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EVALUATION OF FINANCIAL TECHNOLOGY'S PERFORMANCE IN ISLAMIC BANKING ACROSS INDONESIA, MALAYSIA, AND BRUNEI DARUSSALAM

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Abstract:

This research aims to analyze the effect of financial technology on financial performance in Islamic banking Indonesia, Malaysia and Brunei. The measurement method used in this research the percentage of income derived from the financial technology in the financial statements presented in Islamic banking registered with the Financial Services Authority (OJK). The data used is secondary data obtained from the annual financial statements. population in this research Islamic banking in Indonesia period 2016-2020. The sampling method in this research using purposive sampling method. The number of samples obtained is 129 samples. The data analysis used is the classical assumption test and multiple linear regression analysis. The method analysis data using SPSS version 25. The results of the analysis that has been carried out in this research, it shows that FDR, DER, BOPO, Inflation and Islamic Banking have a significant effect on financial technology in Islamic banking. Meanwhile, financial performance represented by ROA has a significant negative effect on financial technology. Where the increasing income generated by Islamic banking does not necessarily mean that the bank will improve the quality of its financial technology. All variable contribution to the development of financial technology in Islamic banking in Indonesia, Malaysia and Brunei. This shows that the realization that had carried out describes the situation and the condition of the financial performance of Islamic banking on the financial technology.

A. INTRODUCTION

In the G20 era, it is hoped that all countries that join the G20 can develop and improve the economic conditions of their respective countries. To improve economic conditions, an update is needed in every industry. The banking and financial industry is expected to improve its quality to attract customers' attention. Improving quality can be done by improving services and systems used by banks. The previously manual system is now evolving into digitization. Currently, many banks use financial technology in the banking transaction process. Financial technology combines technology and financial services that can change conventional business models into moderators and operational processes initially carried out directly online (Bank Indonesia, 2020). Each bank uses different types of financial technology. There are several types of financial technology: payment channels, digital banking, peer-to-peer lending, digital insurance and crowdfunding.

Financial technology is used both in conventional banking and Islamic banking. The use of Financial Technology in banking shows changes in the financial performance of banks. Financial technology can increase customers' attractiveness because of the ease of transaction wherever customers are located, both during COVID-19 and after COVID-19. In addition, financial technology is very important in the development of Islamic banks, which are currently experiencing significant development in terms of assets and awards achieved. Financial technology used in Islamic banking includes ATM, Internet Banking, Mobile Banking, SMS Banking, Phone Banking, Video Banking, and Branchless. However, for branchless, there are still few who use it.

In Islamic banking, it can be seen that there is an increase in the number of assets, income, equity, and profits owned. This indicates that an increase in the quality and use of financial technology can positively impact the financial performance of Islamic banking. When financial performance increases, that Islamic banks will improve the quality of their financial technology. However, this still needs to be re-analyzed to find out in detail the financial performance that has a significant effect on financial technology so that Islamic banking can improve the quality of its financial technology.

This study focuses on aspects of financial performance that affect the development of financial technology, which several researchers have previously studied. This study represents financial performance on Return on Assets (ROA), BOPO, Debt to Total Equity Ratio (DER), Financing Deposit Ratio (FDR), and inflation. Research conducted by Rahmi Asri and Silvia (2022) and Margaretha (2015) shows that financial performance significantly affects financial technology. This is not in line with the results of research by Syarifudin (2014), Yohani (2015) and Sinambela (2017), which show that financial performance has no significant effect on financial technology.

Based on the description above, the results of some of these studies are still diverse, and some of these studies refer to the influence of financial technology on financial performance; several factors have not been studied previously, and the research has a wider population, namely by examining 3 ASEAN countries (Indonesia, Malaysia, and Brunei Darussalam). Therefore, this study was conducted to examine the factors of financial performance that affect the development of financial technology in Islamic banking. The difference between this study and previous research is that this study uses BOPO, DER, FDR, and inflation variables that previous researchers have not used, and the sample period used is different and updated, namely from 2016 to 2020. In addition, this study also analyzes factors -Factors that influence the development of financial technology that have previously been studied but in this study are further developed from the results of these studies in order to be able to contribute more to the renewal of financial technology used in Islamic banking in Indonesia, Malaysia, and Brunei Darussalam.

