Capital, Efficiency, Management Risk on Islamic Bank Stability During Covid-19 Pandemic

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Abstract. *The performance of the banking sector in one period is one of the indicators in encouraging financial stability in a country. Banking stability is reflected by healthy conditions and a well-run intermediation function. The purpose of this study is to see the impact of the Covid-19 pandemic shock in the short and long term which affects capital, efficiency, and management risk on the stability of Islamic banking in Indonesia. Analysis of this study using quantitative methods based on the Vector Error Correction Model (VECM). Empirically, the results of this study show that the CAR, BOPO, and FDR variables are significantly positively correlated to the stability of Islamic banks in the long term. Meanwhile, the NOM and NPF variables in length are negatively correlated with the stability of Islamic banks during the Covid-19 pandemic. In the short term the significant influential variables are NOM and FDR while the other variables have no effect. This shows that the Covid-19 pandemic shows an impact on bank stability in the future. This research proves that during the Covid-19 Pandemic, Islamic banks have succeeded in taking several policies in the form of financing restructuring which have proven effective in maintaining islamic banking stability.*
Keywords: *Bank Stability, Islamic Bank, Z-Score, Covid-19 Pandemic, VECM*

Abstrak. *Kinerja sektor perbankan dalam satu periode merupakan salah satu indikator dalam mendorong stabilitas keuangan di suatu negara. Stabilitas perbankan dicerminkan dengan kondisi perbankan dalam sehat dan fungsi intermediasi perbankan yang berjalan dengan baik. Tujuan dilakukan penelitian ini untuk melihat dampak guncangan pandemi Covid-19 dalam jangka pendek dan jangka panjang yang berpengaruh pada kinerja keuangan berupa capital, efisiensi, dan risiko manajemen terhadap stabilitas perbankan syariah di Indonesia. Studi ini melakukan analisis dengan menggunakan metode kuantitatif berdasarkan Vector Error Correction Model (VECM). Secara empiris hasil penelitian ini menunjukkan bahwa variabel CAR, BOPO, dan FDR berkorelasi positif signifikan terhadap stabilitas bank syariah baik dalam jangka panjang. Sedangkan variabel NOM dan NPF dalam panjang berkorelasi negatif signifikat terhadap stabilitas bank syariah selama pandemi Covid-19. Adapun dalam jangka pendek variabel berpengaruh signifikan adalah NOM dan FDR sedangkan variabel yang lainnya tidak berpengaruh. Hal ini menunjukkan bahwa pandemi Covid-19 menunjukkan pengaruh terhadap stabilitas bank pada masa yang akan datang. Penelitian ini membuktikan bahwa selama Pandemi Covid-19 perbankan syariah telah berhasil mengambil beberapa kebijakan berupa resktrukturisasi pembiayaan yang terbukti efektif dalam mempertahankan stabilitas perbankan syariah.*

Kata Kunci : *Stabilitas Bank, Perbankan Syariah, Z-Score, Pandemi Covid-19, VECM*

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Introduction

Banking developments are currently a benchmark in determining Indonesia's economic growth. The benchmark in determining banking development can be seen from the condition of the bank's financial performance. In maintaining its business activities, Islamic banks must maintain their financial performance position (Dewi & Sudarmawan, 2022). The performance of the banking sector in one period is one of the indicators in encouraging financial stability in a country (Nguyen & Le, 2022). In addition to aspects of financial performance, many researchers are trying to review other aspects of financial institutions (Sudarmawan, 2022). Good banking can be seen from the bank's ability to maintain its stability. According to Sysoyeva (2020), argues that financial stability should be understood as a permanent capacity for the banking sector to carry out its functions without adverse negative effects on the real sector. The stability of the banking system is reflected in the sound banking condition and the banking intermediation function that is running well (Warjiyo, 2007). If conditions like this continue to be maintained, then the economy, which mostly takes place through the banking system, can also run well.

