandemic of 10,973.1233 and a mean during the COVID-19 pandemic of 78.6533 means on average, BKMI-1 Islamic banking experienced an increase in financing distribution allowance with a decrease of 99.28% during the COVID-19 pandemic. There are 6 NOM ratio numbers before and during the COVID-19 pandemic that are used as research samples (N=6), with a mean result before the COVID-19 pandemic of 0.8400 and a mean during the COVID-19 pandemic of 2.4720means on average BKMI-1 Islamic banking experienced an increase in net income of 194.29% during the COVID 19 pandemic. There are 6 Gross NPF ratio numbers before and during the COVID-19 pandemic that are used as research samples (N=6) with a mean result before the COVID-19 pandemic of 3.0000 and a mean during the COVID-19 pandemic of 3.2367means on average BKMI-1 Islamic banking experienced an improvement in financing quality (Gross) of 7.89% during the COVID-19 pandemic.

Table 1. Description of Islamic Banking financial parameters.

Information	N	Min	Max	Mean	St. Dev
BOPO – Before the COVID-19 pandemic	6	80,03	103,97	92,1067	8,18094
BOPO – During the COVID-19 pandemic	6	87,89	140,11	106,3400	18,14371
CKPN-Before the COVID-19 pandemic	6	1,57	1,85	1,6867	0,9158
CKPN - During the COVID-19 pandemic	6	1,56	1,82	1,6600	0,9612
FDR – Before the COVID-19 pandemic	6	79,28	50737,28	10973,1233	20081,41671
FDR – During the COVID-19 pandemic	6	69,29	84,17	78,6533	5,58800
NOM – Before the COVID-19 pandemic	6	0,42	1,46	0,8400	0,38190
NOM – During the COVID-19 pandemic	6	0,27	10,30	2,4720	4.39283
NPF Gross – Before the COVID-19 pandemic	6	2,74	3,13	3,0000	0,15697
NPF Gross – During the COVID-19 pandemic	6	2,85	3,51	3,2367	0,23796
NPF Net – Before the COVID-19 pandemic	6	1,77	2,12	1,9933	0,14733
NPF Net – During the COVID-19 pandemic	6	1,28	2,27	1,9133	0,33237
ROA – Before the COVID-19 pandemic	6	0,74	2,24	1,7380	0,58094
ROA – During the COVID-19 pandemic	6	0,23	1,72	1,0240	0,55302
ROE – Before the COVID-19 pandemic	6	3,57	6,28	5,5080	1,11165
ROE – During the COVID-19 pandemic	6	4,59	6,05	5,4240	0,60231

There are 6 Net NPF ratio numbers before and during the COVID-19 pandemic that are used as research samples (N=6), with a mean result before the COVID-19 pandemic of 1.9933 and a mean during the COVID-19 pandemic of 1.9133 means on average, BKMI-1 Islamic banking experienced an improvement in financing quality (Net) of 4.01% during the COVID 19 pandemic. There are 6 ROA ratio numbers before and during the COVID-19 pandemic that are used as research samples (N=6), with a mean result before the COVID-19 pandemic of 1.7380 and a mean during the COVID-19 pandemic of 1.0240 means on average BKMI-1 Islamic banking experienced a decline productivity assets amounted to 41.08% during the COVID 19 pandemic. There are 6 ROE ratio numbers before and during the COVID-19 pandemic that are used as research samples (N=6), with a mean result before the COVID-19 pandemic of 5.5080 and a mean during the COVID-19 pandemic of 5.4240means on average BKMI-1 Islamic banking experienced a decline productivity assets by 1.53% during the COVID 19 pandemic (Muh, 2021; Kolistiawan; 2014; Nguyen, 2021).

Table 2. Paired sample T-test results.

Variables	Significance	Hypothesis
BOPO	0.053 > 0.05 (α)	H0: Accepted
CKPN	0.692 > 0.05 (α)	H0: Accepted
NPF Gross	0.143 > 0.05 (α)	H0: Accepted
NPF Net	0.667 > 0.05 (α)	H0: Accepted
ROA	0.020 < 0.05 (α)	H0: Rejected

Table 3. Wilcoxon signed-rank test results.

Variables	Significance	Hypothesis
FDR	0.028 < 0.05 (α)	H0: Rejected
NOM	0.786 > 0.05 (α)	H0: Accepted
ROE	0.500 > 0.05 (α)	H0: Accepted

Table 4. Hypothesis results.

