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Indonesia's Islamic Banking Stability in The Shadow of the Covid-19 Outbreak

Stabilitas Perbankan Syariah Indonesia di Bayang-bayang Wabah Covid-19

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ABSTRACT:

The Covid-19 pandemic that has occurred in the world has harmed economies since 2020, especially Indonesia. Therefore, it is very important to study the impact of this pandemic on the stability of Islamic banking in Indonesia and examine potential signs of post-pandemic recovery. This study examines the stability of Islamic banking in Indonesia. Stability is measured using ROA and Z-score. The data in this study are panel data for Islamic Commercial Banks (BUS) and Islamic Business Units (UUS). The data used is quarterly data for 2016-2020. This study uses the Generalized Method of Moment (GMM). The results of this study are ROA for Assets, CAR, FDR, and Covid-19 do not affect profits. However, NPF and BOPO have a negative effect. Whereas on the Z-score for Assets, CAR FDR has a positive effect. NPF and BOPO harm the stability of Islamic banking, except for Covid-19. Lower efficiency and problematic financing reduce the stability of Islamic banking. In addition, the results of our analysis, based on profitability and financial stability during the quarterly period, Islamic banking was able to survive during the Covid-19 pandemic. This research implies that even though some variables do not significantly affect profits, Islamic banks must still pay attention to other variables, such as ROA, owned assets, CAR, FDR, and Covid-19 which are likely to have a large negative impact on the long term. Apart from that, Islamic banks must also maintain profits and stability to survive and compete with conventional banking amid the Covid-19 pandemic.

Keywords: Generalized Method of Moment, Islamic Bank, Banking Stability, Return on Assets, Z Score

ABSTRAK:

Pandemi Covid-19 yang terjadi di dunia memberikan dampak negatif bagi perekonomian sejak tahun 2020, khususnya Indonesia. Oleh karena itu, sangat penting untuk mengkaji dampak pandemi terhadap stabilitas perbankan syariah di Indonesia dan mengkaji potensi pemulihan pasca pandemi. Penelitian ini mengkaji tentang stabilitas perbankan syariah di Indonesia. Stabilitas diukur menggunakan ROA dan Z-score. Data dalam penelitian ini adalah data panel untuk Bank Umum Syariah (BUS) dan Unit Usaha Syariah (UUS). Data yang digunakan adalah data triwulanan tahun 2016-2020. Penelitian ini menggunakan Generalized Method of Moment (GMM). Hasil penelitian ini adalah ROA untuk Aset, CAR, FDR, dan Covid-19 tidak berpengaruh terhadap keuntungan perbankan syariah. Namun NPF dan BOPO berpengaruh negatif. Sedangkan pada Z-score untuk Aset, CAR FDR berpengaruh positif. NPF dan BOPO berpengaruh negatif terhadap stabilitas perbankan syariah, kecuali Covid-19. Efisiensi yang lebih rendah dan pembiayaan bermasalah mengurangi stabilitas perbankan syariah. Selain itu, hasil analisis, berdasarkan profitabilitas dan stabilitas keuangan selama periode triwulanan, perbankan syariah mampu bertahan selama pandemi. Hasilnya menunjukkan implikasi bahwa meskipun beberapa variabel tidak berpengaruh signifikan terhadap keuntungan, namun Bank Syariah harus tetap memperhatikan variabel lain, seperti ROA, Aset yang dimiliki, CAR, FDR, dan Covid-19 yang kemungkinan akan terjadi dampak negatif yang besar dalam jangka panjang. Selain itu, Bank Syariah juga harus mampu menjaga keuntungan dan stabilitas agar mampu bertahan dan bersaing dengan perbankan konvensional di tengah pandemi.

Kata Kunci: Generalized Method of Moment, Perbankan Islam, Stabilitas Keuangan, Return on Assets, Z Score

I. INTRODUCTION

The Covid-19 pandemic that has occurred throughout the world has had a bad effect on many countries. The effects of this pandemic do not only occur in one sector. The global spread of the Covid-19 virus has forced all sectors, such as health, social, and the economy, to face an unprecedented crisis (Elnahass et al., 2021). Society and government are required to adapt quickly to the changes that occur. These changes occurred in almost all industrial sectors, including Islamic banking which has a strategic role in the economy. This is because the bank function as a financial intermediary institution, namely collecting funds and distributing public funds. This function aims to increase the distribution of growth and maintain the stability of the country's economy. In addition, public trust in banking institutions is also an important value. As a sharia financial institution that has been regulated by Law no. 21 of 2008, Islamic banks must carry out operational activities following sharia principles and fatwas from the Indonesian Ulema Council. This principle includes justice and balance, benefit, and universalism (natural). In addition, in contract transactions, Islamic banking is prohibited for gharar, maysir, and usury.