The maintained condition of banking stability can be seen from the current economic situation by looking at economic factors that have a major influence on the financial performance of the banking industry. For this reason, the banking industry must look at the risks faced so that it will support maintained banking stability. On the other hand, in maintaining banking stability, the bank must reflect on several events by placing it on developments and problems in Indonesia after the crisis in 1997 and 2008 (Basri dan Munandar, 2009; Setiawan & Pratama, 2019; Widyastuti & Armanto, 2013). There are several studies that suggest that economic shocks will affect banking activities (Darajati & Hartomo, 2017; Rahmi & Putri, 2019; Wisnala & Purbawangsa, 2014; Wulandari & Seviyani, 2021). So that based on the previous crisis, it can be used as a reference for banks in dealing with the impact of the

current global financial crisis. The crisis that occurred as a result of the Covid-19 pandemic had the worst impact on global economic conditions.

In particular, the Covid-19 pandemic had a more significant detrimental impact on the financial sector than the 2008-2009 Global Financial Crisis (Riadi et al., 2022). Currently, the financial crisis has been taken seriously since the shock (Segaf, 2012). The crisis period that occurred not only had an impact on the health sector but also on financial institutions and other sectors. This has resulted in significant economic uncertainty, leading to greater bank risks faced (Elnahass et al., 2021; Wu et al., 2020). According to Baldwin & Di Mauro B.W (2020), global productivity during the Covid-19 Pandemic has decreased significantly due to the implementation of social restrictions. This has an effect on decreasing the quality of direct transaction services so that it will reduce operational performance in Islamic banks which has an impact on the Net Operating Margin (NOM) which is experiencing fluctuations.

Following the global financial crisis, banking regulators must implement stricter measures to make the Islamic banking system more resilient and stable. One of the conditions is to look at capital adequacy, which is an important component in the banking system, so as to strengthen the resilience of the stability of the banking sector (Tran et al., 2022). In carrying out its operations, the bank's capital adequacy ratio is considered an indicator in measuring the level of risk by looking at the Capital Adecuacy Ratio (CAR). The capital adequacy ratio should be applied in accordance with established standards to help banks protect themselves from economic shocks and protect people who use banking services (Abou-El-Sood, 2016). CAR during the Covid-19 pandemic decreased to 22.67% in January 2022. The capital adequacy ratio serves to protect banks and customers to minimize the risks that will be faced by banks (Minh Sang, 2021).

In addition, risk management is a major concern of regulators because it has a large role in determining bank stability (Lassoued et al., 2016). There are several empirical studies that examine the main risks in the form of specific risks in financial stability (Djebali & Zaghdoudi, 2020). Bank-specific risks

include operational, credit/financing, and liquidity risks (Hunjra et al., 2020), and most financial institutions face this type of risk (Chai et al., 2022). During the Covid-19 pandemic, banks provided financing restructuring in reducing the increase in financing risk so that non-performing finance (NPF) gross was less than 5%. Rapid financing growth has a risk of loss that encourages increased liquidity risk with reduced liquidity as seen from the Financing to Deposits Ratio (FDR) decreasing to 68.98% in January 2022. This has an effect on the decline in revenue based on the ratio of Operating Costs to Operating Income (BOPO) which has increased to touch 93.10%. Thus, there is a decrease in efficiency in the banking industry, especially in the conditions of the global financial crisis which will increase losses in the banking industry.

Based on the explanation above, the health crisis that occurred caused an economic crisis that had an impact on the resilience of Islamic banking stability. So this research needs to be carried out to see the short- and long-term influence of shocks in the form of the Covid-19 pandemic in the form of financial performance consisting of capital, efficiency, and management risks on the stability of Islamic banking in Indonesia.

Literature Review

Relationship between Capital and Islamic Banking Stability

In Islamic banking, the capital adequacy ratio is seen by using the Capital Adequency Ratio (CAR). Based on empirical studies related to profitability factors conducted by (Ghenimi dkk., 2017; Kusumastuti & Alam, 2019; Lotto, 2019) shows that CAR has a significant positive effect on bank stability. This is because an increase in the value of CAR will have an effect on increasing the ROA value of banks. If there is an increase in bank income so that the bank's profit increases, the bank's capital will increase, and the bank's ROA will increase. The high value of CAR will improve the performance of the banking which can be seen from its profitability which means that the bank is in a stable condition.

