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Key drivers of profit sharing rates in mudharabah time deposits: Evidence from Islamic banks in Indonesia

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Abstract

People who save their funds tend to choose products that provide high profits. Profit sharing on Islamic bank deposit products is a unique attraction for people to save funds. Bank external and internal factors are needed in determining the amount of profit sharing. This study aims to identify the variables that affect the amount of profit sharing from deposits in the *mudharabah* system. With a quarterly observation period spanning from 2013 to 2022, the sample for this study consists of all Sharia commercial banks registered with the OJK. The error correction model (ECM) is the technique employed. Based on the long-term ECM test results, non-performing financing and interest rates partially have a positive and significant effect. The exchange rate has a negative and significant effect. In contrast, the liquidity ratio, inflation, and GDP per capita have no effect. In the short-term ECM test results, non-performing financing has a significant positive effect. In contrast, liquidity ratio, inflation, exchange rate, interest rate, and GDP per capita have no effect. These findings demonstrate that while the non-performing finance variable consistently impacts over the long and short-terms, the liquidity ratio, inflation, and GDP per capita variables consistently have no effect.

Keywords: *Mudharabah* deposit profit sharing rate; external factors; internal factors; Indonesia

1. Introduction

Conventional and Islamic banks in Indonesia have almost the same product facilities for distributing and collecting funds. Bank financial institutions have main activities, including deposits, savings, and current account deposits (Arinta, 2016). Regarding public preferences for Islamic bank products, customers tend to use products that provide high profits or profit sharing when saving their funds. Therefore, it is natural that term deposit products, namely deposits, are more attractive than other fundraising products because they offer profit sharing. The following Figure 1. presents the development of funds in the sharia banking industry in Indonesia obtained from third parties:

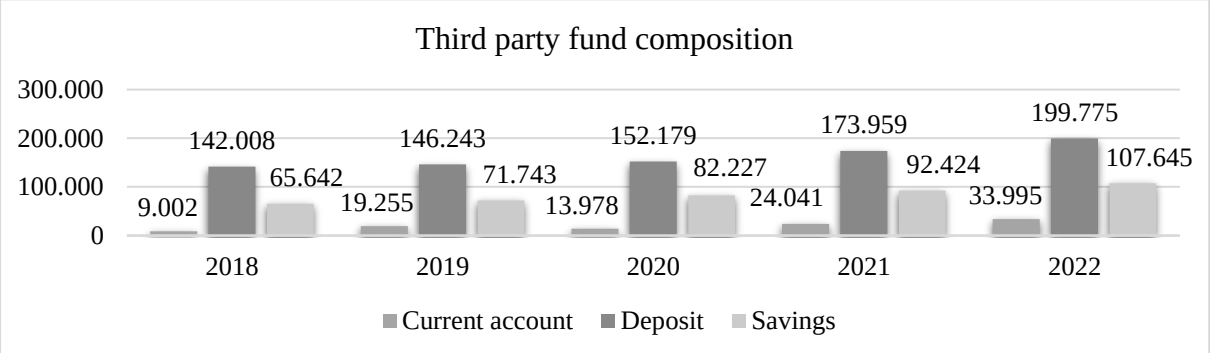

Figure 1. Composition of third-party funds of Islamic banks in Indonesia (Billion Rupiah)

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Based on Figure 1., the most extensive collection of funds is in the form of deposits; this is due to deposit products that offer yields that are high enough compared to other products, so people tend to choose to use deposit products. Deposit products are usually chosen by customers who want to invest in the short and medium-term. Deposits have a specific time for collection at maturity (Wulandari and Oktaviana, 2022), Islamic banks offer deposit products, namely Sharia deposits based on Sharia principles; usually, Sharia deposits use the *mudharabah* principle.

Mudharabah deposits are investments made through third parties, and withdrawals are only made within a certain period with a profit-sharing system. Profit sharing is a form of profit from certain business activities from investment contracts over time, which is uncertain and not fixed at a Sharia bank. The amount of profit-sharing customers will get is a consideration when investing their funds in a Sharia bank. Therefore, maintaining the quality of the profit-sharing level provided to customers is very important for a bank (Sari *et al.*, 2017).