Law Number 10 of 1998 Article 29 Number 2 states that banks are required to maintain the soundness of banks by the provisions of capital adequacy, asset quality, management quality, liquidity, profitability, solvency, and other aspects related to the bank's business, and are required to carry out business activities. business following the precautionary principle. Indonesia as a Muslim country that has the most Islamic financial institutions in the world feels the same way about the effects of the Covid-19 pandemic. The effects of this shock began to be felt in early March 2020, since the case of media coverage of the Covid-19 virus that began to enter Indonesia. The news of this initial case forced the entire financial industry, including Islamic banking, to make a strategy to stay afloat during the pandemic.

On the other hand, Tahliani (2020) stated that the Islamic banking industry has an important role in people's economic development, contributing to economic transformation in productive, value-added, and inclusive economic activities. During this Covid-19 pandemic, Islamic banking must quickly adapt to design new strategies and innovations, as well as appropriate and careful risk mitigation to survive in an uncertain economic situation.

It seems that the strategy of Islamic banking to survive during the pandemic is quite good compared to conventional banking. This is evidenced by OJK data which states that the growth of loans received in Islamic banking in May 2020 was 10.14%. Then, in terms of assets, it also grew by 9.35% and for Third Party Funds (DPK) it grew by 9.24%. Meanwhile, in conventional banking, credit growth only reached 3.04% and Third Party Funds (DPK) was 8.87%. In addition, the position of asset share in Islamic banking reached 6.05%. Where this condition increased before the Covid-19 pandemic (Maritsa & Widarjono, 2021).

This data illustrates that the performance of Islamic banking in the face of the Covid-19 pandemic looks good. The trust of the people who still save their funds is a positive value for Islamic banking. Good banking performance will have an impact on good and stable economic conditions. But on the other hand, banks still have to be careful in carrying out their operational activities because greater risks could occur due to the impact of Covid-19. Several possible risks will be experienced by Islamic banking such as the risk of non-performing financing, market risk, and financial liquidity risk. These risks will ultimately hinder the performance of Islamic banking to carry out its functions and duties (Ilhami & Thamrin, 2021).

There is a lot of empirical literature that analyzes the performance of Islamic banks. Both the specific factors of Islamic banks (Pravasanti, 2012) and include specific and macroeconomic factors to determine the performance of Islamic banks. (Widarjono, 2020; Maritsa & Widarjono, 2020; Eng, 2013; Mimoun 2019). Several previous studies have also examined Islamic banks in Indonesia. Some of the topics related to the profitability of Islamic banks (Zarrouk et al., 2015; Salike & Ao, 2017; Horobet et al., 2021; Trinugroho et al., 2017; Abbas et al., 2019; Suryani, 2012), bank credit risk sharia (Barzani,

2020; Fakhruddin et al., 2015), and the performance of Islamic banks during the Covid-19 pandemic (Elnahass, 2021; Tahliani, 2020; Ilhami & Thamrin, 2021). The present research examines the commercial achievement of sharia banks in Indonesia before and during the Covid-19 pandemic. Several studies apply ROA to test the performance of Islamic banks. However, ROA does not fully represent the financial performance of Islamic banks. So this study applies two measures in measuring the financial performance of Islamic banks: ROA and Z-score. This study examines Islamic banks by applying the Generalized Method of Moment (GMM) dynamic panel data regression model.

II. LITERATURE REVIEW

Aliyu & Yusof (2016) explain that Islamic banks are financial institutions that are increasingly important in the world. Especially since the economic crisis that occurred, where Islamic banks have become financial institutions that can survive. In several respects, the Islamic banking sector is relatively better than the conventional banking sector. Alqahtani & Mayes (2018) emphasizes Islamic banking on sharing risks, not handling derivatives, and channeling funds more directly to the real economic sector. Specifically, Raouf & Ahmed (2021) states that Islamic banks have a very crucial role in driving a country's economic growth, because every progress and innovation in the banking sector, such as the emergence of the Islamic banking system, will have an impact on the stability of the country's economy and stabilize the banking sector. . alone. Thus, it can be concluded that Islamic Banks have an important role in accelerating the rotation of a country's economic growth activities.

