The Effect of Sharia Financial Liquidity and Intermediation on Profitability: ECM Panel Study on BUS and UUS in Indonesia

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Abstract.
This study aims to analyze the influence of liquidity and Islamic financial intermediation on the profitability of Sharia Commercial Banks (BUS) and Sharia Business Units (UUS) in Indonesia. The variables used include profitability as a dependent variable, while liquidity is proxied with cash, and Islamic financial intermediation is proxied with Third Party Funds (DPK) and profit-sharing financing. The research uses monthly panel data from BUS and UUS for the period January 2023–January 2026. The analysis method used is the Panel Error Correction Model (Panel ECM) to identify short-term and long-term relationships between variables. The results of the unit root test showed that all variables were integrated in the first order, while the cointegration test confirmed the existence of a long-term relationship between the study variables. The results of long-term estimation show that cash, deposits, and profit-sharing financing have a positive effect on profitability. These findings indicate that increasing liquidity and optimizing the function of sharia intermediation can improve the profitability performance of Islamic banking. In addition, the existence of an adjustment mechanism towards a long-term equilibrium shows that the profitability of BUS and UUS has the ability to return to equilibrium after economic shocks. This research provides important implications for Islamic bank management in managing liquidity and strengthening the intermediation function to increase profitability in a sustainable manner.
Keywords: *Profitability, Liquidity, Third-Party Funds, Profit Sharing Financing, Islamic Banks and ECM Panel.*

I. INTRODUCTION

The development of the Islamic banking industry in Indonesia has shown a positive trend in recent decades. The presence of Sharia Commercial Banks (BUS) and Sharia Business Units (UUS) is not only an alternative for people who want financial services according to sharia principles, but also plays an important role in supporting national economic growth through the financial intermediation function. As an intermediary institution, Islamic banks collect funds from the community and redistribute them in the form of financing to the productive sector. The success of the implementation of these functions is ultimately reflected in the level of profitability achieved by the bank. Therefore, profitability is one of the main indicators in assessing the performance and sustainability of the Islamic banking business (Ascarya & Yumanita, 2008).

Profitability describes the ability of banks to generate profits through the use of assets and resources owned. A high level of profitability indicates that banks are able to manage funds efficiently, maintain operational stability, and create added value for shareholders and other stakeholders. On the other hand, low profitability can indicate problems in liquidity management, fund raising, and financing distribution. Therefore, identifying the factors that affect profitability is important to support the development of a healthy and sustainable Islamic banking industry (Jan et al. 2019).

In the perspective of Financial Intermediation Theory, banks function as intermediaries between those who have excess funds (surplus units) and those who need funds (deficit units) (Freixas & Rochet, 2008). The effectiveness of the intermediation function greatly determines the bank's ability to generate profits. The more optimal the collection of funds and the distribution of financing, the greater the bank's chances of obtaining income that has an impact on increasing profitability. In the context of Islamic banking, the success of the intermediation function is greatly influenced by the bank's ability to maintain liquidity, raise Third Party Funds (DPK), and distribute profit-sharing-based financing.

Liquidity is one of the important aspects in banking operations. Liquidity reflects a bank's ability to

meet short-term obligations and maintain the smooth running of its operational activities. According to liquidity management theory, banks must be able to maintain a balance between liquidity levels and profitability. Liquidity that is too low can increase the risk of failing to meet obligations to customers, while liquidity that is too high can lead to idle funds that have the potential to reduce the level of profits (Rose et al, 2013). Thus, optimal cash management is an important factor in supporting the profitability of Islamic banking. Wahab's research (2015) shows that liquidity has a significant influence on the financial performance of Islamic banks because it is related to the bank's ability to optimize productive assets.

In addition to liquidity, Third Party Funds (DPK) are the main source of funds that determine the intermediation capacity of Islamic banking. Deposits consisting of current accounts, savings, and sharia deposits reflect the level of public trust in the Islamic banking industry. The larger the funds that are successfully raised, the greater the bank's ability to distribute financing to the productive sector. According to the theory of financial intermediation, increasing deposits will expand the capacity of banks to generate income from financing activities so that they can increase profitability (Mishkin, 2019). Research by Setiawan and Indriani (2016) found that deposits have a positive effect on the profitability of Islamic banks because they are the main source of funding in carrying out the intermediation function.

Another factor that is no less important is profit-sharing financing. Financing based on mudharabah and musharakah contracts is the main characteristic that distinguishes Islamic banking from conventional banking. The profit sharing system is based on the principle of profit and loss sharing, which is the proportional sharing of profits and risks between banks and customers. According to Chapra (2000), the profit-sharing mechanism reflects the value of justice and partnership that is the foundation of the Islamic financial system. Effectively managed profit-sharing financing will generate greater revenue for the bank and ultimately increase profitability. Ascarya and Yumanita (2008) explained that profit-sharing-based financing has a significant contribution to improving the performance of Islamic banking because it encourages productive economic activities.