Determining the level of need for profit sharing is to be done carefully because low returns make people reluctant to invest. Several things are considered when determining the profit-sharing return or profit-sharing ratio, namely the internal and external factors of the bank (Ardana, 2018). Offering high levels of profit sharing from Sharia banking cannot be separated from internal factors, namely the management of the Islamic bank itself, such as the effectiveness of the intermediary function and the amount of non-performing financing (Melani and Sugiarto, 2023). The external factors of the bank are macroeconomic indicators such as inflation rates, currency exchange rates, GDP per capita, and interest rates (Adiyadnya *et al.*, 2016).

This research is motivated by the importance of understanding the variables affecting the amount of profit sharing from *mudharabah* savings in Indonesian Islamic banks. As one of the leading products of Islamic banking, *mudharabah* deposits play a key role in attracting public funds while also reflecting the competitiveness of Islamic banks amidst competition with conventional banking. Numerous internal and external economic factors affect the profit-sharing rate. Thus, this study aims to ascertain and comprehend how the degree of profit sharing on *mudharabah* deposits is impacted by inflation, reference interest rates, GDP growth, non-pferforming financing (NPF), and liquidity ratios. Inflation and benchmark interest rates reflect macroeconomic conditions that can affect people's purchasing power and preferences for sharia-based investments. On the other hand, GDP provides an overview of economic performance, which can influence banks' ability to manage financing and provide appropriate and competitive profit sharing. Internal variables such as NPF reflect the bank's financing risk management, while the liquidity ratio describes the bank's ability to fulfill short-term financial obligations.

The primary motivation for this research was to obtain a comprehensive picture and data-based analysis to assist Islamic banks in determining competitive and sustainable profit-sharing policies. This research is also expected to contribute to academic literature, especially in Islamic banking studies, and be a reference for regulators and practitioners in improving the competitiveness of the Islamic financial industry in Indonesia. Thus, researchers are interested in the factors influencing the profit-sharing rates of *mudharabah* deposits in Indonesian Islamic banks.

2. Literature review and hypothesis development

Liquidity ratio and profit sharing rate of Islamic bank mudharabah deposit

The high level of profit sharing offered by Islamic banking is inseparable from the level of financing and asset quality, which can be seen from the level of FDR (Asnaini *et al.*, 2022). The higher FDR ratio indicates that the high level of financing will have an impact on increasing returns that will be generated from financing products (Sanusi, 2017). The increase in return will impact increasing the profit sharing received by customers and vice versa (Septiani and Laelani, 2021). Based on research by Mariss and Yusuf (2017), FDR has a positive and significant effect on the profit sharing of *mudharabah* deposits in Islamic commercial banks. In contrast to Muazaroh and Septiarini (2021), FDR has no effect on the profit-sharing rate of *mudharabah* deposit.

H1. Liquidity ratio affects the *mudharabah* deposit profit sharing rate.

Non-performing financing and profit sharing rate of Islamic bank mudharabah deposit

The customer's failure to repay the bank-awarded loan and its benefits within the allotted time frame results in the risk of non-performing financing (Ariga, 2019). The higher NPF at a bank more

significant the amount of problematic financing; this shows that the quality and ability of Islamic banks analyzing their debtors is poor, so it can have a direct impact on the receipt of income by Islamic banks. If Sharia bank income decreases, the returns received by depositors decrease, influencing the level of profit sharing given by Islamic banks to depositors (Huruniang and Suprayogi, 2015). According to research from Asnaini *et al.* (2022), NPF has a favorable and noteworthy impact on the degree of profit sharing on *mudharabah* deposits. In contrast, Melani and Sugiarto (2023), demonstrate that NPF has no bearing on the *mudharabah* deposit's profit-sharing return.
H2. NPF financing affects the profit sharing level of *mudharabah* deposits.

Inflation profit sharing rate of Islamic bank mudharabah deposit

Inflation is a condition of a general increase in the prices of goods and services that occurs continuously in the economy over a long period. According to Nofinawati (2018), the unresolved inflation rate can disrupt banking activities in raising funds from the public, because inflation causes accurate interest rates to decline. This condition will impact people's low desire to save and withdraw their savings because consumption activities are more dominant than saving money in banks. High inflation will reduce the income of Islamic banks due to a decrease in the level of savings, so profit sharing decreases, and vice versa. Based on research by Mobin and Masih (2015) in Malaysia, inflation impacts deposit products in Malaysian Islamic banks. In contrast to Affandi (2016), *mudharabah* deposit profit sharing is unaffected by inflation.
H3. Inflation affects the *mudharabah* time deposit profit sharing rate.