B. LITERATUR REVIEW

Stakeholder Theory

Stakeholder theory is used as the basis for corporate responsibility, where the company has responsibility for all stakeholders (Akbar et al., 2017). Islamic banks have responsibilities to customers to carry out operations by sharia provisions. Every activity carried out by Islamic banks is based on Islamic *maqashid*, such as avoiding usury. Not only carrying out operational activities under sharia provisions, but sharia

banking is also required to improve its quality as a form of responsibility to facilitate customers in transacting.

Financial Technology

Financial technology combines technology and financial services to change conventional business models into moderators and operational processes initially carried out directly online (Bank Indonesia, 2020). Financial technology is developed to improve financial performance and overcome problems like slow banking transaction procedures. There are several types of financial technology: payment channels, digital banking, peer-to-peer lending, digital insurance and crowdfunding.

Financial performance

Financial performance is an analysis carried out to determine whether a bank has used all of its funds properly, to find out whether the company has a going concern in the short or long term, and to find out whether the bank has carried out operations by government regulations (Fahmi, 2010). 2018). Financial performance can be measured using several ratios directly related to the company's financial operations contained in the company's financial statements. The ratio data obtained will be used as the basis for decision-making in carrying out its operations both in the short and long term.

Income

Revenue is an increase in economic benefits during the accounting period in the form of an inflow or increase in assets or a decrease in liabilities, increasing equity other than those relating to contributions from equity participants Kieso et al. (2018). Based on this understanding, it can be concluded that income is a gross inflow or an increase in assets or a decrease in liabilities obtained by the company through the company's activities in the form of buying and selling and providing a service as well as interest, royalties and dividends resulting from the use of the entity's assets by third parties that generate benefits substantially. economic benefits for the company can result in decreased liabilities and an increase in equity value. However, inflows

from investment and value-added taxes from third parties are not included in revenue.

Profitability Ratio

The profitability ratio is a ratio that describes the company's ability to earn profits. Profitability ratios consist of Return on Assets (ROA) and Ratio of Operating Expenses and Operating Income (BOPO). Return on Assets (ROA) is the ratio used to measure the company's ability to generate profits using company assets (Kasmir, 2014). Operating Expenses and Operating Income Ratio (BOPO) is a ratio used to compare operating costs with operating income in measuring the level of efficiency and ability of banks to carry out their operations (Rivai et al., 2013).

Solvency Ratio

The solvency ratio is the ratio used to describe the ability of a company's assets to be financed with debt and to measure the debt financing of a company in both the long and short term (Kasmir, 2014). The solvency ratio is the debt-to-equity ratio used to compare the company's total debt with capital (equity) (Triyonowati & Recly, 2016).

Inflation

Inflation is an economic problem that causes an increase in the prices of goods and services in general and occurs continuously within a certain period. When a country's inflation is high, it will be difficult for that country to increase economic growth. On the other hand, when inflation is low and stable, it will become a stimulator of a country's economic growth (Mankiw, 2006).

C. METHODOLOGY

This descriptive quantitative research aims to determine the effect of each independent variable on the dependent variable. This study's population is Islamic Commercial Banks in Indonesia, Malaysia, and Brunei Darussalam for the 2016-2020 period. This study uses a purposive sampling technique by determining the sample based on certain considerations. These considerations or criteria are Islamic

Commercial Banks registered with Bank Focus for 2016-2020 and publishing complete annual financial reports for 2016-2020. The data used in this study is secondary data, namely the annual report of Islamic Commercial Banks obtained through each bank's website and data from bank focus. The data analysis technique used is the parametric statistical method. While the hypothesis testing technique uses multiple linear regression methods using SPSS version 25.

