

Analysis Of Financial Performance In Soe Sharia Commercial Banks In Indonesia Before And After The Merger With The Vecm Method (Vector Error Correction Model)

Shinta Kemala Dewi¹, Nurlaila²

^{1,2}Program Studi Perbankan Syariah Fakultas Ekonomi Islam, Universitas Islam Negeri Sumatera Utara

Email: shintadewi@gmail.com

ABSTRACT

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This study uses the VECM (Vector Error Correction Model) method to examine the financial performance of Islamic banks at three state-owned Islamic banks before and after the merger. The sample in this study used a purposive sampling technique. The samples for this study were 3 BUMN banks that were merged, namely Mandiri Syariah Bank (BSM), BNI Syariah, and BRI Syariah with a 4-year period from 2018-2021. The data analysis method used is the VECM (Vector Error Correction Model) method with evIEWS 9 analysis tools. There are 3 research variables namely profitability, solvency/leverage and liquidity, with the following indicators: profitability (ROA, NPM), Solvency (DER, DAR) and Liquidity (CR). Profitability (ROA, NPM), Solvency (DER, DAR), Liquidity (CR). The results of this study indicate that there are differences in the variables between the financial performance of Islamic banking before and after the merger. In addition, there is a mutually influencing relationship between variable indicators, which means that each variable indicator can influence the ups and downs of post-merger Islamic banking financial performance.

Keywords: Merger, Financial Performance, Profitability, Solvency, Liquidity

1. INTRODUCTION

Based on data from the Central Statistics Agency for 2019, it is known that Indonesia's population reaches 267 million people, where 87% of Indonesia's total population are Muslims. Such a large Muslim population is a potential for the development of banking that adheres to Sharia principles, namely Islamic banking. In just three years, from 2018 to 2021, the development of Islamic banking in Indonesia has shown good achievements. Within these 3 years, the increase in third party funds and distribution of Islamic banking financing was respectively 30 and 33 percent.

Based on the 2020/2021 Global Islamic Economy Indicator (GIEI) data, Indonesia's position in the global sharia economy is in 4th position in the world where previously Indonesia was in 5th position. Meanwhile, for the Islamic Finance category, Indonesia is ranked 6th in the world (OJK, 2020). on a national scale the performance conditions of sharia banking based on Snapshot data from December 2018 to 2021, the market share of sharia banking in Indonesia continues to experience growth as shown in Graph 1 below:



Figure 1 Sharia Banking Market Share Growth 2017-2020

This indicates that the performance of Islamic banking in Indonesia continues to grow every period. However, based on the latest data, in December 2020 the market share of Islamic banking was still around 6.51%, far behind the market share of conventional banking, which was much larger, namely 94.49% (OJK, 2020). Even though the market share of sharia banking in Indonesia has continued to show positive developments over the past few years, sharia banking still has problems, namely based on the Sharia Banking Snapshot data released by the Financial Services Authority (OJK) as of December 2020 growth in Assets, Financing Provided (PYD)) and Third Party Funds (DPK) from 2018 to 2020 experienced a decline. For the growth of sharia banking assets in 2020, it has decreased by 7.17% compared to the previous 4 years. Apart from the total assets of sharia banking, the amount of financing provided (PYD) also decreased by 8.33% from the previous 4 years. Finally, the number of Third Party Funds (DPK) growth also decreased by 8.96% from the previous 4 years. Based on Syafrida and Aminah (2015) stated that the slowdown in Islamic banks in Indonesia has actually occurred since 2013 where Islamic banks experienced a decline in terms of capital, then there was an increase in problem loans and a decrease in profits from Islamic banks. The occurrence of a slowdown in Islamic banks was caused by two factors, namely internal and external factors. Regarding the internal factors that affect the slowdown of Islamic banks, this is the lack of variation in financing available in Islamic banks,