Exchange rate and profit sharing rate of Islamic bank mudharabah deposit

The exchange rate is a benchmark in the system of selling goods and services; a declining exchange rate allows people to invest some of their funds. This makes Islamic bank deposits increase. The movement of bank funds can be used to calculate the profit-sharing rate obtained by customers. The amount of reward can increase customer loyalty. Therefore, when the exchange rate drops, the DPK increases followed by high profit sharing. According to research by Affandi (2016), The currency rate positively impacts the *mudharabah* deposit's profit-sharing margin. In contrast to Prasetyawan (2019), The *mudharabah* deposit's profit-sharing ratio is unaffected by the currency rate.
H4. Exchange rate affects the *mudharabah* time deposit profit sharing rate.

Interest rate and profit sharing rate of Islamic bank mudharabah deposit

The interest rate is one of the policy tools that banks can employ to try to raise money from other sources and finance debtors. One of the elements that may affect the calculation of the Sharia deposit ratio is the interest rates offered by conventional banks. In order to enhance bank funds and balance the movement of conventional bank interest, Islamic banks must be able to offer competitive profit-sharing rates. Islamic financial institutions frequently match conventional system interest rates (Hidayati and Azhari, 2015). According to Hamza (2016), Interest rates positively affect the profits of savings investments in Tunisia's Islamic banks. Research Aziz *et al.* (2014), interest rates affect *mudharabah* deposit in the short-term in Islamic banks in Qatar. In contrast to Cahyani *et al.* (2017), Interest Rates do not influence the Profit Sharing Level of *mudharabah* deposits.
H5. Interest rate affects the *mudharabah* time deposit profit sharing rate.

GDP per capita and profit sharing rate of Islamic bank mudharabah deposit

GDP per capita is obtained by dividing the total national income or gross domestic product by the country's population. Nurjanah and Sumiyarti (2009), in Fitrianingsih and Rani (2020) said that when a country's income increases, people's income also increases, thus increasing their desire to invest funds. When bank deposits increase, bank profitability also increases, so the offers made by banks for the amount of profit sharing also increase. Improved economic conditions and increased investment opportunities will have an impact on increasing bank revenues and profits so that banks can offer a significant rate of return (Hamza, 2016). Research Hilman (2016), The findings demonstrate a positive and substantial relationship between GDP and the amount of profit sharing on *mudharabah* deposits. In contrast to Fitrianingsih and Rani (2020), the findings show that GDP has no bearing on the profit shared on deposits in *mudharabah*.
H6. GDP per capita affects the *mudharabah* time deposit profit sharing rate.

3. Method

Observations on all Sharia banks formally registered with the OJK from 2013 to 2022 are used in this quantitative research method. Bank Indonesia reports, the Central Bureau of Statistics (*Badan Pusat Statistik-BPS*), and the Indonesia service authority (*Otoritas Jasa Keuangan-OJK*) publishing of Islamic banking statistics reports are the data sources used in the study. ECM is the Error Correction Model used in the test model. The model equations for the long and short terms are as follows:

$$TBHDM_t = c + \alpha_1 LR_i + \alpha_2 NPF_i + \alpha_3 INF_i + \alpha_4 ER_i + \alpha_5 IR_i + \alpha_6 GDP_i + e \ldots (1)$$

$$TBHDM_t = c + \beta_1 LR_{it} + \beta_2 NPF_{it} + \beta_3 iNF_{it} + \beta_4 ER_{it} + \beta_5 IR_{it} + \beta_6 GDP_{it} + e \ldots (2)$$

Description:

$TBHDM_t$	= *Mudharabah* time deposit profit sharing rate in period t
$\alpha_1, \alpha_2, \alpha_3, \alpha_4, \alpha_5, \alpha_6$	= Short term coefficient
$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$	= Long term coefficient
LR	= Liquidity ratio
NPF	= Non-performing financing
INF	= Inflation
ER	= Exchange rate
IR	= Interest rate
GDP	= Gross domestic product per capita
I	= Individual bank
t	= Time period
e	= Error term

