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# Comparative Analysis Of Bank Muamalat's Profitability in Implementing Fintech

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#### **ABSTRACT**

# Technological innovation has become the basis of information in the financial services industry, currently many new technologies are ready to drive the next wave of financial services innovation, one of which is financial industry innovation in the form of financial technology or fintech. The fintech industry emerged due to various constraints of banking and other financial institutions. The economic development of a country is strongly supported by the banking sector. The profitability of Bank Muamalat Indonesia is a benchmark in the banking world to determine the extent to which the bank has achieved its goal, namely obtaining good profits to increase bank profits. The aim of this research is to analyze the comparison of Bank Muamalat Indonesia before and after collaborating with fintech. The method used in this research is a quantitative method with the data source used from the annual financial report of Bank Muamalat Indonesia for the period 2006-2023. This research uses secondary data analysis using the normality test method, paired sample t-test for normally distributed data and the Wilcoxon signed test for data that is not normally distributed. The research results obtained show that at Bank Muamalat Indonesia the variables ROA, ROE, BOPO, GPM have a negative and significant effect after collaborating with fintech during the 2006-2023 period and the NIM and NPM variables have a positive and significant effect. This indicates that Bank Muamalat Indonesia's financial condition is experiencing income instability even though it has collaborated with fintech.

#### **ARTICLE INFO**

# Keywords:

Competitive, Profitability, Financial Technology (Fintech), Bank Muamalat Indonesia

# Introduction

The distribution of funds in Islamic Banking is known as financing and Islamic operational activities use the principle of profit sharing (mudharabah) Islamic banks do not use interest as a means of earning profits or charging interest on loans because interest is

usury which is forbidden. Banks in carrying out their business processes are always faced with various risks and challenges. There are risks and challenges faced so that an assessment must be carried out regarding transparency measuring tools in disclosing company information (Salmita, 2023). One of the measuring tools that can be used to measure bank performance is profitability, Profitability is a company's ability to generate profits and is measured using profitability ratios. And one indicator of the success of sharia banking is shown by the function of the bank as an intermediary institution which will have an impact on bank profit. (Nisa & Iqbal Rafiqi, 2023)

Profitability is the most important indicator to evaluate the performance of a bank. Profitability can measure how much a company's capacity to earn profit both related to sales, asset resources and profit for its own capital. To measure the level of profitability is a very important thing to do, because the main purpose of measuring the level of profitability is to ensure whether the percentage of profit obtained by the bank from several periods has been achieved or not. The purpose of analysing the profitability of a bank is to measure the level of business efficiency achieved by the bank concerned (Hendrawan, 2016) One of the ratios used by banks to measure profitability is ROA (Return on Assets), ROE (Return on Equity), NIM (Net Interst Margin), BOPO, Net Profit Margin (NPM) and Gross Profit Margin (GPM).

Based on the Indonesian banking statistics report, the downward trend in the level of banking profitability levels identifies that the financial performance of banks has decreased, the banking sector uses financial technology with the aim of increasing the efficiency of business operations and the quality of banking services for its customers. Fintech or Financial Technology is a term used to denote companies that offer modern technology in the financial sector(Amrin et al., 2022) These companies have been around since 2010. Fintech companies are mostly micro, small or medium-sized companies that do not have much equity, but have a clear idea of how to introduce new innovations or how to improve existing services in the financial services market.

Currently fintech already has a legal umbrella, which has been issued by the Financial Services Authority Regulation (PJOK) Number 13 / PJOK.02 / 2018 concerning responsible digital financial innovation which considers that along with technological advances, digital financial innovation cannot be ignored and needs to be managed in order to provide the greatest benefit for the benefit of the community. the regulation was issued so that fintech produces digital finance that is responsible, safe and has good governance risks, this regulation also supports innovative, fast, cheap, easy and broad financial services(Pramana, 2022)