In general, Islamic banks are banks that carry out muamalah activities in an Islamic manner, which refer to the provisions of the Al-Quran and Hadith. The same thing was conveyed by Ben Mimoun (2019) that Islamic banks are financial institutions that have goals and operations that do not include elements that conflict with Islamic principles.

In the last few decades, Islamic banking has continued to experience development, especially in Indonesia. With the development of Islamic banking, Islamic banking has major differences from conventional banking, where the products offered to customers are following Islamic principles (Berger et al., 2019). Therefore, Indonesia began to develop the Islamic financial sector. One of them is the Islamic banking sector. Indonesia's seriousness in developing the Islamic banking sector can be seen from the formulation of regulations in Article 1 paragraph (1) of Law no. 21 concerning Islamic Banks, it is stated that Islamic Banking is all forms of matters relating to Islamic Commercial Banks and Islamic Business Units, covering institutions, business activities, as well as methods and processes in carrying out achievement activities (Rizvi et al., 2020).

Another important thing in a financial institution is the stability of the financial system. Financial system stability is a condition in which the economic mechanisms for setting prices, allocating funds, and managing risks function properly and support economic growth. Good financial system stability will be able to provide benefits and protection from negative shocks, as well as help stabilize and strengthen the financial system (Rashid & Jabeen, 2016). The same thing was conveyed by Bank Indonesia’s financial system stability is a condition that allows the national financial system to function effectively and efficiently, allocate funds and financing on target, and can protect the economy from internal and external factors. To create growth and stability of the national economy that leads to a positive increase.

Financial system stability in Indonesia is not fully controlled by Bank Indonesia, other financial institutions such as the Financial Services Authority (OJK), and several other financial institutions also have an important role in maintaining financial system stability. Therefore, a good cooperative system is needed between Bank Indonesia and other financial institutions.

During the Covid-19 pandemic, the Financial Services Authority (OJK) and Bank Indonesia worked together to build good management and strategies. Able to provide solutions to problems in every banking system in Indonesia. The Covid-19 pandemic can be used as a benchmark for the readiness of banks and other government and private financial institutions to be able to survive and compete in times of crisis that will occur now or in the future. This readiness requires maximum and optimal effort. Planning in the short term and long term must be prepared properly and correctly.

There is a lot of empirical literature that analyzes the performance of Islamic banks. Both specific factors of Islamic banks (Pravasanti, 2012) as well as specific and macroeconomic factors determine the performance of Islamic banks. (Widarjono, 2020; Maritsa & Widarjono, 2020; Eng, 2013; Mimoun 2019). Several previous studies have also examined Islamic banks in Indonesia. Some topics related to the profitability of Islamic banks (Zarrouk et al., 2015; Salike & Ao, 2017; Horobet et al., 2021; Trinugroho et al., 2017; Abbas et al., 2019; Suryani, 2012), bank credit risk sharia (Barzani, 2020; Fakhruddin et al., 2015), and the performance of Islamic banks during the Covid-19 pandemic (Elnahass, 2021; Tahliani, 2020; Ilhami & Thamrin, 2021). The current research examines the financial performance of Islamic banks in Indonesia before and during the Covid-19 pandemic. Several studies apply ROA to test the performance of Islamic banks. However, ROA does not fully represent the financial performance of Islamic banks. So this study applies two measures in measuring the financial performance of Islamic banks: ROA and Z-score. This study examines Islamic banks by applying the Generalized Method of Moment (GMM) dynamic panel data regression model.

Research Hypothesis

Based on the relationship between these variables, the hypothesis variables obtained are as follows:

H1 : Assets have a positive effect on ROA and Z-Score
H2 : CAR has a positive effect on ROA and Z-Score
H3 : NPF has a negative effect on ROA and Z-Score
H4 : FDR has a positive effect on ROA and Z-Score
H5 : BOPO has a negative effect on ROA and Z-Score
H6 : COVID-19 has a negative effect on ROA and Z-Score

III. RESEARCH METHODS

The object of this study uses Islamic bank financial report data which consists of 14 Islamic commercial banks and 12 Islamic business units. Quarterly panel data from 2016 to 2020. This period was chosen as a reference to view financial data for the last five years before and during the Covid-19 pandemic. The data is taken from the financial reports of the Financial Services Authority (OJK) and the financial reports of several banks for Sharia Business Units (UUS).