H_1 = Capital Adequacy Ratio (CAR) has a positive effect on the stability of Islamic banks during the Covid-19 pandemic.

The Relationship between Profitability and Islamic Banking Stability

Profitability in banks based on operational activities is very important in encouraging the creation of banking stability. Theoretical studies conducted by Kalunda & Elizabeth, (2015); Lotto, (2019) states that if the higher the operating results, the higher the profit that a bank will get, thereby increasing the stability of the bank. This means that banks will benefit greatly from the results of banking operations by looking at the increasing Net Operating Margin (NOM) ratio. Thus, Net Operating Margin (NOM) will also have a positive effect on banking stability (Lotto, 2019; Shair dkk., 2019).

H_2 = Net Operating Margin (NOM) has a positive effect on the stability of Islamic banks during the Covid-19 pandemic.

Relationship of Efficiency with Islamic Banking Stability

One of the determining factors in determining the level of banking stability can be seen by measuring banking efficiency (Peterson, 2019). In banking, efficiency measurement can be done by looking at the ratio of Operating Costs to Operating Income (BOPO). BOPO ratio has a negative influence on banking stability (Heniwati, 2019; Kusmayadi, 2018; Kusumastuti & Alam, 2019). This shows that the greater the comparison of total operating costs with low operating income results, it means that banks lack efficiency in carrying out their operations. So that it affects the level of income generated by banks which has decreased, causing bank instability. Thus, it can be concluded that Operating Costs to Operating Income (BOPO) will negatively affect banking stability.

H_3 = Operating Expenditure to Operating Income (BOPO) negatively affects the stability of Islamic banks during the Covid-19 pandemic.

Relationship of Financing Risk with Islamic Banking Stability

Financing risk is a major concern in carrying out its intermediation function by taking into account the Non-Performing Finance (NPF) ratio. Based on research conducted by Babar et al., (2019) concluded in his research that the NPF ratio will negatively affect the profitability of a bank. Banks will get greater profits and stable financial condition of their banks if they obtain a lower Non-Performing Financing (NPF) value. This happens when financing risks rise, it will cause bank instability. The higher the value of the NPF owned by banks, it shows that defaults from customers have also increased, which affects bank instability. Thus, it can be concluded that Non-Performing Financing (NPF) will negatively affect banking stability (Fatoni & Sidiq, 2019; Maritsa & Widarjono, 2021; Widarwati dkk., 2019).

H_4 = Non-Performing Financing (NPF) negatively affects the stability of Islamic banks during the Covid-19 pandemic.

Relationship of Liquidity Risk with Islamic Banking Stability

Research conducted by (Almunawwaroh & Marliana, 2018; Kusmayadi, 2018; Maritsa & Widarjono, 2021) stated that bank liquidity risk is measured using a measure of Financing to Deposits Ratio (FDR). Liquidity risk measurement is carried out to avoid bankruptcy in the banking sector. The FDR ratio has a positive influence on banking stability. This is because the amount of funds needed to be allocated in the form of financing is met so that the bank will get a high income and will also be followed by an increase in bank profitability.

H_5 = Financing to Deposits Ratio (FDR) has a positive effect on the stability of Islamic banks during the Covid-19 pandemic.

Method

The type of research used is research with a quantitative approach. The sampling technique carried out in this study was to use purposive sampling. For analysis purposes, the data obtained and used is data from time to time (time series) during the period March 2020 - September 2022. In this study, it

used the Vector Error Correction Model (VECM) with E-Views 12 software to test the short-term and long-term influence of variable capital, efficiency, management risk (CAR, NOM, BOPO, NPF and FDR) on the stability of Islamic banking in Indonesia during the COVID-19 pandemic.

Operational Definition of Variables

Dependent Variables

The dependent variable in this study is banking stability as measured using the Z-Score. Some researchers who use Z-Score in measuring bank stability (Albaity & Rahman, 2019; Louati & Boujelbene, 2015; Rosyidah & Sukmana, 2019). Here is the formula for calculating the Z-Score (Albaity & Rahman, 2019) :

$$\text{Z-Score} = \frac{\text{ROA} + (\frac{\text{E}}{\text{A}})}{\partial \text{ROA}} \text{ X } 100\%$$

Independent Variables

The independent variables used in this study are as follows.