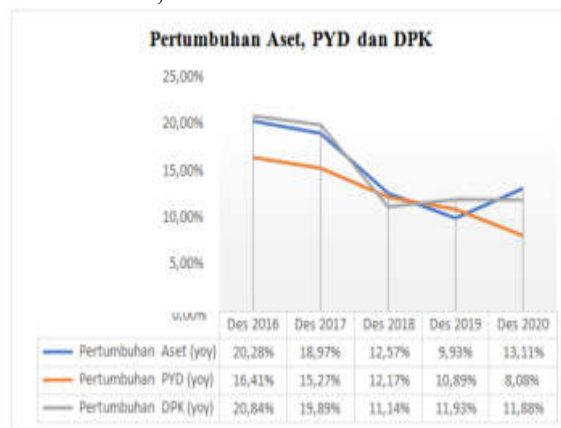


Figure 2 Growth in Assets, PYD and DPK 2016-2020

In an effort to re-increase the growth of Islamic banking business activities, the government has merged several Islamic Commercial Banks, namely PT. Mandiri Syariah Bank, PT. Bank BRI Syariah, Tbk., PT. Bank BNI Syariah. The merger carried out by the three banks was based on Law No. 28 of 1999 concerning Mergers, Consolidation and Acquisition of Banks, Law No. 40 of 2007 article 126 (1). In addition, this merger also received permission from OJK with the issuance of Decree of the OJK Board of Commissioners No. .4/KDK.03/2021. This merger was carried out to develop and increase the growth of Islamic banks again. In general, mergers are one way of external expansion of Islamic banking.

The merger carried out by Islamic banking is an important alternative for external business expansion (Cartwright & Schoenberg, 2006). The existence of merger activities is expected to improve the financial performance of Islamic banking, as well as to attract investors to invest their shares in the Islamic banking sector so as to increase the Indonesian economy indirectly. This is in line with Gupta's statement (2015) in Syaifullah and Nizar (2017) who revealed in their journal that the banking sector has an important role in the economic growth and development of a country (Atikah I, et al., 2021). Even so, the merger that will be carried out by 3 BUMN BUS in Indonesia has good intentions and goals, but this raises pros and cons in the process. For some parties, the merger of Islamic banks is considered to be able to strengthen the position of Islamic banks in the banking industry as a whole while also expanding the market share of Islamic banking in Indonesia. However,

those who refused argued that this merger would only combine assets, but would not increase the value for the Islamic banking industry itself, so that it would be better for Islamic banks to remain competitive and encourage the growth of Islamic banks in Indonesia.

Related to issues of pros and cons that spread in society during the pre and post merger. This needs to be carried out further studies from a scientific point of view so that it can be proven. So that in this study the researchers aimed to examine the differences in financial performance before and after the merger of Islamic banking and to analyze the relationship that occurred in the variable indicators studied. To measure the indicators in this study using the VECM (Vector Error Correction Model) method to predict (Forecasting) the financial performance of 3 Islamic Commercial Banks, namely Bank Mandiri Syariah, BRI Syariah, and BNI Syariah. In addition, this study also aims to see whether or not there is a relationship that occurs in the financial ratios that have been determined using the time series approach. Changes in the volume of financing in the past have an effect on changes in real output in the present, and conversely, changes in real output in the past also have an effect on changes in the volume of financing in the present. Changes in past Bank Indonesia Wadiah Certificates (SWBI) will affect the value of sharia banking sector financing and the current inflation rate. In the long term, the growth of Islamic banking financing and Sharia SWBI/SBI bonuses have a significant effect on economic growth. The contribution of Islamic bank financing and Sharia SWBI/SBI bonuses to economic growth is still very low (Setiawan I., 2019). changes in real output in the past also have an influence on changes in the volume of financing in the present. Changes in past Bank Indonesia Wadiah Certificates (SWBI) will affect the value of sharia banking sector financing and the current inflation rate. In the long term, the growth of Islamic banking financing and Sharia SWBI/SBI bonuses have a significant effect on economic growth. The contribution of Islamic bank financing and Sharia SWBI/SBI bonuses to economic growth is still very low (Setiawan I., 2019). changes in real output in the past also have an influence on changes in the volume of financing in the present. Changes in past Bank Indonesia Wadiah Certificates (SWBI) will affect the value of sharia banking sector financing and the current inflation rate. In the long term, the growth of Islamic banking financing and Sharia SWBI/SBI bonuses have a significant effect on economic growth. The contribution of Islamic bank financing and Sharia SWBI/SBI bonuses to economic growth is still very low (Setiawan I., 2019).