D. RESULT AND ANALYSIS

Classic assumption test

Normality test

Table 1. Normality Test Results

		Unstandardized Residual
N		129
Normal Paramenter [a.b]	Mean	.0000000
	Std. Deviation	.22087043
Most Extreme Differences	Absolute	.068
	Positive	.068
	Negatives	-.049
Test Statistic		.068
Asymp. Sig. (2-tailed)		.200[cd]

Source: Data Processed by Author (SPSS)

The results for the normality test using the Kolmogorov-Smirnov parametric test method can be seen in Table 1 above. The test results of the data above show the asymp value. sig. (2-tailed) of 0.200. This means that the standardized residual data is declared to be normally distributed.

Multicollinearity Test

Table 2. Multicollinearity Test Results

Model		Collinearity Statistics	
		Tolerance	VIF
1	ROA	.756	1.323
	BOPO	.714	1.401
	FDR	.895	1.117
	DER	.919	1.089
	INF	.953	1.049

Source: Data Processed by Author (SPSS)

The test results above show that the tolerance values for the ROA, BOPO, DER, FDR, and Inflation variables are 0.756; 0.714; 0.895; 0.919; and 0.953 where the resulting tolerance value is more than 0.10. Meanwhile, the VIF value on the ROA, BOPO, DER, FDR, and Inflation variables are 1.323; 1,401; 1.117; 1,089; and 1.049. By looking at the test results of the five variables, nothing shows that the VIF value is greater than 10 so it can be concluded that the tested data does not detect multicollinearity symptoms.

Heteroscedasticity Test

Table 3. Heteroscedasticity Test Result

			Unstandardized Residual
Spearman's rho	ROA	Sig (2-tailed)	.716
	BOPO	Sig (2-tailed)	.061
	FDR	Sig (2-tailed)	.296
	DER	Sig (2-tailed)	.280
	INF	Sig (2-tailed)	.710
	Unstandardized Residual	Sig (2-tailed)	.

Source: Data Processed by Author (SPSS)

Heteroscedasticity in this study was tested using the spearmen rank method. Based on these trials resulted in a significant value of the ROA variable to the absolute residual value of 0.716 > 0.050, the BOPO variable to the absolute residual value of 0.061 > 0.050, the FDR variable to the absolute residual value of 0.296 > 0.05, the DER variable to the absolute residual value of 0.280 > 0.050, while the inflation variable to the absolute residual value is 0.710 > 0.050. This shows that there is no systematic relationship between the variables that explain and the absolute value of the residuals, so it can be concluded that the data obtained does not contain heteroscedasticity.

Autocorrelation Test

Table 4. Autocorrelation Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.643[a]	.413	.389	.2253149	2.088

Source: Data Processed by Author (SPSS)

Based on the results of the autocorrelation test in the table above, the Durbin-Watson value of 2.088 means that the value of dw is between the upper bound (dU) and (4-dU), namely 1.6329 < 2.088 < 2.3671. So, it can be concluded that there is no positive autocorrelation, or it can be interpreted that there is no relationship between one data and another.

Hypothesis Testing

Coefficient of Determination Test (R^2)

Table 5. Coefficient of Determination Test Results (R^2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.643[a]	.413	.389	.2253149

Source: Data Processed by Author (SPSS)

Based on the results of the coefficient of determination test (R2), it shows that the value of R or multiple R is 0.643 which means that the multiple correlation between ROA, BOPO, DER, FDR, and Inflation is 0.643. While the value of R square or coefficient of determination is 0.413, which means that the ROA, BOPO, DER, FDR, and inflation variables affect financial technology by 41.3% so that the influence of the contribution of variable changes to financial technology, which is 58.7% is influenced by other factors that researchers have not studied. The adjusted R square value generated is 0.389, which means that variations in ROA, BOPO, DER, FDR, and inflation affect financial technology by 38.9%. In addition, the above results show the value of std. the error of the estimate is 0.2253149, which means that the deviation between the regression equation and the real dependent value is 0.2253149 units of the dependent variable.

Simultaneous F Test

Table 6. Simultaneous F Test Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.399	5	.880	17.329	.000[b]
	Residual	6.244	123	.051		
	Total	10.643	128			

Source: Data Processed by Author (SPSS)

Based on the results of the simultaneous F test in Table 6 above, the significance value of F is 0.000 < F significance value of 0.05, so it can be concluded that ROA, BOPO, DER, FDR, and inflation simultaneously affect financial technology.