Hypothesis	Results
H1: There is no difference in the financial performance of Islamic banks as measured by the BOPO ratio before and during the COVID-19 pandemic.	Accepted, there is no difference in the financial performance of Islamic banks as measured by the BOPO ratio before and during the COVID-19 pandemic.
H2: There is no difference in the financial performance of Islamic banks as measured by the CKPN ratio before and during the COVID-19 pandemic.	Accepted, there are differences in the financial performance of Islamic banks as measured by the CKPN ratio before and during the COVID-19 pandemic.
H3: There is no difference in the financial performance of Islamic banks as measured by the FDR ratio before and during the COVID-19 pandemic.	Rejected, there are differences in the financial performance of Islamic banks as measured by the FDR ratio before and during the COVID-19 pandemic.
H4: There is no difference in the financial performance of Islamic banks as measured by the NOM ratio before and during the COVID-19 pandemic.	Accepted, there is no difference in the financial performance of Islamic banks as measured by the NOM ratio before and during the COVID-19 pandemic.
H5: There is no difference in the financial performance of Islamic banks as measured by the Gross NPF ratio before and during the COVID-19 pandemic.	Accepted, there is no difference in the financial performance of Islamic banks as measured by the Gross NPF ratio before and during the COVID-19 pandemic.
H6: There is no difference in the financial performance of Islamic banks as measured by the Net NPF ratio before and during the COVID-19 pandemic.	Accepted, there is no difference in the financial performance of Islamic banks as measured by the Net NPF ratio before and during the COVID-19 pandemic.
H7: There is no difference in the financial performance of Islamic banks as measured by the ROA ratio before and during the Covid-19 pandemic.	Rejected, there are differences in the financial performance of Islamic banks as measured by the ROA ratio before and during the COVID-19 pandemic.
H8: There is no difference in the financial performance of Islamic banks as measured by the ROE ratio before and during the COVID-19 pandemic.	Accepted, there is no difference in the financial performance of Islamic banks as measured by the Net ROE ratio before and during the COVID-19 pandemic.

There is a significant difference in the BKMI - 1 Islamic general banking ratio for FDR before and during the COVID-19 pandemic, while the NOM and ROE ratios do not have a significant difference. This is in line with research, which states that there are significant differences in the NPF, ROA, and BOPO ratios of Islamic Banks before and during the COVID-19 pandemic. Meanwhile, there were no significant differences before or during the COVID-19 pandemic for FDR and ROA of Islamic Banks (Muhammad, 2022; Xiazi, 2022; Xing, 2022).

5. Conclusion

The conclusion based on the research results is that (1) The BOPO ratio before and during the COVID-19 pandemic, with a mean result before the COVID-19 pandemic of 92.1067 and a mean during the COVID-19 pandemic of 106.3400 means that on average, BKMI-1 Islamic banking experienced an increase in operational costs of 15.54% during the COVID 19 pandemic. The BOPO ratio needs attention because > 89% is ranked fifth based on the attachment to Bank Indonesia Circular Letter No. 9/24/DPbs. (2) The CKPN ratio before and during the COVID-19 pandemic, with a mean result before the COVID-19 pandemic of 1.6867 and a mean during the COVID-19 pandemic of 1.6600, means that on average, BKMI-1 Islamic banking experienced an improvement in reserves for impairment losses of 1.58% during the COVID 19 pandemic. (3) The FDR ratio before and during the COVID-19 pandemic with the mean result before the COVID-19 pandemic was 10,973.1233, and the mean during the COVID-19 pandemic was 78.6533, meaning that on average, BKMI-1 Islamic banking experienced an increase in financing distribution allowance of 99.28% during COVID 19 pandemic. The FDR ratio is still in the range of 75% < FDR ≤ 85%, which is ranked 2nd in bank health based on the Attachment to Bank Indonesia Circular Letter No. 9/24/DPbs. (4) The NOM ratio before and during the COVID-19 pandemic, with a mean result before the COVID-19 pandemic of 0.8400 and a mean during the COVID-19 pandemic of 2.4720 means that on average, BKMI-1 Islamic banking experienced an increase in net income of 194.29% during the pandemic COVID 19. The NOM ratio is still in the range of 2% < NOM < 3%, which is ranked 2nd for bank health based on the Attachment to Bank Indonesia Circular Letter No. 9/24/DPbs. (5) The NPF Gross ratio before and during the COVID-19 pandemic used was the mean before the COVID-19 pandemic of 3.0000 and the mean during the COVID-19 pandemic of 3.2367, meaning that on average, BKMI-1 Islamic banking experienced an improvement in financing quality (Gross) of 7.89 % during the COVID 19 pandemic. The NPF Gross ratio is still in the NPF range of ≤ 7%, which is ranked 1st in bank health based on the Attachment to Bank Indonesia Circular Letter No. 9/24/DPbs. (6) The Net NPF ratio before and during the COVID-19 pandemic was used with the mean result before the COVID-19 pandemic being 1.9933 and the mean during the COVID-19 pandemic being 1.9133, meaning that on average, BKMI-1 Islamic banking experienced an improvement in financing quality (Net) of 4.01% during the COVID 19 pandemic. The Net NPF ratio is still in the NPF range of ≤ 7%, which is ranked 1st for bank health based on the Attachment to Bank Indonesia Circular Letter No. 9/24/DPbs. (7) The ROA ratio before and during the COVID-19 pandemic was used with the mean result before the COVID-19 pandemic being 1.7380 and the mean during the COVID-19 pandemic being 1.0240, meaning that on average, BKMI-1 Islamic banking experienced a decline in asset productivity of 41.08% during the COVID 19 pandemic. The ROA ratio is still in the range of 0.5% < ROA ≤ 1.2 5%, which is ranked 3rd in bank health based on the Attachment to Bank Indonesia Circular Letter No. 9/24/DPbs. (8) The ROE ratio before and during the COVID-19 pandemic used with the mean result before the COVID-19 pandemic was 5.5080 and the mean during the COVID-19 pandemic was 5.4240, meaning that on average, BKMI-1 Islamic banking experienced a decline in asset productivity of 1.53% during the COVID-19 pandemic. The ROE ratio needs attention because it is still in the ROE range ≤ 8%, which is ranked 5th in bank health based on the Attachment to Bank Indonesia Circular Letter No. 9/24/DPbs.

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