Islamic banks have begun to cooperate with start-up fintech companies, one of the Islamic fintech companies is PT Ammana Fintek which is the first sharia P2P (Perr-to-Perr) Lending company in Indonesia that is licensed and supervised by OJK which supports the progress of business actors (MSMEs) by bridging lenders with borrowers. PT Bank Muamalat Indonesia Tbk (Bank Muamalat) established a business partnership with PT Ammana Fintek Syariah (Ammana), a sharia peer-to-peer (P2P) lending company. In this case, Bank Muamalat will act as an agent. payment results from lenders on borrowers will be managed through a series of cash management services at Bank Muamalat, including using virtual accounts, cash management systems and becoming escrow account agents to ensure that funds collected and managed will be allocated in accordance with the main objectives (Junaidi, 2022)

Tabel 1
Rasio Profitabilitas ROA, ROE, NIM, BOPO, NPM, GPM Bank Muamalat

KET	YEAR	ROA	ROE	NIM	ВОРО	NPM	GPM
	2006	2,10	21,99	6,10	84,69	62,15	55,02
	2007	2,18	22,35	7,61	83,33	65,64	57,08
	2008	2,60	33,14	7,42	78,94	67,63	60,97
	2009	0,45	8,03	5,15	95,50	63,76	45,84
	2010	1,36	17,78	5,24	87,35	71,73	52,45
	2019	0,05	0,45	0,83	99,50	80	13,78
	2020	0,03	0,29	1,94	99,45	62,5	33,79
	2021	0,02	0,20	1,59	99,29	47,3	35,20
	2022	0,09	0,53	0,66	96,62	27,5	18,68
	2023	0,02	0,28	0,37	99,41	72,2	9,51

Source: Bank Muamalat Indonesia annual report

Bank muamalat began to cooperate with the company ammana fintech syariah, from the above report shows the financial statements of bank muamalat before and after cooperation. In 2006 ROA was 2.10% and increased in 2008 by 2.60% and again decreased in 2010. While in 2019 ROA continued to decline by 0.05% after collaborating with fintech, this is not in line with research conducted by ridwan muklis which suggests that in collaboration with fintech, financing will be channeled more easily so as to increase banking profitability, considering that ROA 2019 has decreased so that fintech in banking must be socialised to customers.

In the ROE variable before joining in 2006 it was 21.99% and decreased sharply in 2009 by 8.3% and continued to decline after working with fintech, this is not in accordance with the phenomenon that states that adopting fintech can help banking profitability and

according to Kauffman's research says that companies engaged in finance need to rely on technological innovations such as fintech.

NIM in 2006 amounted to 6.10% and experienced fluctuations every year and after joining NIM at Muamalat Bank decreased every year, namely in 2023 by 0.37, this shows that Bank Muamalat experienced a higher NIM level during the period before implementing fintech. BOPO in 2006 of 84.69% is included in the healthy category and after joining fintech continues to increase, as seen in 2019 of 99.50% shows that Bank Muamalat experienced a very high level of BOPO during the period after implementing fintech which shows it is not good at streamlining its operational expenditures and optimising its income.

The NPM value before joining has increased in 2006-2010 and after joining in 2019 has increased by 80% and has decreased in 2023 which is 72.2%, this shows that the bank is not good at its operations. As for GPM before joining fintech has increased and after joining the GPM value has decreased every year.

Based on the background described above with the existence of Start-up Fintech companies and seeing the condition of the profitability of Muamalat Bank, this study compares before and after cooperation with Start-up Fintech companies and takes objects at PT Bank Muamalat Indonesia. This study chose the object at PT Bank Muamalat as the object of research because of the sharia principles used and as the first Sharia Bank in Indonesia.