This application measures the performance of Islamic banks using two measurements, namely the Z-score as a variable measuring financial stability (Widarjono., 2020; Barzani., 2020; Trinugroho et al., 2017; Elnahass; 2021) and Return on Assets (ROA) as a variable for Islamic bank profits (Zarrouk et al., 2015; Widarjono et al., 2020). The Z-score variable is calculated using the formula (ROA + CAR)/STDV(ROA). STDV (ROA) stands for ROA standard deviation. CAR is the amount of bank assets that contain risk. NPF is the low value of the performance of Islamic banks on non-performing financing. FDR is the liquidity of Islamic banks in making payments back to depositors. Operating Costs and Operating Income (BOPO) is the ability of bank management to generate profits generated by Islamic banks. Covid to separate data before the Covid-19 pandemic and after the Covid-19 pandemic.

Table 1. Variable definition and expected sign

Variable	Information	Measurement	Source
Dependent Variable			
ROA	Return On Assets	%	OJK
Z-score	(ROA+CAR) / STDV(ROA)	%	Annual Report, OJK
Independent Variable			
Asset	Total Assets (Rp Trillion) Equity	*log*	Annual Report, OJK
CAR	Capital Adequacy Ratio	%	Annual Report, OJK
NPF	Non Performing Financing	%	OJK
FDR	Financing to Deposit Ratio	%	Annual Report, OJK
BOPO	Operational Efficiency Ratio	%	Annual Report, OJK
Covid	0 = before Covid-19; 1 = after Covid-19	-	

Note: OJK stands for Financial Services Authority, Annual Report is a financial report for Sharia Business Unit (UUS) data

The model used in this study with two equations. The equation model (1) in this study, it can be written in the backsliding equation as follows:

$$ROA_{i,t} = \alpha + \beta_1 ROA_{i,t-1} + \beta_2 \log(Asset)_{i,t} + \beta_3 CAR_{i,t} + \beta_4 NPF_{i,t} + \beta_5 FDR_{i,t} + \beta_6 BOPO_{i,t} + \beta_7 Dummy_{i,t} + \varepsilon_{i,t} \ldots\ldots\ldots (1)$$

The Z-score variable as variable has an influence in short-term and long-term conditions in viewing the stability performance of Islamic banks. Equation (2) in this model can be written as follows:

$$z\,score_{i,t} = \gamma + \theta_1 z\,score_{i,t-1} + \theta_2 log(Asset)_{i,t} + \theta_3 CAR_{i,t} + \theta_4 NPF_{i,t} + \theta_5 FDR_{i,t} + \theta_6 BOPO_{i,t} + \theta_7 Dummy_{i,t} + \varepsilon_{i,t} \ldots\ldots\ldots (2)$$

where :

$ROA_{i,t}$	: Sharia Banking Profit Variables (1)
$z\,score_{i,t}$	: Sharia Banking Stability Performance Variable (2)
α / γ	: constant
$\beta_1 - \beta_7$ / $\theta_1 - \theta_7$	: Long *lag* all variabel
$\log(Asset)_{i,t}$	: Total Assets (Rupiah)
$CAR_{i,t}$	: Rasio Capital Adequacy Ratio (%) at time t and Islamic Bank i
$NPF_{i,t}$	: Rasio Net Performing Financiang (%) at time t and Islamic Bank i
$FDR_{i,t}$	: Rasio Financial to Deposit Ratio (%) at time t and Islamic Bank i
$BOPO_{i,t}$	: Rasio Efisiensi Operasional (%) at time t and Islamic Bank i
$Dummy_{i,t}$	: Separating variables before and during the Covid-19 pandemic 0 = before Covid-19; 1= during Covid-19
$\varepsilon_{i,t}$	: *error term*

The management and calculations of this study used secondary data with dynamic panel model analysis techniques using the Generalized Method of Moment (GMM) method. The analysis technique using the Generalized Method of Moment (GMM) in this research is to measure the magnitude of the influence of Islamic bank internal variables on the profit and stability of Islamic bank performance. This method provides many advantages to the development of panel data models involving the dependent variable.

The Generalized Method of Moment (GMM) method is a method introduced by Peter Hansen and later developed by Arellano and Bond. The Generalized Method of Moment (GMM) can also be a simple alternative when the derivative of the maximum likelihood function is difficult to determine (Youssef & Abonazel, 2014). This was conveyed by Arellano and Bond who suggested that the Generalized Method of Moment (GMM) approach was the right approach to use in dynamic panel research. The Generalized Method of Moment (GMM) approach is used for two reasons. First, the Generalized Method of Moment (GMM) is a common estimator and provides a more useful framework for comparison and assessment. Second, the Generalized Method of Moment (GMM) provides a simple alternative to other estimators, especially for maximum likelihood.