Regarding the VECM model according to A. Faturrahman & F. Rusdi (2019) in his research analyzing the factors that affect the liquidity of Bank Syariah Indonesia, the research results show that long-term Return On Assets (ROA) has a negative and significant effect on FDR. Meanwhile, in the short term, ROA has a positive and significant effect on FDR. Indications that cause the ROA variable to have a negative effect on the liquidity of Islamic banks is that there is intense competition, giving rise to management inefficiencies which results in decreased profits or financial performance and the emergence of problematic financing which will affect capital and will cause liquidity problems because banks are unable to meet obligations in the short term. (A. Faturrahman & F. Rusdi, 2019).

In other studies using different indicators related to mergers put forward by Yusuf, M., & Ichsan, RN (2021) regarding mergers carried out by Islamic banking in Indonesia, it shows that the variables NPF, FDR, BOPO, and CAR are simultaneously the financial performance of Commercial Banks Sharia in Indonesia for the 2011-2020 period. Simultaneously the variables NPF, FDR, BOPO and CAR have a significant effect on the financial performance (ROA) of Islamic commercial banks in Indonesia for the 2011-2020 period. Based on the magnitude of the adjusted R² is 0.979, which means 97.9% of the financial performance (ROA) of Islamic commercial banks is influenced by independent variables, while 0.21% is influenced by other factors outside of research. CAR partially has an insignificant positive effect on the financial performance (ROA) of Islamic commercial banks in Indonesia for the 2011-2020 period. Partially, NPF has no significant positive effect on the financial performance (ROA) of Islamic commercial banks in Indonesia for the 2011-2020 period. Partially, BOPO has had a significant negative effect on the financial performance (ROA) of Islamic commercial banks in Indonesia for the 2011-2020 period. Partially, FDR has no significant positive effect on the financial performance (ROA) of Islamic commercial banks in Indonesia for the 2011-2020 period (Yusuf, M., & Ichsan, RN, 2021).

In addition, to measure financial performance according to A. Rashid & N. Naeem (2016) that empirically measuring financial performance uses financial ratios, namely profitability ratios (ROA, Profit Margin), solvency/leverage ratios (DER, ICR) and liquidity ratios (Current Ratio & Quick Ratio). The financial performance of Islamic banking in this study is proxied to be measured using the Profitability Ratio, Leverage Ratio and Liquidity Ratio. To measure profitability according to Harmono (2011, 110) namely Net Profit Margin (NPM), Gross Profit Margin (GPM), Return On Assets (ROA), Return On Equity (ROE). To measure profitability in this study, only 2 variables are used, namely Return On Assets (ROA), Net Profit Margin (NPM).

As for solvency by looking at the leverage ratio it is proxied by the Debt to Equity Ratio and the Debt to Asset Ratio and to measure liquidity it is proxied by the Current Ratio. When viewed from the background above, even though in general Islamic banking in Indonesia continues to experience growth and developments every year in share the market but asset growth, PYD and DPK have decreased over the last 4 years. So the government took merger action as a solution to the problem. However, this step still reaps the pros and cons in society. Regarding the issue of the pros and cons of carrying out this merger, it needs to be proven scientifically, especially on the financial performance of the merged Islamic banking. With reference to financial performance measurement indicators from previous studies, this will later prove the extent of the effect of the merger on the financial performance of the three merged Islamic banks.