4. Results and discussion

Descriptive analysis

Based on Table 1., the liquidity ratio variable (LR) has a minimum value of 70.1200 points and a maximum value of 104.4300 points with an average value of 84.5862 points. The results show that the movement of the liquidity ratio over the past ten years has ranged from 70.12000 points to 104.4300 points with a standard deviation value of 9.658901 and the number of observations is 40 samples. With an average value of 3.756750 points, the non-performing financing (NPF) variable can range from a minimum of 2.3500 points to a maximum of 5.6800 points. With a standard deviation of 0.9442 and 40 samples of observations, the results demonstrate that the movement of non-performing financing during the last 10 years has varied from 2.3500 points to 5.6800 points. The inflation (INF) variable's average value is 4.1412 points, with a minimum value of 1.3300 points and a high value of 8.4000 points. With 40 data samples, the findings demonstrate that the inflation movement during the previous ten years has varied from 1.3300 points to 8.4000 points, with a standard deviation value of 2.0743.

The exchange rate (ER) variable's average value is 4.1332 points, with a minimum value of 3.9900 points and a high value of 4.2000 points. According to the findings, the exchange rate fluctuated between 3.9900 and 4.2000 points over the last ten years, with a standard deviation of 2.0743 and 40 data samples. The interest rate (IR) variable's average value is 5.4625 points, with a minimum value of 3.5000 points and a maximum value of 7.7500 points. The findings indicate that, with a standard deviation of 1.4693 and 40 data samples, the interest rate has fluctuated between 3.5000 and 7.7500 points over the previous 10 years.

The Gross Domestic Product per Capita (GDP) variable starts at 6.5100 points and goes up to 6.6400 points, with an average of 6.5783 points. With a standard deviation of 0.0366 and 40 data samples, the results show that the GDP per capita has varied between 6.5100 and 6.6400 points during the past ten years. From a minimum of 2.8300 points to a maximum of 7.4700 points, the *mudharabah* time deposit profit sharing rate (TBHDM) variable has an average value of 5.2575 points. The findings indicate that the *mudharabah* time deposit profit sharing rate fluctuated between

2.8300 and 7.4700 points over the last ten years, with a standard deviation of 1.2496 and 40 data samples.

Table 1. Descriptive statistical analysis

	LR	NPF	INF	ER	IR	GDP	TBHDM
Mean	84.5862	3.7567	4.1412	4.1332	5.4625	6.5783	5.2575
Median	79.9300	3.3950	3.4250	4.1400	5.2500	6.5850	5.3700
Maximum	104.4300	5.6800	8.4000	4.2000	7.7500	6.6400	7.4700
Minimum	70.1200	2.3500	1.3300	3.9900	3.5000	6.5100	2.8300
Std. Dev.	9.6589	0.9442	2.0743	0.0453	1.4693	0.0366	1.2496
Observations	40	40	40	40	40	40	40

Data stationarity test results

Using the *Augmaented Dickey Fuller* (ADF) technique at the level, the data stationarity test findings in Table 2. indicate that a number of variables have not been stationary since their respective probability values are more than 0.05. The findings at the first difference level show that all variables concurrently have a probability value <0.05, indicating that each variable is retested at this level. This suggests that, at the first difference level, all variables are stationary.

Table 2. Data stationarity testing results

Variables	Unit root test					
	Level			1st Difference		
	ADV	Prob	Ket	ADV	Prob	Ket
TBHDM	-0.8501	0.7932	Non-stationary	-5.2786	0.0001	Stationary
LR	-1.8731	0.3411	Non-stationary	-6.2764	0.0000	Stationary
NPF	-1.1411	0.6897	Non-stationary	-6.5251	0.0000	Stationary
INF	-1.9190	0.3204	Non-stationary	-7.9932	0.0000	Stationary
ER	-3.2361	0.0253	Stationary	-6.1147	0.0000	Stationary
IR	-1.727	0.4097	Non-stationary	-3.2578	0.0242	Stationary
GDP	-1.2820	0.6279	Non-stationary	-9.0094	0.0000	Stationary

Optimum lag length determination results

According to Table 3. Lag 3 has the lowest AIC (*Akaike Information Criteria*) value, which is -2.223175*. This study's chosen model, lag 3, can be determined since it satisfies the criteria for additional analysis. Estimated outcomes with the ECM model.