Lubis (2013) said similarly that the approach using the Generalized Method of Moment (GMM) method provides consistent, efficient, and unbiased estimation results. Nonetheless, the Generalized Method of Moment (GMM) approach is an approach that has good estimation results. Blundell and Bond (1998) suggest the Generalized Method of Moment System (Blundell and Bond GMM-System Estimator) which has more efficient estimation results. This is due to the use of additional level information, namely in the form of conditional moments and level instrument variable matrices in addition to the first difference by combining conditional moments and instrument variable matrices (first difference and level).

In the Generalized Method of Moment (GMM) method approach there are two estimation procedures used in estimating dynamic panel models, namely by using First Difference-GMM and System-GMM. First, First Difference-GMM is used to overcome the correlation problem between the lag-dependent variable and the error component. A limited sample can bias the estimation results, especially if the number of observation periods available is relatively small. Blundell & Bond (1998) revealed that the AB-GMM estimator can be constrained by limited sample bias. The existence of limited sample bias can be detected by comparing AB-GMM results with alternative estimators of autoregressive parameters. Pooled least squares will provide an estimate with an upward bias (biased upward) in the presence of individual effects (individual-specific effect). On the other hand, the fixed effect will provide an estimate with a downward bias (biased downward). Furthermore, consistent estimators can be expected among pooled least square or fixed effect estimators. If the AB-GMM estimator is close to or below the fixed effect estimator, then the AB-GMM estimator may be biased downward which can be caused by a weak instrument (Taurif et al., 2014).

Second, System-GMM In small samples, First Difference-GMM may contain imprecise and biased analysis results. In dynamic panel models that have short timeframes, inefficiencies in estimation results can occur in the First Difference-GMM model. So, Blundell and Bond suggest using the Generalized Method of Moment System (Blundell and Bond GMM-System Estimator) which is considered to have a better level of efficiency. Lubis (2013) conveys this because of the additional use of level information, namely in the form of conditional moments and level instrument variable matrices in addition to first difference by combining conditional moments and instrument variable matrices (first difference and level).

The data analysis technique in this study is divided into three analytical test methods, namely, first, the J-statistical test (Sargan Statistics) is a test used to approach detecting problems with the validity of the instrument. The Sargan test can be accepted or declared valid if the p-value in the Sargan statistic which can be calculated using chi-square is greater than 0.05 and vice versa. Second, the Arellano and Bond (AR) test is a test used to test the consistency of estimates obtained from the results of the Generalized Method of Moment (GMM) process. And third, the hypothesis test, or the so-called t-statistic test is a test used to test the effect of the independent variables on the dependent variable. The t-statistic test can be seen by comparing the t-count with the t-table or by looking at the probability value of a significant level, namely 0.05. If the t-count is smaller than the t-table, then H0 is rejected. However, if the t-count is greater than the t-table, then Ha is accepted.

IV. RESULTS AND DISCUSSION

Descriptive statistics for all variables used in this study are presented in Table 2. The average ROA is 1.91% with a standard deviation of 2.90, and the altitude of profitability of sharia banks is almost at the minimum limit of healthy sharia banks, which is 1.5%. The average Z-score is 36.97% and is relatively stable, with a standard deviation of 44.87. Average assets are 15.5 trillion. The CAR of Islamic banks is also almost safe, with a median of 24.56%. This CAR is above the minimum limit, which is 12%. A big CAR reflects that sharia banks can finance operational activities and make a sizeable contribution to profitability. The moderate NPF is 1.89%, with a standard deviation of 2.31, indicating that the level of bad loans in Islamic banks is relatively safe below the maximum limit of 5%.

The average FDR is 100.44% with a standard deviation of 50.82, indicating that the altitude of financing in sharia banks is relatively high. BOPO has an average of 82.79% with a standard deviation of 22.38, the efficiency level of sharia banks is above the minimum ideal ratio, which is 60% - 65%. The Covid variable as a dividing variable for sharia banks, before the Covid-19 pandemic and during the Covid-19 pandemic, had a median f of 0.20 and a standard deviation of 0.40.