1) Capital Adequacy Ratio (CAR)

Capital or capital is a method of assessing banks based on the capital owned by banks using the Capital Adequacy Ratio (CAR).

$$\text{CAR} = \frac{\text{Bank Capital}}{\text{ATMR}} \text{ X } 100\%$$

2) Net Operating Margin (NOM)

Net Operating Margin (NOM) is a ratio that describes net operating income so that the average ability of productive assets to generate profit is known.

$$\text{NOM} = \frac{\text{Net Income}}{\text{Average Productive Assets}} \text{ X } 100\%$$

3) Operating Costs to Operating Income (BOPO)

Operating Expenses to Operating Income (BOPO) is a ratio used to measure the level of efficiency and ability of banks to carry out their operations.

$$\text{BOPO} = \frac{\text{Operating Expenses}}{\text{Operating Income}} \text{ X } 100\%$$

4) Non Performing Financing (NPF)

A high NPF will increase financing risk, resulting in potential bank losses. The higher this ratio, the worse the quality of bank loans will be which causes the number of non-performing loans to be greater.

$$\text{NPF} = \frac{\text{Non}-\text{Performing Financing}}{\text{Total Financing}} \text{ X } 100\%$$

5) Financing to Deposits Rasio (FDR)

FDR is a measure of liquidity that measures the amount of funds placed in the form of loans derived from Third Party Funds or DPK.

$$\text{FDR} = \frac{\text{Total Financing}}{\text{DPK}} \text{ X } 100\%$$

Results and Discussion

Stationaryity Test (Unit Root Test)

Based on the estimated results, a comparison of the unit root test at the level level and the unit root test at the 1st Difference level was obtained. This suggests that the model can proceed to look at the short-term influence between independent variables on dependent variables.

Table 1. Dickey Fuller Augmented Root Test Results

Variable	ADF T- Statistic	Prob. ADF
Level		
CAR	-1.849758	0.3504
NOM	-0.890877	0.7772
BOPO	-1.341019	0.5972
NPF	-0.573297	0.8622
FDR	-1.539545	0.4998
1st Difference		
CAR	-5.656988	0.0001*
NOM	-5.827177	0.0000*
BOPO	-4.833803	0.0005*
NPF	-4.138478	0.0032*
FDR	-4.278555	0.0023*

Source : Data processed Eviews 12

Information:

*   : 0.01%

** : 0.05%

*** : 0.10%

Based on the test results of table 1, it can be known the degree of significance of stationaryity in the observed variables. For CAR, NOM, BOPO, NPF, and FDR variables are not stationary (prob. > 0.05) at the level level. The stationary degree is then raised to the level of the 1st Difference degree resulting in the variables CAR, NOM, BOPO, NPF and FDR stationary (prob. < 0.05) at the level of 1st Difference.

Cointegration Test Results

The Cointegration Test was conducted to indicate the possibility of a long-term relationship between the economic variables used in the study. The results of the cointegration test produce long-term equations. The results of the cointegration test are as follows:

Table 2. Cointegration Test Results

Hypothesis	Trace Statistic	Critical Value	Prob.
None	141.3692	95.75366	0.0000*
At most 1	79.19629	69.81889	0.0074*
At most 2	50.79203	47.85613	0.0258**
At most 3	28.37949	29.79707	0.0722***
At most 4	15.45820	15.49471	0.0506***
At most 5	7.500698	3.841465	0.0062*

Source : Data processed Eviews 12

Information:

* : 0.01%

** : 0.05%

*** : 0.10%

Based on table 4, the cointegration test shows that the trace statistical value > a critical value of 0.05, so it is proven that there is cointegration between variables. These results show that between variables have a long-term relationship, so in this case research can be carried out by applying the VECM

(Vector Error Correction Model) model. To trace the short-term and long-term relationships, the VECM test is then carried out.