2. METHODS

a. Mergers

Merger is the merging of business entities into one by taking over or buying all the assets and liabilities of the companies being combined. In this merger, the company that takes over owns at least 50% of the shares, while the company that is being taken over stops operating and the shareholders receive some money or shares in the new company (Brealey, Myers & Marcus, 2016). Merger of business entities is the unification of two or more companies into one economic unit. There are two ways to merge business entities, namely through fusion and acquisition. Fusion is the merging of two or more companies into one larger economic entity. This fusion can be done by way of merger or consolidation. Acquisition is a merger of two or more companies by controlling a position of control over another company. This position of control is obtained by controlling the majority (more than 50 percent) of the shares of other companies. Based on the type of companies joining, mergers can be divided into several forms, namely (Brealey, Myers & Marcus, 2016):

- 1) Horizontal mergers, namely mergers that occur when two or more companies engaged in the same industry join. An example is the merger of a machine manufacturing company. This form of merger causes expansion of the company's operations in certain product lines and at the same time can eliminate competitors.
- 2) Vertical merger, namely a merger that occurs when a company acquires a supplier or customer company. For example, a tobacco company acquires a tobacco plantation company, a garment company acquires a textile company, and so on. The economic benefits of a vertical merger stem from the company's increased control over the raw materials or distribution of the acquired company's final goods.
- 3) Congeneric mergers, namely mergers that occur when companies are in the same industry but not in the same line of business as their suppliers or customers. An example is the merger of a machine tool manufacturer with an industrial conveyor system manufacturer. The benefit of a congeneric merger is the ability to use the same sales and distribution channels to reach customers from both businesses.
- 4) Conglomerate merger, namely a merger that occurs between companies that are in an unrelated business. For example, a company that produces food products merges with a computer company. The main benefit of this merger is the ability to reduce risk because the merging companies have different cyclical and seasonal patterns of sales and income.

b. Financial performance

According to Akamal (2016), financial performance is an analysis carried out to see how far a company has carried out using the rules of financial implementation properly and correctly. Such as by making a financial report that meets the standards and provisions of SAK (Financial Accounting Standards) or GAAP (General Accepted Accounting Principles), and others. (Fahmi, 2016).

c. Profitability

Profitability ratio is a ratio that can measure a company's ability to earn profits, both in relation to sales, assets and own capital (Mahaputra, 2012). According to Baiq Fitri (2021), the Profitability Ratio is a ratio that measures a company's ability to generate profits over a certain period and also provides an overview of the level of effectiveness of management in carrying out its operational activities. The profitability ratios used in this study consist of Return On Assets (ROA). Return On Assets or ROA is the ratio used to measure a company's ability to generate profits from investment activities. In another sense ROA is a business unit to earn profit on a number of assets owned by the business unit. This ratio aims to measure management's ability to obtain overall profits. The greater the ROA, the greater the overall profit level.

d. Solvability

The solvency ratio is the ratio used to measure the extent to which debt finances company assets (Kasmir, 2016). This means how much the debt burden borne by the company compared to its assets. The broad meaning can be said that the solvency ratio is useful for measuring a company's ability to pay all of its obligations, both short term and long term if the company is liquidated. In this study, researchers will use the Debt to equity ratio. Debt to equity ratio is the ratio used to assess debt to equity. The way to find this ratio is by comparing all debt, including current debt with all equity.

e. Liquidity

The liquidity ratio is a ratio that describes a company's ability to meet short-term obligations (OECD, 2016). Another function of the liquidity ratio is to show or measure a company's ability to meet its maturing obligations, both obligations to parties outside the company (business entity liquidity) and within the company (company liquidity). In general, the main objective of the liquidity ratio is to assess a company's ability to meet its obligations. Besides that, from the liquidity ratio it can be seen other things that are more specific which are also still related to the company's ability to fulfill its obligations. All this depends on the type of liquidity ratio used. In this study, researchers will use the current ratio.

f. Vector Error Correction Model (VECM)

VECM is a limited form of VAR because the form of the data is not stationary but has a cointegration relationship (Panghayo, 2018). VECM is often referred to as a VAR design for transient data that has a cointegration relationship. The VECM model specification limits the long-term relationship for each dependent variable so that it is able to approach the cointegration relationship but still allows momentum in the short term. After the VAR model shows that the time series data has a cointegration relationship, the VECM model can be used to find out how the short-term behavior of a variable has a long-term value. The VECM model is a model used to analyze multivariate time series data that is not stationary and has a linear cointegration relationship, so that the VAR model with the VECM model uses $y_t - 1$ (first differences). Testing for causality between one variable and another in a system of equations is an indication of whether there is a relationship between one variable and another.