Table 3. *Optimum lag* length test results

Lag	AIC
0	-1.7233
1	-1.3658
2	-1.769
3	-2.2231

Cointegration test results

According to Table 4. cointegration test findings, which are seen using the Johanssen test based on trace statistics with critical values at a 5% significance level, all variables have a probability value < alpha and a trace statistic value > critical value. Consequently, it may be said that there is cointegration between the independent and dependent variables. In other words, there is a long-term link between the independent and dependent ones. *The Engle-Granger* error model has to be corrected after the cointegration findings have been determined. Using this concept, correction will be done in two phases: short-term and long-term.

Table 4. *Johansen* cointegration test results based on *trace statistic*

Hypothesized no. of CE(s)	*Trace statistic*	*Critical value*	*Prob.*
None*	212.6024	125.6154	0.0000
At most 1*	156.8253	95.75366	0.0000
At most 2*	113.5344	69.81889	0.0000
At most 3*	73.74951	47.85613	0.0000
At most 4*	42.43942	29.79707	0.0011
At most 5*	22.59880	15.49471	0.0036
At most 6*	5.029280	3.841466	0.0249

Error correction model (ECM) estimation results

Based on the Table 5., two-equation models were obtained. Thus, the long-term and short-term equation is obtained:

$$TBHDM = 53.1371 - 0.0066LR + 0.7341NPF - 0.0945INF - 13.0337ER + 0.3773IR + 0.3220GDP \ldots(3)$$

$$D(TBHDM) = -0.0316 - D(0.0233LR) + D(0.5698NPF) - D(0.0592INF) - D(5.3780ER) + D(0.3260IR) - D(7.9378GDP) - 0.6155ECT(-1)\ldots(4)$$

Table 5. *Error correction model* (ECM) testing results

Variables	Long term		Variables	Short term	
	Coefficient	Prob.		Coefficient	Prob.
C	53.1371	0.3391	C	-0.0316	0.7160
LR	-0.0066	0.8543	D(LR)	-0.0233	0.4605
NPF	0.7341	0.0000	D(NPF)	0.5698	0.0043
INF	-0.0945	0.1671	D(INF)	-0.0592	0.3583
ER	-13.0337	0.0100	D(ER)	-5.3780	0.2195
IR	0.3773	0.0041	D(IR)	0.3260	0.0555
GDP	0.3220	0.9716	D(GDP)	-7.9378	0.5602
-	-	-	ECT	-0.6155	0.0009

Regression analysis

The following Table 6. outcomes are displayed based on the long-term ECM estimate results: While the liquidity ratio and inflation have a negative and negligible impact on *mudharabah* deposit profit sharing, problem financing and interest rates have a positive and significant impact; the exchange rate has a negative and significant impact; and GDP per capita has a positive and negligible impact.

The short-term ECM test results indicate that: (1) *mudharabah* deposit profit sharing is negatively and not significantly impacted by the liquidity ratio, inflation, exchange rate, and GDP per capita; (2) *mudharabah* deposit profit sharing is positively and significantly impacted by problem financing; and (3) Interest rates have a positive but not significant impact on *mudharabah* deposit profit sharing.

Table 6. Simultaneous test results

Prob(F-statistic)	Long term	Short term
	0.000000	0.012176

Based on the simultaneous test results in Table 6., the long-term and short-term ECM testing Prob (F-Statistic) values are smaller than alpha, which means the independent variable, namely liquidity ratio, problem financing, inflation, exchange rate, interest rate, and GDP per capita together affect the dependent variable, *mudharabah* deposit profit sharing.

The long-term ECM model's coefficient of determination between the independent and dependent variables in R-Square is 0.872787, according to the results of the determination coefficient test. This indicates that changes in the independent variable can have an 87.27% impact on the

dependent variable, which is *mudharabah* deposit profit sharing. However, 12.73% is affected by changes in other factors not covered in this research. Based on the short-term ECM test results, the coefficient of determination for the short-term ECM model between the independent and dependent variables is 0.416470. This indicates that changes in the independent variable can impact 41.64% of the dependent variable, *mudharabah* deposit profit sharing. However, additional variable differences not covered in this study impacted 58.36%.