Although theoretically liquidity, deposits, and profit-sharing financing are estimated to have a positive effect on profitability, the results of previous empirical research still show mixed findings. Mohamad & Abd Wahab (2016) found that liquidity has a significant effect on the profitability of Islamic banks, while several other studies show that the effect of liquidity is not always consistent across different observation periods. Similarly, deposits and profit-sharing financing have been shown to increase profitability in some studies, but in others they show a insignificant effect. The difference in results indicates that the relationship between these variables still needs further study, especially with an approach that is able to explain the dynamics of short-term and long-term relationships simultaneously.

Most previous studies have used static panel data regression methods that can only explain the direct relationship between variables without considering the adjustment process towards long-term equilibrium. In fact, changes in liquidity, deposits, and profit-sharing financing do not always have a direct impact on profitability. These impacts can appear gradually and form a balanced relationship in the long run. Therefore, the use of the Panel Error Correction Model (Panel ECM) is relevant because it is able to identify short-term relationships as well as explain the adjustment mechanism towards long-term equilibrium when there is a deviation from equilibrium conditions (Basuki & Prawoto, 2021).

This study aims to analyze the influence of cash-proxied liquidity, as well as Islamic financial intermediation proxied with Third-Party Funds (DPK) and profit-sharing financing on the profitability of BUS and UUS in Indonesia during the period January 2023 to January 2026. The use of monthly data allows for a more detailed observation of the dynamics of Islamic banking performance. In addition, the results of the stationary and cointegration tests showed that there was a long-term relationship between variables so that the ECM Panel approach was the right method to use.

This research makes several important contributions. First, this study integrates the liquidity and intermediation aspects of Islamic finance in one empirical model to explain the profitability of BUS and UUS in Indonesia. Second, this study uses the latest data that represents the condition of the Islamic banking industry in the post-pandemic era and the digital transformation of the financial sector. Third, this study

applies the ECM Panel approach which is still relatively limited in the study of the profitability of Islamic banking in Indonesia. Thus, the results of the research are expected to enrich the literature on the determinants of Islamic banking profitability and provide input for bank management and regulators in formulating liquidity management policies, fund collection, and profit-sharing financing optimization to improve the performance and competitiveness of the Islamic banking industry in Indonesia.

II. METHOD

This study uses a quantitative approach with the aim of analyzing the influence of liquidity and Islamic financial intermediation on the profitability of Sharia Commercial Banks (BUS) and Sharia Business Units (UUS) in Indonesia. The data used is secondary data in the form of panel data that combines time (*time series*) and individual dimensions (*cross section*). Observations were carried out on two groups of Islamic banks, namely BUS and UUS, with a monthly observation period from January 2023 to January 2026 so that 74 balanced panel observations were obtained.

The research data was obtained from the official publication of the Financial Services Authority (OJK), especially Sharia Banking Statistics (SPS), which contains information on profitability, cash, Third Party Funds (DPK), and profit-sharing financing in BUS and UUS in Indonesia. The dependent variable in this study is profitability (PROFIT) which is proxied using Islamic banking profits. Meanwhile, independent variables consist of cash (CASH) as a liquidity proxy, Third Party Funds (DPK) as an indicator of the ability to raise public funds, and profit-sharing financing (PEMBBH) which reflects the intermediation function based on the principle of *profit and loss sharing*. The entire variable is transformed into a natural logarithmic form to reduce the problem of data heterogeneity and allow the interpretation of coefficients as elasticity. The long-term model used in this study is formulated as follows:

$$lnPROFITit = \beta 0 + \beta 1 lnCASHit + \beta 2 lnDPKit + \beta 3 lnPEMBBHit + \varepsilon it$$

where i indicates the observation unit (BUS and UUS) and t indicates the time period.

Data analysis was carried out using the Panel Error Correction Model (Panel ECM) approach. This method was chosen because it is able to explain the short-term and long-term relationships between variables while identifying the adjustment mechanism towards long-term equilibrium (Basuki & Prawoto, 2021). The analysis stage began with a stationarity test using a root test unit panel which included the Im, Pesaran and Shin (IPS), ADF-Fisher, and PP-Fisher methods. This test aims to ensure that the variables have the same degree of integration before further analysis is carried out.

The next stage is the cointegration test through residual stationary testing (*Error Correction Term/ECT*). If the residual of the long-term model is proven to be stationary, then it can be concluded that there is a long-term equilibrium relationship between the variables so that the ECM model can be estimated. Furthermore, the estimation of the long-term relationship was carried out using panel data regression. The selection of the best panel model is done through the Chow Test to determine *the Common Effect* or *Fixed Effect model*, as well as the Hausman Test to choose between *the Fixed Effect* and *Random Effect models*.