#### **Literatures Review**

Financial Technology is a financial technology that refers to new solutions that show innovation in the development of applications, products, or business models in the financial services industry that use technology. Bank Indonesia defines Financial Technology (Fintech) as the result of a combination between financial services and technology that ultimately changes the business model from conventional to moderate, which initially in paying must be face-to-face and carry a number of cash, now can make transactions by making payments that can be made in a matter of seconds (Rolas et al., 2024)

Financial technology has helped Islamic banks in speed and accuracy in processing business operations data and marketing products. The application of information systems is very influential in the banking industry, where the application of systems in banking has a tremendous impact considering that the banking industry is one of the industries with the highest level of dependence on the activities of collecting, processing, analysing and submitting reports (information) needed to meet customer needs (Nazifah & Sukardi, 2023)

Profitability ratio is a ratio that describes the company's ability to earn profits through all existing capabilities and sources such as sales activities, cash, capital, number of employees, number of branches and so on. Measurement of profitability ratios can be done by comparing various components in the income statement and / or balance sheet. Measurements can be made for several periods (Fuadi & Munawar, 2022). The goal is to monitor and evaluate the level of development of the company's profitability over time. ratios are critical to making the best use of resources when dealing with environmental change. Several ratios, including liquidity ratios, solvency ratios, profitability ratios, profitability ratios, and valuation ratios, can be used as measuring tools. Finding problems with a bank's financial status is the main goal of financial report analysis, especially Islamic banks. (Sari et al., 2023)

It is known that there are several types of profitability ratios, the first is Return on Assets (ROA). ROA is a ratio used to describe a bank's ability to manage funds invested in overall assets that generate profits. The return on assets is a ratio that shows how much the asset contributes to creating net profit. In other words, this ratio is used to measure how much net profit is generated from each rupiah of funds embedded in total assets. This ratio is calculated by dividing net profit by total assets (Dwi & Wediawati, 2022).

Second, Return on Equity (ROE). ROE is a ratio that shows the extent to which the company manages its own capital (net worth) effectively, measuring the level of return on investment that has been made by the owner of the company's own capital or shareholders. This ratio shows the power to generate returns on investment based on the book value of shareholders, and is often used to compare two or more companies in the same industry (Wibowo et al., 2023).

The third is Net Interest Margin (NIM). NIM is a ratio used to measure the ability of bank management to manage its earning assets to generate net interest income. The greater this ratio, the higher the interest income on productive assets managed by the bank, the smaller the possibility of a bank in problematic conditions. The NIM ratio is also used to measure the bank's performance ability in lending (Amali & Selvi, 2021).

The fourth is Operating Expenses to Operating Income (BOPO). BOPO is a ratio that is often called the efficiency ratio and is used to measure the ability of bank management to control operating costs. The smaller this ratio means the more efficient the operating costs incurred by the bank concerned so that the possibility of a bank in problematic conditions is smaller.

Fifth is the Net Profit Margin (NPM) ratio. NPM is a ratio that measures the amount of the company's net profit compared to its sales. This ratio interprets the company's level of efficiency, namely the extent to which the company's ability to reduce its operating costs in certain periods (Bagaskara & Rohmadi, 2024).

The sixth is the Gross Profit Margin (GPM) ratio. GPM is a ratio used to measure the percentage of gross profit on net sales. This ratio is calculated by dividing gross profit against net sales. Gross profit itself is calculated as a result of the reduction between net sales and cost of goods sold (Nazifah & Sukardi, 2023).

# **Hypotheses Development**

- 1. H<sub>o1</sub>: There is no significant difference in the level of Return On Asset (ROA) profitability ratio before and after applying Financial Technology
  - Ha<sub>1</sub>:There is a significant difference in the level of Return On Asset (ROA) profitability ratio before and after applying Financial Technology.
- 2.  $H_{02}$ : There is no significant difference in the level of Return On Equity (ROE) profitability ratio before and after applying Financial Technology.
  - Ha<sub>2</sub>: There is a significant difference in the level of Return On Equity (ROE) profitability ratio before and after applying Financial Technology.
- 3. H<sub>o3</sub>: There is no significant difference in the level of Net Interest Margin (NIM) profitability ratio before and after applying Financial Technology.
  - Ha<sub>3</sub>: There is a significant difference in the level of Net Interest Margin (NIM) profitability ratio before and after applying Financial Technology
- 4. H<sub>04</sub>: There is no significant difference in the level of BOPO profitability ratio before and after applying Financial Technology
  - $H_{a4}$ : There is a significant difference in the level of BOPO profitability ratio before and after applying Financial Technology.
- 5.  $H_{05}$ : There is no significant difference in the level of Net Profit Margin (NPM) profitability ratio before and after applying Financial Technology
  - H<sub>a5</sub>: There is a significant difference in the level of Net Profit Margin (NPM) profitability ratio before and after applying Financial Technology
- 6.  $H_{06}$ : There is no significant difference in the level of Gross Profit Margin (GPM) profitability ratio before and after applying Financial Technology.
  - H<sub>a6</sub>: There is a significant difference in the level of Gross Profit Margin (GPM) profitability ratio before and after applying Financial Technology.