VECM Estimation Results

VECM estimation is carried out to determine the magnitude of the influence and how significant each variable occurs in the other variables. Both on the 1st lag, the 2nd lag, and so on. The VECM test can look at short-term and long-term influences in a study. The results of VECM estimates in this study are as follows:

Table 3. VECM Long-Term Estimation Results

Variable	Coefficient	T-statistics	Information
Long-term			
D(Z-Score(-1))	1.000000		
D(CAR(-1))	0.139942	12.0926	Significant
D(NOM(-1))	-3.296620	-72.8366	Significant
D(BOPO(-1))	0.469572	99.1489	Significant
D(NPF(-1))	-4.718959	-37.3875	Significant
D(FDR(-1))	0.382240	43.8732	Significant
C	0.153747	-3.681060	

Source : Data processed Eviews 12

The VECM test in this study used a significance level of 5% with a total of 31 observations, so that a t-statistical value of ± 2.04227 was obtained. The basis for making decisions taken is that if the t-statistical value of the < variable (-2.04227) or > 2.04227 then it can be concluded that the variable has a significant influence. Conversely, if the t-statistical value of the variable > (-2.04227) or < 2.04227 then the variable has no significant effect.

By table. 3 it can be seen that in the long run the variables CAR, NOM, BOPO, NPF, and FDR significantly affect the stability of Islamic banking during the Covid-19 pandemic. Vecm's long-term estimates show that CAR has a significant positive influence on the stability of Islamic banking with a coefficient of 0.139942. This means that any 1% increase in CAR will increase islamic banking stability by 0.14%. The NOM variable has a significant negative influence on the stability of Islamic banking with a coefficient of -3.296620. This

means that any 1% increase in NOM will reduce islamic banking stability by 3.30%. The BOPO variable has a significant positive influence on the stability of Islamic banking with a coefficient of 0.469572. This means that any 1% increase in BOPO will increase the stability of Islamic banking by 0.47%. The NPF variable has a significant negative influence on the stability of Islamic banking with a coefficient of -4.718959. This means that any 1% increase in NPF will reduce islamic banking stability by 4.72%. FDR has a significant positive influence on the stability of Islamic banking with a coefficient of 0.382240. This means that any 1% increase in FDR will increase islamic banking stability by 0.38%.

Table 4. VECM Short-Term Estimation Results

Variable	Coefficient	T- statistics	Information
Jangka Pendek			
D(ZScore(-1))	3.085659	12.0926	Significant
D(CAR(-1))	-0.352182	-1.88779	Insignificant
D(NOM(-1))	-10.31567	-2.85554	Significant
D(BOPO(-1))	0.014443	0.16575	Insignificant
D(NPF(-1))	1.879448	1.18873	Insignificant
D(FDR(-1))	-0.301327	-2.93392	Significant
D(ZScore(-2))	0.180492	0.15617	Insignificant
D(CAR(-2))	0.101386	0.55255	Insignificant
D(NOM(-2))	-0.968809	-0.27126	Insignificant
D(BOPO(-2))	-0.023850	-0.32274	Insignificant
D(NPF(-2))	0.164395	0.10919	Insignifican
D(FDR(-2))	-0.084856	-0.92429	Insignifican
R-Square	0.807001		

Source : Data processed Eviews 12

By table. 4 vecm estimation results in the short term variables that have a significant effect on the level of stability of Islamic banking during the Covid-19 pandemic are only NOM and FDR variables in Lag 1 which show the influence of NOM and FDR variables in period 1 on islamic banking stability. This shows that there is a correction adjustment mechanism from the short term to the long term. The R-Square coefficient in the study is worth 0.807001. This shows that as many as 80.70% of CAR, NOM, BOPO, NPF, and FDR variables

are able to explain their effect on the stability of Islamic banking during the Covid-19 pandemic. Meanwhile, the other 19.30% was explained by other variables outside the variables used in this study.