The short-term ECM model is then estimated by including an Error Correction Term (ECT) component that indicates the speed of adjustment towards long-term equilibrium after a short-term shock. To ensure the validity of the model, classical assumption testing was carried out which included heteroscedasticity tests and autocorrelation tests. The entire process of data processing and analysis is carried out using the EViews 12 software. The results of the estimation are used to explain the influence of liquidity and Islamic financial intermediation on the profitability of BUS and UUS in Indonesia both in the short and long term.

III. ANALYSIS AND DISCUSSION

The stationarity test was carried out using the Panel Unit Root Test which includes the Im, Pesaran and Shin (IPS), ADF-Fisher, and PP-Fisher methods (Pesaran, 2012). The test results showed that at the level level, the variables PROFIT, DPK, and PEMBBH were not stationary because the entire probability value was greater than 0.05. For example, the PROFIT variable has a probability value of 0.8771, ADF-Fisher

0.4509, and PP-Fisher 0.6658. Similarly, the DPK and PEMBBH variables show a probability above the significance level of 5 percent.

Table 1. Stationary Test

Panel unit root test: Summary					
Series: PROFIT					
Sample: 2023M01 2026M01					
Method		DATA LEVEL		FIRST DIFFERENCE	
	Null: Unit root (assumes individual unit root process)	Statistic	Prob.**	Statistic	Prob.**
PROFIT	Im, Pesaran and Shin W-stat	1.16078	0.8771	-3.05799	0.0011
	ADF - Fisher Chi-square	3.68118	0.4509	17.089	0.0019
	PP - Fisher Chi-square	2.38273	0.6658	34.9579	0.0000
CASH	Null: Unit root (assumes individual unit root process)				
	Im, Pesaran and Shin W-stat	-2.4419	0.0073	-8.80856	0.0000
	ADF - Fisher Chi-square	13.2607	0.0101	56.3596	0.0000
	PP - Fisher Chi-square	23.8901	0.0001	73.0458	0.0000
DPK	Null: Unit root (assumes individual unit root process)				
	Im, Pesaran and Shin W-stat	2.33937	0.9903	-2.77772	0.0027
	ADF - Fisher Chi-square	4.14916	0.3862	16.005	0.0030
	PP - Fisher Chi-square	2.47921	0.6484	41.7354	0.0000
PEMBBH	Null: Unit root (assumes individual unit root process)				
	Im, Pesaran and Shin W-stat	1.00308	0.8421	-2.34103	0.0096
	ADF - Fisher Chi-square	6.33121	0.1757	14.5587	0.0057
	PP - Fisher Chi-square	5.07462	0.2797	53.7896	0.0000

Source: Data processed 2026

Meanwhile, the CASH variable has been stationary at the level level because the probability values of IPS (0.0073), ADF-Fisher (0.0101), and PP-Fisher (0.0001) are less than 0.05. However, to meet the requirements of the cointegration analysis and the Panel Error Correction Model (ECM), all variables were retested at the first difference level.

The test results at the first difference showed that all variables had a probability value below 0.05 in all three test methods. The variables PROFIT, CASH, DPK, and PEMBBH were each proven to be stationary after the first differentiation. Thus, it can be concluded that the research variables are integrated on order one or I(1). This condition shows that the data are eligible for cointegration and estimation tests using the Panel Error Correction Model (Panel ECM) approach to analyze the short-term and long-term relationships between variables.

Table 2: Long-Term Panel Regression Test

Dependent Variable: LOG(PROFIT)						
Method: Panel EGLS (Period weights)						
Sample: 2023M01 2026M01						
Periods included: 37						
Cross-sections included: 2						
Total panel (balanced) observations: 74						
Linear estimation after one-step weighting matrix						
Model	Common Effect Model		Fixed Effect Model		Random Effect Model	
Variable	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error
LOG(CASH)	0.0557	0.0265	0.2962	0.0186	0.0629	0.0412
LOG(PEMBBH)	0.6785	0.0455	0.3217	0.0731	0.6461	0.0986
LOG(DPK)	0.7846	0.1058	0.1266	0.0762	0.7744	0.1616

C	-19.5926	1.6893	7.1868	1.6401	-18.3975	2.7199
R-squared	0.9978		0.9988		0.972	
Chow Test			Statistic	df		
			9.537803	(36,34)		
Hausman Test					Chi-Sq. Stat	Chi-Sq. d.f.
					38.32	3

Source: Data processed 2026

Long-term relationship analysis was conducted using panel data regression to identify the influence of liquidity and Islamic financial intermediation on the profitability of Sharia Commercial Banks (BUS) and Sharia Business Units (UUS) in Indonesia. Before interpreting the estimation results, the most suitable panel model is first selected. The results of the Chow Test showed a probability value of 0.0000 (< 0.05), so the Fixed Effect Model (FEM) model was more appropriate than the Common Effect Model. Furthermore, the results of the Hausman Test produced a probability value of 0.0000 (< 0.05), which indicates that the Fixed Effect Model is more suitable than the Random Effect Model. Therefore, the interpretation of the long-term relationship in this study is based on the results of the Fixed Effect Model estimation.