## **Methods**

The research method used in this research is quantitative research, which involves a series of observations (measurements) that can be expressed in the form of numbers or qualitative data into numerical data. This study will examine the Comparative Analysis of Bank Muamalat's Profitability in Applying Fintech, this comparative method is used for a study that compares the financial data of banking companies before and after applying financial technology. The nature of this research is development.

This research was conducted at Islamic commercial banks, namely Bank Muamalat Indonesia, which was obtained from the official website of the annual financial report of bank muamalat indonesia http://www.bankmuamalat indonesia.co.id and the research time was January 2024 until completion.

The population in this study is the financial statements that have been published by Bank Muamalat Indonesia 5 years before using Financial Technology (Fintech) and 12 years after using Financial Technology (Fintech), namely in 2006-2023. The sample in this research uses time series data. The technique in taking this sample is purposive sampling technique, which is a sampling technique with certain considerations. Then the bank sample was selected by purposive sampling with the selection of the following criteria:

- 1. Islamic Commercial Banks that have implemented or adopted Fintech services such as ATMs, Internet Banking, Mobile Banking, SMS Banking, and Phone Banking.
- 2. Banks that have collaborated with one of the Fintech Startups.
- 3. Financial statements that publish complete annual financial statements for a period of seventeen consecutive years from 2006-2023. This technique aims to obtain a sample that suits the research needs. Then the sample in this study was Bank Muamalat Indonesia.

This data collection technique uses Literature Study, namely in this study, researchers examine theories obtained from literature, articles, journals, and previous research results so that researchers can understand the relevant literature. Statistical testing was carried out using the SPSS programme. Data analysis techniques are carried out through classification assumption tests and hypothesis testing.

# Results

# Ratio assessment of Bank Muamalat Indonesia's Profitability Criteria Before the Fintech Start-Up

Table 2 Assessment of Profitability Criteria Before Fintech

ISLAMIC BANK	PROFITABILITY	AVERAGE VALUE	CRITERIA	
	ROA	(%)	Vory Hoalty	
	ROE	1,7	Very Healty	
	NIM	20,65	Very Healty	
		6,3	Very Healty	
	BOPO	85,97	Very Good	
	NPM	66,18	Very Good	
	GPM	54,27	Very Good	

(Source: Excel Output, 2024)

# 2. Ratio assessment of Bank Muamalat Indonesia's Profitability Criteria After the Fintech Start-Up

ISLAMIC BANK	PROFITABILITY	AVERAGE VALUE (%)	CRITERIA
	ROA	0,41	Healty enough
	ROE	7,27	Very Healty
	NIM	8,88	Very Healty
	BOPO	98,85	Not Good
	NPM	70,55	Very Good
	GPM	34,09	Very Good

(Source: Excel Output, 2024)

# **Data Analysis Test Results**

# **Normality Tes**

Tabel 3
Normality Test of ROA Before and After Collaboration with Fintech

**Tests of Normality** 

	Kolmogorov	v-Smirnov <sup>a</sup>		Shapiro-Wilk			
	Statistic	df	Sig.	Statistic	df	Sig.	
ROA Sebelum	.265	5	.200*	.922	5	.542	
ROA Sesudah	.318	5	.109	.748	5	.029	

Sumber: Output SPSS, 2024

Based on table 3 above, it shows that the significance level of ROA before joining is 0.542 which means greater than the probability value of 0.05, then H0 is accepted or it can

be interpreted that the data is normally distributed. Meanwhile, the significance level of ROA after joining is 0.029 which means it is smaller than the probability value, so H0 is rejected or it means that the data is not normally distributed.