The Effect of Capital on Islamic Banking Stability During the COVID-19 Pandemic

The results of the VECM test show that the CAR variable in the short term does not have a significant influence on the stability of Islamic banking. This shows that capital symbolized by high-value CAR variables will not affect the stability of Islamic banking in the short term. Meanwhile, the results of VECM estimates in the long term show that the CAR variable has a significant positive influence on the stability of Islamic banking. This means that the impact caused by the Covid-19 pandemic shows that the CAR variable will only affect the resilience of Islamic banking stability in the long term.

The results of the estimates carried out are in line with empirical studies related to profitability factors carried out by (Christaria & Kurnia, 2016; Ghenimi et al., 2017; Imbierowicz & Rauch, 2014; Kusumastuti & Alam, 2019; Lotto, 2019) shows that CAR has a significant positive effect on bank stability. It is stated that an increase in the capital adequacy ratio will have an effect on increasing the ROA value of the banking industry. If there is an increase in bank capital, it will encourage the bank to be in a stable condition. The capital adequacy ratio during the Covid-19 pandemic helped absorb losses in the banking industry and protect against the risk of bankruptcy, thereby increasing the stability of Islamic banks. This is not in line with research showing results that CAR negatively affects bank stability (Harahap dkk., 2018; Kusumastuti & Alam, 2019; Peterson, 2019; Setiawan & Pratama, 2019).

The Effect of Profitability on Islamic Banking Stability During the COVID-19 Pandemic

Based on the results of the VECM test, it shows that the NOM variable in the short term has a significant negative influence on the stability of Islamic banking. This shows that profitability symbolized by high-value NOM variables will affect the decline in Islamic banking stability in the short term. Meanwhile, the results of VECM estimates in the long term show that the NOM variable has a significant negative influence on the stability of Islamic banking. Showing that the impact of the Covid-19 pandemic shows that the NOM variable will only affect the stability of Islamic banking in the long term.

The results of this study are in line with Shair dkk., (2019) which show that NOM negatively affects bank stability. Net Operating Margin (NOM) can be performed to test the impact of profitability on banking stability. If the NOM ratio of a bank is of high value, then the operational activities carried out by the bank can be said to generate good profits so that the bank that carries out these operational activities will be stable in its financial condition. Kalunda & Elizabeth, (2015) & Lotto, (2019) researchers stated that if the higher the net interest margin, the higher the profit that a bank will get, thereby increasing the stability of the bank. This means that during the Covid-19 pandemic, Islamic banks get greater profits so that Islamic banks are in a stable condition. In contrast to research that shows that NOM variables have a positive effect on bank stability (Kalunda & Elizabeth, 2015; Lotto, 2019).

The Effect of Efficiency on Islamic Banking Stability During the COVID-19 Pandemic

Vecm testing that has been carried out shows that the BOPO variable in the short term does not have a significant influence on the stability of Islamic banking. This shows that the efficiency symbolized by the high-value BOPO variable will not affect the stability of Islamic banking in the short term. Meanwhile, the results of VECM estimates in the long term show that the BOPO variable has a significant positive influence on the stability of Islamic banking. This means that the impact of the Covid-19 pandemic shows that the BOPO

variable will only affect the resilience of Islamic banking stability in the long term.

The results of the study are in accordance with research that shows that BOPO has a significant positive effect on bank stability (Cihak & Hesse, 2008; Soekapdjo et al., 2019). This shows that the greater the comparison of total operating expenses with operating income causes banks to lack efficiency in carrying out their operations. This condition occurs because any increase in the Bank's operating costs is not followed by an increase in operating income so that it will result in a decrease in bank profitability, which in the end will also reduce ROA. However, in this study, efficiency did not have an influence on bank stability, which showed that during the Covid-19 pandemic, banks did not pay attention to efficiency factors but paid attention to capital adequacy factors and risks that occurred. This is different from the research conducted by (Christaria & Kurnia, 2016; Heniwati, 2019; Kusmayadi, 2018; Kusumastuti & Alam, 2019) which shows that BOPO will have a negative influence on banking stability.