The way to find a causal relationship is to use the Granger causality test. The causality test was conducted to determine whether the dependent variable can be treated as an exogenous variable. This happens because there is a relationship between one variable and another; that is, if there are two variables x and y , then if x causes y or vice versa, if y causes x or both, or if there is no relationship at all for one variable to the other. The x variable must be able to cause the y variable, which means how

many y values exist in the current period, which can be explained by the y values in the previous period and the x values in the previous period. Causality testing can be done using several methods including Granger's Causality and Error Correction Model Causality (Ekananda, 2014). One function of the stationarity and cointegration tests that were carried out previously was to determine whether the VAR method to be used in the estimation uses the VAR in Level method or the Vector Error Correction Model (VECM) method. If the previous test shows that the estimation is not stationary but has a cointegration relationship with other data variables, then the model used is the VECM model. This procedure essentially uses a restricted form of VAR. This additional limitation must be due to the non-stationary form of the data having a cointegration relationship. The VECM model uses the cointegration limit information contained in the model specifications. The VECM specification limits the long-term behavioral relationship between the variables used in the system of equations to be able to converge in cointegration relationships, but still have short-term dynamic changes. Error correction means that if there is a long-term deviation from the balance, this is gradually corrected by short-term partial adjustments. This cointegration test is useful to determine whether or not there is a long-term balance between research variables. Cointegration test can be done with.

Object of research this is in state-owned sharia banking in Indonesia, namely Bank Rakyat Indonesia Syaria'ah, Bank Syariah Mandiri, Bank Negara Indonesia Syariah. The existence of the Islamic banking industry in Indonesia itself has experienced a significant increase and development in the past three decades. In this study the data that has been used is secondary data obtained from various sources, namely financial reports and documentation in the form of data from the website or the official website of each Islamic Commercial Bank in Indonesia in the form of annual financial reports from 2018-2021. The sample in this study used a purposive sampling technique. The samples for this study were 3 merged state-owned banks, namely Mandiri Syariah Bank (BSM), BNI Syariah, and BRI Syariah with a 4-year period from 2018-2021.

To answer the problems as formulated earlier, this study uses the Vector Autoregressive (VAR) analysis method. If the data used is not stationary at the level level so that it must be differentiated in the first derivative (first differencing) and has a long-term or cointegrated relationship (Enders, 2004), then use the Vector Error Correction Model (VECM). VAR and VECM analysis required several stages, namely data stationarity test, stability test, optimal lag determination, cointegration test, general VECM model determination, and Innovation Accounting consisting of Impulse Response Function (IRF) and Variance Decomposition (VD) analysis. In general, the VECM model is as follows:

$$\Delta xt = \pi_0 + \pi_1 xt_{-1} + \pi_2 \Delta xt_{-1} + \pi_3 \Delta xt_{-2} + \dots + \pi_p \Delta xt_{-p} + \epsilon t \quad (1)$$

Information:

xt : vector that contains the variables analyzed in the study

π_0 : intercept vector of size (n.1)

π : matrix with elements π_{jk} , where with element $\pi_{jk} \neq 0$

π_1 : coefficient matrix sized (nn) with elements π_{jk} (i)

ϵt : error vector of size (n.1) with elements ϵ_{it}

3. RESULTS AND DISCUSSION

a. Data Stationarity

In this study to detect stationary data was carried out using the Augmented Dickey-Fuller (ADF) test with a significance level of 5%.