Tabel 4
Normality Test of ROE Before and After Collaboration with Fintech

**Tests of Normality** 

	Kolmogoro	v-Smirnov <sup>a</sup>		Shapiro-Wilk			
	Statistic	df	Sig.	Statistic	df	Sig.	
ROE Sebelum	.226	5	.200*	.965	5	.839	
ROE Sesudah	.246	5	.200*	.859	5	.225	

Sumber: Output SPSS, 2024

Based on table 4 above, it shows that the significance level for ROE before joining is 0.839, which means it is greater than the probability value of 0.05, so H0 is accepted or it can be interpreted that the data is normally distributed. Meanwhile, the significance level of ROE after joining is 0.225, which means it is greater than the probability value, so H0 is accepted or it means that the data is normally distributed.

Tabel 5
Normality Test of NIM Before and After Collaboration with Fintech

**Tests of Normality** 

	Kolmogorov	y-Smirnov <sup>a</sup>		Shapiro-Wilk			
	Statistic	df	Sig.	Statistic	df	Sig.	
NIM Sebelum	.230	5	.200*	.856	5	.214	
NIM Sesudah	.465	5	<,001	.569	5	<,001	

Sumber: Output SPSS, 2024

Based on table 5 above, it shows that the significance level of NIM before joining is 0.214 which means it is greater than the probability value of 0.05, then H0 is accepted or it can be interpreted that the data is normally distributed. Meanwhile, the significance level of NIM after joining is 0.001, which means it is smaller than the probability value, so H0 is rejected or it means that the data is not normally distributed.

Tabel 6
BOPO Normality Test before and after Collaboration with Fintech

**Tests of Normality** 

	Kolmogoro	v-Smirnov <sup>a</sup>		Shapiro-Wilk			
	Statistic	df	Sig.	Statistic	df	Sig.	
BOPO Sebelum	.211	5	.200*	.951	5	.746	

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BOPO Sesudah	.407	5	.007	.683	5	.006
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Sumber: Output SPSS, 2024

Based on table 6 above, it shows that the significance level of BOPO before joining is 0.746 which means it is greater than the probability value of 0.05, then H0 is accepted or it can be interpreted that the data is normally distributed. Meanwhile, the significance level of BOPO after joining is 0.006 which means it is smaller than the probability value, so H0 is rejected or it means that the data is not normally distributed.

Tabel 7
Normality Test of NPM Before and After Collaboration with Fintech

**Tests of Normality** 

	Kolmogorov	v-Smirnov <sup>a</sup>		Shapiro-Wi		
	Statistic	df	Sig.	Statistic	df	Sig.
NPM Sebelum	.158	5	.200*	.964	5	.836
NPM Sesudah	.316	5	.114	.831	5	.143

Sumber: Output SPSS, 2024

Based on table 7, it shows that the significance level for NPM before joining is 0.836, which means it is greater than the probability value of 0.05, so H0 is accepted or it can be interpreted that the data is normally distributed. Meanwhile, the significance level of NPM after joining is 0.143, which means it is greater than the probability value, so H0 is accepted or it means that the data is normally distributed.

Tabel 8
GPM Normality Test Before and After Collaboration with Fintech

**Tests of Normality** 

	Kolmogoro	v-Smirnov <sup>a</sup>		Shapiro-Wilk			
	Statistic	df	Sig.	Statistic	df	Sig.	
GPM Sebelum	.174	5	.200*	.977	5	.921	
GPM Sesudah	.326	5	.089	.826	5	.131	

Sumber: Output SPSS, 2024

Based on table 8 above, it shows that the significance level for GPM before joining is 0.921, which means it is greater than the probability value of 0.05, so H0 is accepted or it can be interpreted that the data is normally distributed. Meanwhile, the significance level of GPM after joining is 0.131, which means it is greater than the probability value, so H0 is accepted or it means that the data is normally distributed.