Partial T-Test

Table 7. Partial T-Test Results

Model		Unstandar-dized B	Coefficients Std. Error	Standar-dized Coefficients Beta	t	Sig.
1	(Constant)	.581	.097		5.982	.000
	ROA	-.183	.054	-.268	-3.368	.001
	BOPO	.109	.041	.216	2.640	.009
	FDR	-.205	.067	-.222	-3.036	.003
	DER	-.015	.005	-.211	-2.927	.004
	INF	.036	.013	.202	2.859	.005

Source: Data Processed by Author (SPSS)

Based on the results of the simultaneous F test in table 6 above, the significance value of F is 0.000 < F significance value of 0.05 so it can be concluded that ROA, BOPO, DER, FDR, and inflation simultaneously affect financial technology. Partial t test in this study using a level of significant 0.05. In partially testing the hypothesis, the t-test is used, which is to partially test the independent variable on the dependent variable.

The first hypothesis states that ROA as a proxy for financial performance affects financial technology in Islamic banks. The results of the regression analysis showed that the ROA variable had a significance value smaller than 0.05 and the coefficients were 0.001 and -0.268. Based on the results above, it can be concluded that financial performance represented by ROA has a significant negative effect on financial technology. Where the increasing income generated by Islamic banking does not necessarily mean that the bank will improve the quality of its financial technology. This is because the highest income is obtained from other assets owned by Islamic banking besides financial technology so that banks are more focused on increasing assets that contribute more than developing financial technology.

The second hypothesis states that BOPO, as a proxy for financial performance, significantly influences financial technology in Islamic banks. The regression analysis results showed that the BOPO variable had a significance value and coefficient of 0.009 and 0.216. Therefore, it can be concluded that the financial performance proxied by BOPO has a significant positive effect on financial technology. Developing financial technology requires a large enough cost. In accounting records, the costs incurred to improve the quality of financial technology can be charged to operational costs so that operational costs increase when there is development in their financial technology.

The third hypothesis states that FDR influences financial technology in Islamic banks. The regression analysis results show that the FDR variable has a significance value and coefficient of 0.003 and -0.222, which indicates that the FDR variable has a significant negative effect on financial technology. Financing is one component that can provide greater income than other operational activities. When Islamic banking focuses more on the income earned for financing distribution, the financial technology owned by banks is not developed optimally. This is because the funds owned by Islamic banking are maximized for financing distribution.

The fourth hypothesis states that DER as a proxy for financial performance has a significant influence on financial technology in Islamic banks. The results of the regression analysis show that the DER variable has a significance value less than 0.05, which is 0.004 and a coefficient of -0.211. Therefore, it can be concluded that the DER variable has a significant negative effect on financial technology. Financial technology can be developed using funds owned by Islamic banking or through debt. When Islamic banking does not have sufficient funds to be able to improve its financial technology, the bank will apply for a loan to be able to develop its financial technology. This is done in order to provide the best service for customers, attract other customers, and not lose in the competition in the banking market.

The fifth hypothesis states that inflation as a proxy for macroeconomics has a significant influence on financial technology in Islamic banks. The results of the regression analysis show that the inflation variable has a significance value of 0.005 with a coefficient of 0.202, which means sig inflation <0.05. Therefore, it can be concluded that inflation has a significant positive effect on financial technology

E. CONCLUSION

The results of this study indicate that, simultaneously, financial performance has a significant influence on financial technology. The financial performance as proxied by the Return on Asset (ROA), the Operating Expenses and Operating Income (BOPO), the Financing Deposits Ratio (FDR), the Debt-to-Equity Ratio (DER), and the inflation have a significant effect on financial technology.

The limitations of this study and suggestions for further research are that it is expected to add or use other variables that may affect the amount of financial technology in Islamic banks. Due to the difficulty of knowing the amount of financial technology through financial reports, future research can consider using other proxies of financial performance.

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