Discussion

The effect of liquidity ratio on mudharabah deposit profit sharing rate

The liquidity ratio has no impact on the long-term or short-term profit sharing of *mudharabah* deposits, according to the findings of the error correction model (ECM) estimation. The findings of this study are consistent with and corroborated by those of earlier research by Permatasari (2018) on Islamic commercial banks in Indonesia from 2012-2015. In line with that, Sulfiani and Mais (2019) on Islamic Commercial Banks in Indonesia from 2012-2018. These results are inversely proportional to the research conducted by Nofianti *et al.* (2015) on Islamic commercial banks in Indonesia in 2011-2013. Likewise, research Melani and Sugiarto (2023) on Islamic commercial banks in Indonesia in 2016-2020.

In this study, the results obtained were not influential, shows that the level of liquidity ratio measured using FDR is not a determinant of the amount of profit sharing of *mudharabah* deposit because the source of financing funds used by Islamic commercial banks not only comes from third-party funds in the form of deposit products but also comes from savings and current account products, so that the proceeds received from financing are not only channeled to deposit investors but also channeled to savings customers, current accounts and shareholders (Sulfiani and Mais, 2019). So even though the amount of financing and third-party funds is high, it will not affect the profit sharing of the *mudharabah* deposit. Then it can be concluded that the size of the profit-sharing rate that will be received by customers is not influenced by the amount of financing distributed to the community but is more influenced by financing that is smooth and produces large profits, not from financing that is in default (Muazaroh and Septiarini, 2021).

The effect of non-performing financings on the profit sharing rate of mudharabah deposit

Based on the error correction model (ECM) estimate results, it is determined that non-performing financing significantly and favorably affects the profit sharing of *mudharabah* deposits over both the short and long-term. The results of this study are supported by the results of previous research conducted by (Ardana and Wulandari, 2018; Arfiani and Mulazid, 2017; also Inda and Hajar, 2021). These results are inversely proportional to the results of the study research by Oktaviani and Riyadi (2021) on Bank Syariah Mandiri for 2010-2019. Likewise, Yulinartati *et al.* (2020) on BMT Maslahah in 2014-2019.

The findings of this study, which demonstrated that non-performing financing had a beneficial impact on *mudharabah* deposit profit sharing, indicated that the premise was inappropriate. This indicates that the high and low profit-sharing levels of *mudharabah* deposits will be influenced by the high and low NPF. Suppose many customers default on loans. In that case, it will have a direct impact on the profit sharing of *mudharabah* deposits, which is related to the amount of funds contained in banking finance that are rotated to distribute profit sharing (Ardana and Wulandari, 2018). However, the high NPF value does not cause a decrease in the profit-sharing rate because banking profits are not only from lending to customers but also from relatively high *fee-based* income, which will affect the profit-sharing given to customers.

The effect of inflation on the profit sharing rate of mudharabah time deposit

The error correction model (ECM) estimation findings indicate that inflation has no impact on the profit sharing of *mudharabah* deposits, either in the short or long-term. According to Fitrianingsih and Rani (2020) and Yuwono and Riyadi (2018), the study's findings are consistent with those of Islamic banks in Indonesia. These findings have an adverse relationship with studies on Islamic banking in Indonesia conducted by Halimatussa'idah and Septiarini (2019) also Sudirman and Fitianti (2022). The results of this study contradict investment theory, which states that increasing inflation will reduce the profit sharing of *mudharabah* deposits. This is because *mudhar*abah deposits have the

main characteristic that depositors get the amount of profit sharing that has been determined and agreed upon at the beginning when opening a deposit account, so that if there is inflation, the nominal amount of profit sharing obtained by the customer will not change and remain the same as at the beginning of the agreement (Yuwono and Riydi, 2018). If there is an increase in inflation, then third-party funds will be more affected and decreased because people or customers will withdraw their funds for their daily consumption needs.