# Uji Paired Sample Test

Tabel 9
Paired Sample t-test of ROE Before and After Collaboration with Fintech

Paired Samples	Test								
	Paired Di	fferences						Signifi	cance
				95% Con	fidence				
			Std.	Interval o	of the			One-	Two-
		Std.	Error	Difference	e			Sided	Sided
	Mean	Deviation	Mean	Lower	Upper	t	df	p	р
Pair ROE	Mean 3.11200		Mean 3.64213		Upper 13.22418		df 4	p .221	.041
Pair ROE 1 Sebelum					1.1			•	.041
				-	1.1			•	.041

Sumber: Output SPSS, 2024

Based on the table above, it can be seen that the results of hypothesis testing on the ROE ratio variable in the paired sample t-test test if the sig value (2-tailed) <0.05 then H0 is rejected, if the sig value (2-tailed) > from 0.05 then H0 is accepted. Because the value is 0.041 which is smaller than the research limit of 0.05. So the hypothesis is that H0 is rejected or there is a significant difference in the Return On Equity ratio before and after collaborating with Start-Up Fintech.

 $\label{thm:condition} Tabel~10$  Paired Sample t-test of NPM Before and After Collaboration with Fintech

Paired Samples T	Paired Samples Test												
	Paired D	Differences						Signifi	icance				
			95% Conf	idence									
		Std.	Std.	Interval of the				One-	Two-				
		Deviatio	Error	Difference	9		d	Side	Side				
	Mean	n	Mean	Lower	Upper	t	f	d p	d p				
Pai NPM	39.854	20.5408	9.1861	14.3491	65.3588	4.33	4	.006	.012				
r 1 Sebelum -	00	8	6	3	7	8							
NPM													
Sesudah													

Sumber: Output SPSS, 2024

The results of hypothesis testing on the NPM ratio variable in the paired sample t-test test if the sig value (2-tailed) <0.05 then H0 is rejected, if the sig value (2-tailed)> from 0.05 then H0 is accepted. Because 0.012 which is smaller than the research limit of 0.05. So

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the hypothesis is that H0 is rejected, or there is a significant difference in the Net Profit Margin ratio before and after collaborating with Start-Up Fintech.

Tabel 11
Paired Sample t-test of GPM Before and After Collaboration with Fintech

Paired Samples Test
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Paired Differences									Significance	
		95% Confidence								
			Std.	Std.	Interval	of the			One-	Two-
			Deviatio	Error	Difference	ce		d	Side	Side
		Mean	n	Mean	Lower	Upper	t	f	d p	d p
Pai	GPM	8.5700	2.89899	1.2964	4.9704	12.1695	6.61	4	.001	.003
r 1	Sebelu	0		7	3	7	0			
	m - GPM									
	Sesudah									

Sumber: Output SPSS, 2024

The results of hypothesis testing on the GPM ratio variable in the paired sample ttest test if the sig value (2-tailed) <0.05 then H0 is rejected, if the sig value (2-tailed)> from 0.05 then H0 is accepted. Because 0.003 which is smaller than the research limit of 0.05. So the hypothesis is that H0 is rejected or there is a significant difference in the Gross Profit Margin ratio before and after collaborating with Start-Up Fintech.  $\phantom{a}$ .

## Uji Wilxocon Signed Rank Test

Tabel 12 Wilcoxon Signed Test Data ROA Variable Bank Muamalat Indonesia Before and After Collaboration with Fintech

Test Statistics<sup>a</sup>

ROA Sesudah -					
	ROA Sebelum				
Z	-2.023b				
Asymp. Sig. (2-tailed) .043					
C 1 0 4 4 CDCC 2024					

Sumber: Output SPSS, 2024

The results of hypothesis testing on the NIM ratio variable in the Wilcoxon Signed ttest test if the sig value (2-tailed) < 0.05 then H0 is rejected, if the sig value (2-tailed) > than 0.05 then H0 is accepted. Because 0.500 which is greater than the research limit of 0.05. So the hypothesis is H0 accepted, or there is no significant difference in the NIM ratio before and after collaborating with Start-Up Fintech.