Table 2. Descriptive statistics for variables

Variable	Mean	Std. Dev.	Maximum	Minimum
ROA	1.913593	2.900242	17.23000	-11.02000
Z-score	36.97795	44,87082	309,5900	-0.240000
Assets (trillion)	15.5	1.33	18.6	12.4

CAR	24,56618	28.16142	346.4300	0.000000
NPF	1.892500	2.316338	15.46000	0.000000
FDR	100.4413	50.82707	506.0000	0.000000
BOPO	82.79021	22.38976	217.4000	0.000000
COVID	0.202096	0.401864	1.0000000	0.000000

Note: The number of observations is 760 consisting of 26 data banks for the 2016-2020 quarter

To estimate the GMM model, we have to perform the Arellane and Bond (AR) test to test the consistency of the estimation obtained from the results of the GMM process. The results of the Arellane and Bond (AR) test can be seen in table 3. Table 3 demonstrates the results of the Arellane and Bond (AR) test on the ROA variable to analyze the performance of sharia banks in terms of profits and the Z-score variable to analyze the performance of sharia banks based on bank stability sharia.

Table 3 displays the results of GMM estimation for model 1 and model 2. In the first model, Islamic bank-specific variables, namely NPF and BOPO affect ROA at =1%, while ASSET, CAR, FDR, and Covid variables have no impact on ROA.

In the second model, Islamic bank-specific variables such as ASSET, CAR, NPF, FDR, and BOPO affect the Z-score at =1%, while the Covid variable has no impact on the Z-Score. Assets had a positive impact as expected. The higher the Islamic banking assets, the better the stability of Islamic banking performance. CAR has a positive outcome on the Z-score and is following the hypothesis. A good CAR indicates that banks are getting better at dealing with a possible risk of loss and maintaining the stability of the financial system as a whole.

NPF has a negative effect against ROA and Z-score as expected. The increase in bad loans will cause problems for the establishment of Islamic banking. FDR has a positive brunton the Z-score. The low FDR makes Islamic banking unable to carry out its role as a financial intermediary. Meanwhile, the Operational Efficiency Ratio (BOPO) is negative to ROA and Z-score as expected. BOPO is a benchmark to see the effectiveness and management of an Islamic bank in carrying out its operations and duties as a financial institution.

Table 3. GMM estimation results for ROA and Z-Score

Variable	ROA		Variable	Z-score	
	Coefficient	t-Statistic		Coefficient	t-Statistic
ROA (-1)	-0.065165	-2.465181***	**Z-score (-1)**	0.583075	125.3501***
Logs (Assets)	-0.089103	-0.320438	**Logs (Assets)**	3.573585	8.530490***
CAR	0.015041	1.141899	**CAR**	0.309769	24.63963***
NPF	-0.077935	-2.608035***	**NPF**	-0.226629	3.624616***
FDR	0.000588	0.222649	**FDR**	0.042213	12.45472***
BOPO	-0.055287	-8.975986***	**BOPO**	-0.050303	-8.848758***
COVID-19	-226.7605	-0.809620	**COVID-19**	-85.51806	-0.661760***

Sargan Specification Test ROA		**Sargan Specification Test Z-Score**	
J-Statistics	23.88961	**J-Statistics**	28.66073
Prob (J-Statistic)	0.687349	**Prob (J-Statistic)**	0.482835

Notes: ***; **; * stand for significant at =1%, 5% and 10% respectively

The next evaluation is the statistical Sargan test (J-Statistics) using the Sargan Specification Test. Table 3 presents the results of the Sargan Statistics test from the research model. Based on the results of the instrument validity test with the approach *Sargan Specification Test*, it can be concluded that the J-statistic on the dependent variable ROA is 23,88961 with a probability value of 0.687349 where this value is bigger than 0.05. And in J-statistics the dependent variable Z-score is 30,74161 with a probability value of 0.28188 where this value is bigger than 0.05, which means that these two dependent variables are found to have valid conditions of moment or instruments used.

Hypothesis Testing (t-statistics)

The hypothesis test in this research was using the Generalized Method of Moment (GMM) test. The decision to partially test the hypothesis is based on the probability value obtained from the results of data management. The probability value, namely H0 is dismissed and Ha is welcomed if the

significance value is less than 0.05. While Ho is denied and Ha is gotten, if the significance value is greater than 0.05.