The effect of exchange rate on mudharabah time deposit profit sharing rate

The error correction model (ECM) estimation results indicate that the exchange rate variable has a negative and significant impact on the profit sharing of *mudharabah* deposits over the long-term but a negative and negligible impact on the profit sharing of *mudharabah* deposits over the short-term. The results of this long-term study are supported by the results of previous research conducted by Batubara and Nopiandi (2020) also Zen (2020) on Islamic banks in Indonesia. This result is inversely proportional to research by Prasetyawan (2019) on Islamic banks in Indonesia. Likewise, Farida *et al.* (2021) on Islamic Commercial Banks in Indonesia and Malaysia.

The results show that the exchange rate variable affects the profit-sharing rate of the *mudharabah* deposits in the long run. Exchange rates that fluctuate but tend to decline can affect domestic economic growth. A decrease in the value of the rupiah due to a decrease in demand for the currency can have an impact on a decrease in imports and an increase in exports (Handayani and Riduwan, 2020). The number of exports increases and is profitable, especially if the goods are produced with local raw materials. When the exchange rate tends to fall, the demand for domestic currency also falls. This decline has an impact on people's economic conditions because there is a general increase in prices and a decrease in people's purchasing power. People with declining economic conditions will consider their financial management more, especially on speculative matters. In this case, people tend to reduce investment because they prioritize priority needs. Under these conditions, the residual cash theory applies, namely that people hold money mainly to finance the transactions they carry out, and another reason people hold their money for precautionary purposes.

The findings indicate that the exchange rate variable has no short-term impact on the *mudharabah* Deposit profit sharing rate. The exchange rate, which sometimes fluctuates quite a bit, is not a factor that can affect the finances of Islamic banks, especially when making decisions to provide *mudharabah* deposit returns. This is because Islamic banks already have a way to mitigate the fluctuations in the exchange rate, namely with the existence of Islamic hedging products so that the fluctuating exchange rate does not affect the stability of the Islamic bank (Farida *et al*., 2021).

The effect of interest rate on mudharabah time deposit profit sharing rate

The error correction model (ECM) estimation results show that the interest rate variable has a positive and significant impact on the profit sharing of *mudharabah* deposits over the long-term, but a positive and negligible impact on the profit sharing of *mudharabah* deposits over the short-term. These results are in line with research from (Gok, 2021; Ergec and Kaytanci, 2014; Korkut and Ozgur, 2017) on Islamic banks in Turkey and Anuar *et al.* (2014) on Islamic banks in Malaysia found that the determination of the rate of return on *mudharabah* deposit in Islamic banks in both countries still depends on the amount of conventional bank interest rates. This result is inversely proportional to the results of the research, namely research by Nofianti *et al.* (2015) and Permatasari (2018), on Islamic Banks in Indonesia.

This positive effect indicates a unidirectional link between the interest rate and the profit sharing of *mudharabah* deposits. The study's findings defy the conventional wisdom that says that higher conventional bank interest rates will increase the amount of deposits in conventional banks, which will negatively impact the amount of deposits in Islamic banks, lowering the profit sharing of *mudharabah* deposits. This is because there is a competitive factor between Islamic and conventional banks, so the two are closely related (Yuwono and Riyadi, 2018). Therefore, the yield on Islamic banks still refers to the yield or interest of conventional banks (Muazaroh and Septiarini, 2021).

Islamic banks in Indonesia are still developing and trying to compete with conventional banks, so determining the profit-sharing rate of deposits in Islamic banks still refers to the interest rate on conventional bank deposits (Halimatussa'idah and Septiarini, 2019). This aims to attract customers

who want to save their money in Islamic banks in the form of deposits so that Islamic banks do not experience liquidity difficulties, and the amount of financing will also increase. If the amount of financing channeled rises, Islamic banks can increase the level of profit sharing on deposits (Muazaroh and Septiarini, 2021). Studies conducted by Akhtar *et al.* (2017) stated that Islamic banks must offer competitive profit-sharing rates in connection with the high interest rates of conventional banks in order to attract customers to raise funds. Islamic banks have an impact on providing high-profit sharing Islamic banks.