Tabel 13
Wilcoxon Signed Test Data NIM Variable Bank Muamalat Indonesia Before and
After Collaboration with Fintech

Test Statistics<sup>a</sup>

	NIM Sesudah -				
	NIM Sebelum				
Z	674 <sup>b</sup>				
Asymp. Sig. (2-tailed) .500					
G 1 0					

Sumber: Output SPSS, 2024

The results of hypothesis testing on the NIM ratio variable in the Wilcoxon Signed t-test test if the sig value (2-tailed) <0.05 then H0 is rejected, if the sig value (2-tailed) > than 0.05 then H0 is accepted. Because 0.500 which is greater than the research limit of 0.05. So the hypothesis is H0 accepted, or there is no significant difference in the BOPO ratio before and after collaborating with Start-Up Fintech

Tabel 14
Wilcoxon Signed Test BOPO Variable Data Bank Muamalat Indonesia Before and
After Collaboration with Fintech

Test Statistics<sup>a</sup>

	BOPO Sesudah -
	BOPOSebelum
Z	405b
Asymp. Sig. (2-tailed)	.686

Sumber: Output SPSS, 2024

The results of hypothesis testing on the BOPO ratio variable in the Wilcoxon Signed t-test test if the sig value (2-tailed) <0.05 then H0 is rejected, if the sig value (2-tailed) > than 0.05 then H0 is accepted. Because 0.686 which is greater than the research limit of 0.05. So the hypothesis is H0 accepted, or there is no significant difference in the BOPO ratio before and after collaborating with Start-Up Fintech.

# **Discussion**

#### **Comparison of ROA Ratio Before and After Joining Fintech**

From the results of research conducted by researchers on Return On Asset (ROA) at Bank Muamalat Indonesia, it shows that the ROA variable before working with start-up fintech and afterwards shows that there is a significant difference where the sig value in the Wilcoxon Signed Rank Test of this study is 0.043 smaller than 0.05 which means there is a difference when using start-up fintech.

This is supported by (Romadhon, 2021) esearch, which states that after working with Fintech, ROA results have a significant negative effect. Where in this study the analysis of the ROA profitability ratio before fintech 1.7% while after fintech to 0.41% it can be concluded that the value of the ROA variable before fintech is better than the ROA value after fintech There is a difference that has a negative effect due to the lack of bank ability to manage net income by utilising bank assets in cooperation with start-up fintech due to the rise of start-up fintech that has sprung up in Indonesia.

# Comparison of ROE Ratio Before and After Joining Fintech

From the results of research conducted by researchers on the Return On Equity variable at Bank Muamalat Indonesia, it shows that the ROE variable before working with start-up fintech and afterwards shows that there is a significant difference, where the sig value in the Paired Sample T-Test difference test of this study is 0.041 smaller than 0.05.

This is supported by (Febrianto, 2022) Research which suggests that after collaborating with Fintech the results of ROE have a significant negative effect. Where in this study the analysis of the ROE profitability ratio before fintech is 20.65% and after fintech it is 7.27%, it can be concluded that the value of the ROE variable before fintech is better than the ROE value where the ROE variable has a significant negative effect because the bank has not been able to use its capital in cooperating with one of the fintech start-ups to generate net income and satisfy the interests of the shares this can happen due to the lack of promotion of new products in Bank Muamalat Indonesia so that there is less interest in the community to become customers and invest in the bank.

# **Comparison of NIM Ratio Before and After Joining Fintech**

From the results of research conducted by researchers on Net Interest Margin (NIM) at Bank Muamalat Indonesia, it shows that the NIM variable before working with start-up fintech and afterwards shows that there is no significant difference where the sig value in the Wilcoxon Signed Rank Test of this study is 0.500 greater than 0.05 which means there is no significant difference when using start-up fintech.