Table 1 Unit Root Test

Null Hypothesis: NPM has a unit root
 Exogenous: Constant
 Lag Length: 0 (Automatic - based on SIC, maxlag=9)

Variabel	1st Difference	
	t stat	prob
ROA	-6.9340	0.000*
NPM	-6.2485	0.000*
DER	-5.7192	0.000*
DAR	-7.9892	0.000*
CR	-7.3831	0.000*

*MacKinnon (1996) one-sided p-values

*) significant at ($\alpha=5\%$)

Source: Results of secondary data processing Eviews 9, 2022

Based on the results of the table above, the stationarity test at the level level was carried out using the Augmented Dickey Fuller test for the variables ROA, NPM, DER, DAR AND CR with respect to the absolute value or statistical absolute value of Augmented Dickey Fuller $|-6.9340|$ greater than the MacKinnon critical value at each $\alpha 5\%$ $|-2.926622|$ and the probability value obtained is less than 0.05 ($0.00 < 0.05$) so it can be concluded that the variables ROA, NPM, DER, DAR AND CR, in other words, that the data used is correct to estimate the research model used.

b. Optimum Lag Testing

Forecasting with VAR requires the data to be stationary. Because the data for each variable is stationary at the first difference level, it is hoped that this estimate will provide valid model results. Therefore, research conclusions can also have a high level of validity. Forecasting the VAR model starts from determining the right lag length in the VAR model. Determination of the optimal lag length must be done in VAR modeling. If the optimal lag entered is too short, it is feared that it will not fully explain the dynamics of the model. This test uses the Schwarz Information Criterion (SC) approach where the optimum number of lags in this study uses the smallest SC value.

Table 2 Optimum Lag Test Results (SC value)

VAR Lag Order Selection Criteria
 Terikatous variables: D(ROA) D(NPM) D(DER) D(DAR) D(CR) Exogenous variables: C

Variabel	Lag						
	0	1	2	3	4	5	6
ROA	5.6 5	2.10 *	2.11	2.9 7	3.8 4	4.5 4	4.8 9
NPM	1.0 8	-0.89 *	-0.29	0.6 3	1.0 3	1.8 0	2.6 9
DER	1.9 8	-1.99 *	-1.37	- 0.5 3	- 0.2 7	0.3 1	1.1 3
DAR	1.6 5	3.11 *	3.10	2.7 8	3.7 3	4.4 3	4.7 8
CR	1.0 8	-0.89 *	-0.29	0.6 3	1.0 3	1.8 0	2.6 9

*) indicates lag order selected by the criterion

SC: Schwarz information criterion

Source: Results of secondary data processing Eviews 9, 2022

Determining the optimal interval duration or optimal delay duration using various existing criteria such as the Schwarz information criterion (SC) to determine the optimal lag duration occurs when the values of the criteria above have the smallest absolute value. From the results of the table above, the optimal lag length can be determined with the smallest absolute value, which is indicated by the number of stars in that period. The optimum lag test results are in table 3, the lag obtained is lag 1. Therefore, the VAR equation of the model in this study based on the optimum lag obtained is as follows:

$$\Delta xt = \pi_0 + \pi xt_{-1} + \pi_1 \Delta xt_{-1} + \varepsilon t \quad (2)$$

Information:

Δxt : Vector that contains the variables analyzed in the study

π_0 : Intercept vector size (n.1)

π : Matrix with elements π_{jk} , where with element $\pi_{jk} \neq 0$ (ROA/ NPM/ DER, DAR, CR)

π_1 : Coefficient matrix sized (nn) with elements π_{jk} (i)ROA/ NPM/ DER, DAR, CR)

εt : Vectors errors sized (n.1) with elements εit

c. VAR Stability Test

To find out whether the estimation of the VAR model is stable or not, by knowing the modulus value of all roots of characteristic polynomials, if the modulus of all roots of characteristic polynomials is less than 1 then the system of VAR equations can be categorized as stable.