Based on the regression results of the influence of Return on Assets, Assets, Capital Adequacy Ratio, Non Performing Financing, Financing to Deposit Ratio, BOPO, and Covid on the benefits and stability of Islamic banking in Indonesia before and during the Covid-19 pandemic can be explained as follows:

- First hypothesis testing

H1 = Assets to profits and stability of Islamic banks

The calculation results show that the coefficient and probability of the Asset variable do not have a significant influence on the profits of Islamic banking before and during the Covid-19 pandemic.

The calculation results show that the asset variable coefficient has a significant positive effect on the stability of Islamic banking before and during the Covid-19 pandemic. This can be seen in table 3 which shows that the probability level of the Asset variable is 0.0000, which is smaller than 0.05, with a coefficient of 3.573585, which means that if Assets increase by 1 unit, the stability of Islamic banking will increase by 3.573585, and vice versa.

- Second hypothesis testing

H2 = Capital Adequacy Ratio to profits and stability of Islamic banks

The calculation results show that the coefficient and probability of the Capital Adequacy Ratio variable do not have a significant effect on Islamic banking profits before and during the Covid-19 pandemic.

The calculation results show that the variable coefficient of the Capital Adequacy Ratio has a significant positive effect on the stability of Islamic banking before and during the Covid-19 pandemic. This can be seen in table 3 which shows that the probability level of the Capital Adequacy Ratio variable is 0.000, which is smaller than 0.05, with a coefficient of 0.309769, which means that if the Capital Adequacy Ratio increases by 1 unit, the stability of Islamic banking will increase by 1 unit. 0.309769, and vice versa.

- Third hypothesis testing

H3 = Non-Performing Financing on the profits and stability of Islamic banks

The calculation results show that the coefficient of the Non Performing Financing variable has a significant negative effect on Islamic banking profits before and during the Covid-19 pandemic. This can be seen in table 3 which shows that the probability level of the Non Performing Financing variable is 0.0003, which is smaller than 0.05, with a coefficient of 0.226629, which means that if Non Performing Financing increases by 1 unit, the stability of Islamic banking will decrease by 1 unit. 0.226629, and vice versa.

The calculation results show that the coefficient of the Non Performing Financing variable has a significant negative effect on Islamic banking profits before and during the Covid-19 pandemic. This can be seen in table 3 which shows that the probability level of the Non Performing Financing variable is 0.0093, which is smaller than 0.05, with a coefficient of 0.077935, which means that if Non Performing Financing increases by 1 unit, the stability of Islamic banking will decrease by 1 unit. 0.077935, and vice versa.

- Fourth hypothesis testing

H4 = Financing to Deposit Ratio on profits and stability of Islamic banks

The calculation results show that the coefficients and probabilities of the Financing to Deposit Ratio variable do not have a significant effect on Islamic banking profits before and during the Covid-19 pandemic.

The calculation results show that the coefficient of the Financing to Deposit Ratio variable has a significant positive effect on the stability of Islamic banking before and during the Covid-19 pandemic. This can be seen in table 3 which shows that the probability level of the Financing to Deposit Ratio variable is 0.0000, which is smaller than 0.05, with a coefficient of 0.042213, which means that if the Financing to Deposit Ratio increases by 1 unit, the stability of Islamic banking will experience an increase of 0.042213 and vice versa.

- Fifth hypothesis testing

H5 = BOPO on the profits and stability of Islamic banks

The calculation results show that the BOPO variable coefficient has a significant negative effect on Islamic banking profits before and during the Covid-19 pandemic. This can be seen in table 3 which shows that the probability level of the BOPO variable is 0.0000, which is smaller than 0.05, with a coefficient of 0.055287, which means that if the BOPO increases by 1 unit, the stability of Islamic banking will decrease by 0.055287, and vice versa.

The calculation results show that the coefficient of the BOPO variable has a significant negative effect on the stability of Islamic banking before and during the Covid-19 pandemic. This can be seen in table 3 which shows that the probability level of the BOPO variable is 0.0000, which is smaller than 0.05, with a coefficient of 0.050303, which means that if the BOPO increases by 1 unit, the stability of Islamic banking will decrease by 0.050303, and vice versa.

- Sixth hypothesis testing

H6 = Covid-19 on the profits and financial stability of Islamic banks

The calculation results show that the coefficient of the Covid-19 variable has no significant effect on Islamic banking profits before and during the Covid-19 pandemic. This can be seen in table 3 which shows that the probability level of the Covid-19 variable is 0.4185 greater than 0.05 with a coefficient of 226.7605.