This is supported by research by (Muchlis, 2018) hich suggests that by collaborating with Fintech, channeling bank financing will be easier so that it can increase profitability. after working with Fintech, the results of NIM have a significant positive effect. Where in this study the analysis of the NIM profitability ratio before fintech is 6.3% and after fintech to 8.88% there is no significant difference but a positive effect means that Bank Muamalat in collaboration with one of the Start-up Fintech is able to generate large interest income

(profit sharing) because the existence of Fintech in banking is able to facilitate the public to do short-term financing so that the bank's profit sharing opinion can increase.

# **Comparison of BOPO Ratio Before and After Joining Fintech**

From the results of research conducted by researchers on Operating Expenses to Operating Income at Bank Muamalat Indonesia, it shows that the BOPO variable before collaborating with StartUp Fintech and afterwards shows that there is no significant difference where the sig. value in the Wilcoxon Signed Rank Test of this study is 0.686 greater than 0.05.

This is supported by (Prastika, 2019) research which states that after collaborating with Fintech the results of BOPO have no significant and negative effect. Where in this study the ratio analysis of BOPO variables after and after fintech has increased 85.97% to 98.85% which proves the greater the operational expenses incurred by the bank so that it shows a decrease in bank profitability this is because there are still many operational expenses that must be paid by the bank due to lack of public knowledge of poduk-products and services contained in Bank Muamalat Indonesia.

# **Comparison of NPM Ratio Before and After Joining Fintech**

From the results of research conducted by researchers on Net Profit Margin at Bank Muamalat Indonesia, it shows that the NPM variable before collaborating with StartUp Fintech and afterwards shows that there is a significant difference where the sig. value in the paired sample t-test of this study is 0.001 smaller than 0.05.

This is supported by research (Muchlis, 2018)which suggests that by collaborating with Fintech, the distribution of bank financing will be easier so that it can increase profitability. Where in this study the ratio analysis of the NPM variable before fintech is 66.18% and after fintech has increased by 70.55%, it can be concluded that the value of the NPM variable after fintech is better than the NPM value before fintech where the NPM variable has a significant positive effect which proves that the higher the operating income in generating profits after working with fintech.

# Comparison of GPM Ratio Before and After Joining Fintech

From the results of research conducted on *Gross Profit Margin*at Bank Muamalat Indonesia shows that the GPM variable before collaborating with StartUp *Fintech* and then shows that there is a significant difference where the sig. value in the difference test *paired sample t-test* This study is 0.003 which is smaller than 0.05. Where the results of the ratio analysis before *fintech* 54.27% and after *fintech* to 34.09% it can be concluded that the value of the GPM

variable before *fintech* better than the GPM value after *fintech* where the GPM variable has a significant negative effect. This is due to the lack of bank ability in maximizing the company in controlling and reducing its operational costs in the company (Jurnal & Mea, 2023)

# Conclusion

The development of developed countries comes from the economic movement of society and All types of businesses are becoming more concerned about the environment in the field sustainable development, but banking stands out for its capabilities to influence economic growth and development of the country. Profitability is the most important indicator to evaluate performance of a bank. Profitability can measure how big a capacity is company in obtaining profits both related to sales, asset resources and profits for its own capital. Bank Indonesia more prioritizes the value of a bank's profitability as measured by its assets Most of the funds come from public savings funds so they are deep measuring the level of banking profitability ROA is more representative of a company's performance bank. The purpose of profitability analysis a bank is to measure the level of business efficiency achieved by the bank concerned.

This research uses secondary data analysis using the normality test method, paired test sample t-test for normally distributed data and Wilcoxon signed test for data which is not normally distributed. The research results obtained show that at Bank Muamalat Indonesia the variables are ROA, ROE, BOPO, GPM negative and significant effect after collaborating with fintech for 2006-2023 period and the NIM and NPM variables have a positive effect and significant. This indicates that Bank Muamalat's financial condition Indonesia is experiencing income instability despite cooperation with fintech

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