Table 3 VAR Stability Test Results

Variable	Modulus		
ROA	0.226172	sd	0.935653
NPM	0.218744	sd	0.935205
DER	0.218839	sd	0.925396
DAR	0.218938	sd	0.935236
CR	0.218839	sd	0.935244

Based on the results of the VAR stability test in Table 3, it is known that the modulus value in each model of all roots of characteristic polynomials is in the range of 0.218 – 0.935 so that VECM can be estimated because the VAR system used can be said to be stable.

d. Cointegration Test

After determining the optimal lag duration, the next step is the cointegration test. Cointegration is a long-term relationship between variables that is not stationary. In other words, even though these variables are not stationary individually or on each variable, the combination of these variables can be stationary or valid when used to estimate a research model. This cointegration test uses the Johansen cointegration test method with stationary data at the first difference level because in the stationarity test there are data from two variables, namely the profitability/leverage variable (DAR) and the liquidity variable (CR) which at the basic level or level are not stationary. Estimation was carried out using the VECM model and cointegration testing is necessary because the data obtained in this study are not entirely stationary at the level, namely the NPM and DER variables. VECM can be used in analysis if there are more than zero cointegration ranks. The Johansen Cointegration Test is based on trace statistics to test whether or not there is cointegration between variables. An indication of cointegration between variables is if the value of the trace statistic is greater than the critical value at the significant level (5 percent). Based on the cointegration test results in Table 4, it is known that there is cointegration between variables. The Johansen Cointegration Test is based on trace statistics to test whether or not there is cointegration between variables. An indication of cointegration between variables is if the value of the trace statistic is greater than the critical value at the significant level (5

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Table 4 Cointegration Test Results

Variabel	H0H1	Trace Statistic			
		R=0	R=1	R=2	R=3
		R>=1	R>=2	R>=3	R>=4
	Trace Stat	70.31*	34.10	14.85	6.42
NPM					
	$\alpha = 0.05$	63.88*			
			42.91	25.87	12.52
	Trace Stat	68.01*	33.79	14.21	6.42
DER					
	$\alpha = 0.05$	63.88*			
			42.92	25.87	12.52

*) there is cointegration at ($\alpha = 5\%$)

Source: Results of secondary data processing Eviews 9, 2022

e. Granger Causality Test

To find out whether or not there is a causal relationship between the variables in the model, you can use the Granger causality test by looking at the probability values. Inter-variables have causality if the probability value is less than the five percent significance level.

H0 = There is no causality relationship

H1 = There is a causal relationship

Criteria Test

H0 is accepted, if the probability value $> \alpha$ ($\alpha, 05$)

H1 is accepted, if the probability value $< \alpha$ ($\alpha, 05$)

Table 5 Granger Causality Test Results

ble	NPM	DER
ROA	≠	↔
DAR	↔	→
CR	≠	↔

Information:

↔ = has a bidirectional relationship

→ = has a one-way relationship

≠ = has no relationship

f. Impulse Response Function (IRF) Analysis

The purpose of impulse response analysis is to analyze the response in the short or long term to one variable to shocks or shocks to other variables. Based on the results of the formed Impulse Response Function (IRF) table, it can be concluded that the response shown by each variable indicator experiences a shock or shock because the standardized value is zero. This means that every variable indicator that exists in each period will always experience changes or be dynamic. Besides that, the average response of the variable indicators has a fluctuating response (responding positively and

negatively) but tends to increase. However, there are several variable indicators that have decreased from before. This is very possible because each variable indicator either ROA, NPM, DER,

g. Variance Decomposition

The test performed at this stage is the Variance Decomposition test. The purpose of this test is to get information about how strong the composition of the role of certain variables is on other variables. The results of the VDC (Variance Decomposition) Analysis presented in the attached table of several variable indicators that have been analyzed show that between variables and one variable indicator with another in each period there are differences and the resulting value is very fluctuating or moving up and down. This means that the variable indicators studied such as ROA, NPM, DAR, DER, and CR can increase in each period or decrease in certain periods. This can be an illustration for the merged Islamic banking that must pay attention to the factors that influence the rise and fall of these financial performance variable indicators. Where this has been described in the previous test, namely the granger causality test. The VECM model analysis was carried out in this study to determine differences in the financial performance of 3 state-owned Islamic banks, namely Bank Syariah Mandiri, BRI Syariah and BNI Syariah before and after the merger. By using historical data from 2017-2020 as an initial benchmark to determine post-merger financial performance using the forecasting data method. There are several results, as follows: Where this has been described in the previous test, namely the granger causality test. The VECM model analysis was carried out in this study to determine differences in the financial performance of 3 state-owned Islamic banks, namely Bank Syariah Mandiri, BRI Syariah and BNI Syariah before and after the merger. By using historical data from 2017-2020 as an initial benchmark to determine post-merger financial performance using the forecasting data method. There are several results, as follows: Where this has been described in the previous test, namely the granger causality test. The VECM model analysis was carried out in this study to determine differences in the financial performance of 3 state-owned Islamic banks, namely Bank Syariah Mandiri, BRI Syariah and BNI Syariah before and after the merger. By using historical data from 2017-2020 as an initial benchmark to determine post-merger financial performance using the forecasting data method. There are several results, as follows:

1) Effect of Variable Indicators on Financial Ratios Before and After the Merger

Based on data on the stationarity test at the level level which was carried out using the Augmented Dickey Fuller test for the variables ROA, NPM, DER, DAR AND CR taking into account the absolute value or the absolute value of the Augmented Dickey Fuller statistic $|-6.9340|$ greater than the MacKinnon critical value at each α 5% $|-2.926622|$ and the probability value obtained is less than 0.05 ($0.00 < 0.05$) so it can be concluded that in the long term all indicators are significant, if you look at the results above for the variables ROA, NPM, DER, DAR, CR significant ($0.00 > 0.05$) so the value of each variable namely profitability (ROA, DER), Solvency (DER, DAR) and Liquidity (CR, DER) in the previous period significantly influenced the value of the profitability variable (ROA, DER), Solvability (DER, DAR) and Liquidity (CR, DER) in the future. It can be concluded that with these results, there is a difference between the previous period and the next period.

2) Reciprocal relationship between Variable Indicators

There is a relationship between variables that have a reciprocal relationship or mutually influencing relationship, namely the profitability variable (ROA) statistically significantly affects the solvency variable (DER), the solvency variable (DAR) statistically significantly affects the profitability variable (NPM), solvency variable (DAR) statistically significant influence on solvency variable (DER), liquidity variable (CR) statistically significant influence on solvency variable (DAR) statistically significant influence on solvency (DER). With the relationship of mutual influence between these variable indicators it becomes a record for the bank in its realization in the future. Because the results of this forecasting only describe what the prospects for a certain period in the future will be like,

4. CONCLUSION

Based on the data on the stationarity test at the level level which was carried out using the Augmented Dickey Fuller test for the variables ROA, NPM, DER, DAR AND CR it is concluded that In the long run all indicators are significant ($0.00 > 0.05$) so the value of each variable namely profitability (ROA, DER), Solvency (DER, DAR) and Liquidity (CR, DER) in the previous period significantly affects the value from the variables of profitability (ROA, DER), Solvency (DER, DAR) and Liquidity (CR, DER) in the future.

There is a relationship between variables that has a reciprocal relationship, namely profitability (ROA) statistically significantly affects solvency (DER), solvency (DAR) statistically significantly affects profitability (NPM), solvency (DAR) statistically significantly affects solvency (DER), liquidity (CR) statistically significant influence on solvency (DAR) statistically significant influence on solvency (DER).

The data in the stationarity test were carried out using the Augmented Dickey Fuller test for the variables ROA, NPM, DER, DAR AND CR. It was concluded that in the long run all indicators were significant ($0.00 > 0.05$) so the value of each variable, namely profitability (ROA, DER), Solvability (DER, DAR) and Liquidity (CR, DER) in the previous period significantly affect the value of the variables profitability (ROA, DER), Solvency (DER, DAR) and Liquidity (CR, DER) in the future.

There is a relationship between variables that has a reciprocal relationship, namely profitability (ROA) statistically significantly affects solvency (DER), solvency (DAR) statistically significantly affects profitability (NPM), solvency (DAR) statistically significantly affects solvency (DER), liquidity (CR) statistically significant influence on solvency (DAR) statistically significant influence on solvency (DER).

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