The Effect of Credit Risk on Islamic Banking Stability During the COVID-19 Pandemic

The results of the VECM estimation test show that the NPF variable in the short term does not have a significant influence on the stability of Islamic banking. This shows that credit risk symbolized by high-value NPF variables does not affect the stability of Islamic banking in the short term. Meanwhile, the results of VECM estimates in the long term show that the NPF variable has a significant negative influence on the stability of Islamic banking. This means that the impact caused by the Covid-19 pandemic shows that the NPF variable will only affect the stability of Islamic banking in the long term.

This research is in line with research that shows NPF negatively affects banking stability (Fatoni & Sidiq, 2019; Ghenimi et al., 2017; Kusmayadi, 2018; Maritsa & Widarjono, 2021; Widarwati et al., 2019). Islamic banks are in a stable condition if they obtain Non-Performing Financing (NPF) under reasonable

conditions in accordance with predetermined regulatory standards. This shows that bad financing that occurs in banks can be anticipated if the bank is able to manage the problematic financing that occurs. This means that bad financing that occurs in banks can be anticipated by providing financing restructuring during the Covid-19 pandemic which shows that banks are able to manage problematic financing that occurs. This is not in line with research that shows that Non-Performing Financing (NPF) will have a positive effect on banking stability (Alqahtani & Mayes, 2018; Amalia, 2018; Harahap et al., 2006; Peterson, 2019).

Effect of Liquidity Risk on Islamic Banking Stability During the COVID-19 Pandemic

Based on VECM testing, it shows that FDR's variables in the short term have a negative and significant influence on the stability of Islamic banking. This shows that liquidity risk symbolized by the high-value FDR variable will have an effect on reducing the stability of Islamic banking in the short term. Meanwhile, the results of VECM estimates in the long term show that the FDR variable has a significant positive influence on the stability of Islamic banking. This means that the impact of the Covid-19 pandemic shows that FDR's variables will only affect the resilience of Islamic banking stability in the long term.

The results of this study are in line with the research conducted by (Almunawwaroh & Marliana, 2018; Diaconu & Oanea, 2015; Kusmayadi, 2018; Maritsa & Widarjono, 2021) stated that liquidity risk has a positive effect on banking stability. FDR's poor management was caused by the bank's inability to disburse financing derived from Third Party Funds (DPK) to customers, resulting in bank instability. However, during the Covid-19 pandemic, Islamic banks were able to effectively mobilize customer deposits, which made liquidity risks decrease so that they did not affect the stability of Islamic banks. In contrast to the research conducted by (Ghenimi et al., 2017; Lotto, 2019;

Sakarombe, 2018; Setiawan & Pratama, 2019; Soekapdjo et al., 2019) found different results, where FDR negatively affected bank stability.

Conclusion

This study examines the relationship between Islamic bank stability and capital, profitability, efficiency, and management risk in Islamic banking in Indonesia during the Covid-19 pandemic using the Vector Error Correction Model (VECM). The findings show a two-way relationship between Islamic bank stability and capital, profitability, efficiency, and management risk in the long and short term. The results showed that the CAR, BOPO, and FDR variables in the long term had a positive and significant influence. Meanwhile, the NOM and NPF variables have a negative and significant influence on the stability of Islamic banks in the long term. Meanwhile, in the short term, the only variables that affect NOM and FDR on the stability of Islamic banking. This shows that the impact of the Covid-19 pandemic shows that FDR's variables will only affect the resilience of Islamic banking stability in the future.

The empirical findings showed that the macroeconomic shocks that occurred during the COVID-19 pandemic were responded to by Islamic banks by making a series of policies. The policy is carried out by restructuring financing for customers affected by the Covid-19 pandemic. This research has implications that the implementation of this policy has made banks stable and able to adapt to shocks in the form of the Covid-19 pandemic. This finding proves that during the COVID-19 pandemic, Islamic banks have succeeded in taking several policies that have proven effective in maintaining islamic banking stability. Although this research contributes theoretically and empirically, this research has some limitations and is a recommendation for further research. This is because this research only focuses on one country and Islamic banks, for further research can explore cross-borders and other financial institutions such as conventional banks and the research model has not shown any influence of macroeconomic variables on the stability of Islamic banking.

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