The calculation results show that the Covid-19 variable coefficient has no significant effect on the stability of Islamic banking before and during the Covid-19 pandemic. This can be seen in table 3 which shows that the probability level of the Covid-19 variable is 0.5084 greater than 0.05 with a coefficient of 85.51806.

Discussion

From the estimation results of the GMM model above, it can be said that several independent variables have no effect on ROA, including assets, CAR, and FDR. In this case, it can be concluded that in carrying out its duties and activities, Islamic banking profits do not affect the assets owned and FDR is used to calculate third party funds channeled for financing activities.

CAR does not affect ROA because banks cannot optimize their capital. CAR is used as an indicator to measure the ability of Islamic banking in the event of a loss in the decline in risky assets (Pravasanti, 2018). On the Z-score, assets and CAR have a significant influence. This indicates that by having high assets and CAR, the stability of Islamic banking performance will be better. So that Islamic banking must pay attention to the system in asset management and CAR so that Islamic banking can carry out its role as a financial institution that can advance the community's economy (Widarjono et al., 2020)

Meanwhile for other internal variables, namely the NPF is negative and significant to the initial hypothesis that the NPF has a significant negative effect on the profits and stability of Islamic banking, where the more problematic financing (NPF), will reduce the profits and stability of Islamic banking. Non-performing loans that occur continuously for Islamic banking will cause potential losses, especially in the long term (Maritsa & Widarjono, 2021).

Similar to FDR which has a significant positive effect. This shows how big the ability of Islamic banking to repay withdrawals made by depositors by using financing as a source of liquidity. In addition, customer confidence in Islamic banking amid the Covid-19 pandemic crisis is quite stable. It is proven by the FDR ratio of Islamic Commercial Banks (BUS) which is still around 80% and Sharia Business Units (UUS) has reached 100%. In this case, Islamic banking FDR is still categorized as good because it does not experience significant changes (Fakhruddial et al., 2015).

In addition to the BOPO variable, it can be seen that the estimation results are following the initial hypothesis, which is negative and significant on the profit (ROA) and stability of Islamic banking, because the greater the costs incurred by Islamic banking, the more inefficient bank operations are. This ratio can be used to measure the effectiveness and management of a bank in carrying out its operations and duties. The results of the research are supported by (Primadita, 2020; Maritsa & Widarjono, 2021).

The Covid variable is negative and not significant. This shows that although the Covid-19 pandemic occurred in Indonesia, the profits and stability of Islamic banking did not have a significant impact on the performance of Islamic banking in Indonesia. Taking the short period of the Covid-19 pandemic, which was only three quarters, caused the Covid-19 pandemic to have no significant impact on Islamic banking in Indonesia. However, Islamic banking still has to pay attention to the risks from the long-term impact of the Covid-19 pandemic, such as lending, declining quality of banking assets, and net interest margin rates.

V. CONCLUSION

This study aims to analyze the impact of the Covid-19 pandemic on the profitability and stability of Islamic banking, identify previous research surveys, popular research sub-themes, and lessons that can be obtained from the research sub-themes and recommendations for further research directions in the field of Islamic banking. This study uses data from Islamic banking documents in Indonesia obtained from ojk.go.id and the annual report data of each Islamic banking obtain 760 data. Based on the results of the analysis and discussion conducted using the Generalized Method of Moment (GMM). This study concludes several important things, namely ROA, the independent variables (Assets, CAR, FDR, and Covid) have no significant effect on Islamic banking profits, except NPF and BOPO. Meanwhile, on the Z-score, all variables have a significant effect on the stability of Islamic banking, except for the Covid variable. Islamic banking must be more objective in providing financing to the public because some Islamic banks have a fairly high NPF value. In addition, BOPO also needs more attention so that the assessment of the efficiency of Islamic banking is better in the future. Islamic banking that can survive for two years during the Covid-19 pandemic is a very good thing.

Although Islamic banking does not have a direct impact on the Covid-19 pandemic, Islamic banking must still pay attention and continue to plan good management to maintain the profits and stability of Islamic banking for the long term. For further researchers, it can be used as a reference and is expected to encourage the quality of research whose results have a significant impact on the development of Islamic banking literature and practices. In addition, this research can enrich the variables and data used by adding other external factors such as inflation, interest rates, and other external factors, as well as choosing a longer period. So that the research results can present a more comprehensive survey. In addition, the government must re-evaluate the regulations and performance of Islamic banking compared to conventional banking. So that the policies taken are right on target and as needed to encourage the development of better sharia banking performance in the future following the government's program in strengthening the sharia financial sector.

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