The effect of GDP per capita on the profit sharing rate of *mudharabah* time deposit

Based on the results of the error correction model (ECM) estimation, it is concluded that in the long-term and short-term, GDP per capita has no effect on the profit sharing of *mudharabah* deposit. This study's results are supported by previous research conducted by Farida *et al.* (2021) on Islamic commercial banks in Indonesia and Malaysia. In line with that, Rahmi and Zuhroh (2020) discussed Islamic banks in Malaysia. These results are inversely proportional to the research conducted by Hilman (2016) on Islamic banks in Indonesia. In line with that of Mohamed *et al.* (2018) on Islamic banks in Malaysia, Similarly, Meyliana and Mulazid (2017) discussed Islamic banks in Indonesia.

In this study, the results of GDP have no effect on the profit sharing of *mudharabah* deposits, which shows that the theory is not appropriate. This is because changes in GDP affect people's income and consumption. A high public income, of course, is accompanied by a high level of consumption and lifestyle, so the remaining income after being used for daily needs is only a little, and people tend to save their funds. Furthermore, it will affect the amount of public investment, including *mudharabah* deposits in Islamic banking (Wulandari and Oktaviana, 2022). Therefore, in this condition, it is very possible to withdraw Islamic banking deposits to meet public consumption. When GDP is high, Islamic banks must be able to keep investors to keep their money in Islamic banks so that the profits earned by Islamic banks can be stable and the profit sharing that customers will obtain will not decrease.

5. Conclusion

According to the findings of the long-term ECM estimation, the exchange rate has a negative and significant impact, non-performing financing and interest rates have a partial positive and significant effect, and the liquidity ratio, GDP per capita, and inflation have no effect on the *mudharabah* deposit profit sharing rate. While the liquidity ratio, inflation, currency rate, interest rate, and GDP per capita have little bearing on the profit-sharing rate of *mudharabah* deposits, non-performing financing has a positive and considerable impact on the short-term ECM estimate findings. The findings demonstrate that while the non-performing finance variable consistently impacts over the long and short-terms, the liquidity ratio, inflation, and GDP per capita variables consistently have no effect.

Based on the conclusions that have been presented, there are several suggestions that the authors can give as follows: In order for bank income to increase, banks need to increase the distribution of financing and the amount of deposit by offering high profit-sharing rates to attract investors to invest their funds. The increase in FDR needs to be considered by bank management to increase profit sharing so that financial performance can be achieved effectively. To suppress non-performing financing and efforts to provide a good profit-sharing rate to customers, bank management needs to pay attention, evaluate, and act decisively in handling non-performing financing before the bank provides financing to customers by paying attention to customer eligibility using customer eligibility assessment with 5C analysis. Although inflation in the term has a negative and insignificant effect, the amount of inflation must still be a concern. Therefore, Islamic banks must remain vigilant and anticipate the risks that occur due to high inflation so that the banking system is not disrupted and has a systemic impact. Islamic banks must continue to pay attention to any movements in macroeconomic variables, especially the rupiah exchange rate variable, this is because the movement of macroeconomic variables can create a financial crisis, which certainly affects the collection of Islamic banking deposits, especially through muḍarabah deposit banking products so that it will affect the profit sharing of *mudharabah* deposit. The profit-sharing rate of *mudharabah* deposit should be determined based on the profit obtained by Islamic banks and adjusted to market conditions and the

ability or purchasing power of the community. GDP, which always increases every year, must be kept stable by the government and Islamic banks must also pay attention to every movement of GDP because instability in the economy can interfere with the performance of Islamic banking, in this case related to fund collection and distribution activities which will affect the amount of *mudharabah* deposit profit sharing.

There are several recommendations for further research. Further research can explore the influence of microeconomic variables on the profit-sharing rate of *mudharabah* deposits in Islamic banks, such as cost of funds, bank income from financing, and operational efficiency as measured by the BOPO ratio. Then, further research can increase the number of samples to obtain more representative results and better generalizations related to the factors that influence the profit-sharing rate of *mudharabah* deposits in Islamic banks. Further research can use a panel data approach by increasing the number of samples in time series and cross-section data from various Islamic banks in Indonesia. With panel data, researchers can observe the dynamics of changes in profit-sharing rates over time while comparing Islamic banks. This approach also provides advantages in identifying causal relationships, reducing heterogeneity bias, and increasing the accuracy of research results. This is expected to provide a more significant contribution to the development of strategic policies in the Islamic banking sector.

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