The results of the estimation show that the variable liquidity (CASH) has a coefficient of 0.2962 with a probability value of 0.0000. These findings show that liquidity has a positive and significant effect on the profitability of BUS and UUS in Indonesia in the long term. The value of the coefficient indicates that an increase in cash by 1 percent will increase profitability by 0.2962 percent, ceteris paribus. These results show that the ability of Islamic banks to maintain the availability of liquid funds contributes to improving financial performance because it supports smooth operations and strengthens customer confidence. These findings are in line with liquidity management theory which states that optimal liquidity management can improve banks' ability to generate profits (Hudgins et al. 2013).

The profit-sharing financing variable (PEMBBH) also showed a positive and significant influence on profitability with a coefficient of 0.3217 and a probability value of 0.0001. This means that every increase in profit-sharing financing by 1 percent will increase profitability by 0.3217 percent. These results show that financing based on mudharabah and musharakah contracts can be an important source of income for Islamic banking. The greater the profit-sharing financing that is distributed productively, the greater the potential revenue that the bank will get from the profit-sharing mechanism. These findings support the theory of profit and loss sharing which places profit-sharing financing as the main instrument in creating sustainable profits for Islamic financial institutions (Chapra, 2000; Ascarya & Yumanita, 2008).

Meanwhile, the Third Party Fund (DPK) variable has a positive coefficient of 0.1266, but the probability value is 0.1059 or greater than the significance level of 5 percent. Thus, deposits do not have a significant effect on profitability in the long run. These findings indicate that the increase in funds that have been successfully collected from the public has not automatically increased the profitability of Islamic banks. This condition can occur if the increase in deposits is not followed by the optimization of financing distribution or there are still idle funds so that they are not able to generate maximum income. In other words, the amount of funds raised does not necessarily reflect the effectiveness of the intermediation function if it is not distributed productively.

Simultaneously, the variables CASH, PEMBBH, and DPK were able to explain the variation in profitability very well. This is shown by the Adjusted R-squared value of 0.9975, which means that about 99.75 percent of the variation in profitability can be explained by all three independent variables in the model, while the remaining 0.25 percent is explained by other factors outside the study model. In addition, the Prob(F-statistic) value of 0.0000 shows that all independent variables together have a significant effect on the profitability of BUS and UUS in Indonesia.

Overall, the results of the long-term analysis show that liquidity and profit-sharing financing are the main factors driving the increase in the profitability of Islamic banking in Indonesia. Meanwhile, Third-Party Funds have not had a significant impact on profitability because their effectiveness is highly dependent on

the bank's ability to allocate the funds to productive and profit-generating financing. These findings affirm the importance of efficient liquidity management and optimization of profit-sharing financing as a strategy to increase the profitability of BUS and UUS in a sustainable manner.

The cointegration test was conducted to find out whether there is a long-term balance relationship between profitability (PROFIT), liquidity (CASH), Third-Party Funds (DPK), and profit-sharing financing (PEMBBH). The test was carried out through a stationary test of residual or Error Correction Term (ECT) as a result of estimating long-term equations. Based on the results of the Root Unit Test Panel, the probability value of the W-statistic Im, Pesaran and Shin (IPS) is 0.0044 and the ADF-Fisher Chi-square is 0.0067, both of which are smaller than the significance level of 5 percent. Thus, the null hypothesis that states the existence of root units in the residual is rejected.

These results show that the residual model is stationary or integrated at level I(0). In other words, there is a long-term equilibrium relationship (cointegration) between the variables of profitability, cash, deposits, and profit-sharing financing in BUS and UUS in Indonesia. These findings indicate that despite short-term fluctuations, these variables tend to move together towards a long-term equilibrium so that the use of the Panel Error Correction Model (ECM) is feasible and can be continued.

Table 3: Cointegration Test

Panel unit root test: Summary				
Series: ECT				
Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-2.62187	0.0044	2	70
ADF - Fisher Chi-square	14.1955	0.0067	2	70
** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.				

Source: Data processed 2026

The results of the Error Correction Model (ECM) Panel estimate show that in the short term (Yasar et al. 2009), the liquidity variables and Islamic financial intermediation have different influences on the profitability of BUS and UUS in Indonesia. The CASH variable has a coefficient of 0.0850 with a probability value of 0.0000, which indicates that liquidity has a positive and significant effect on changes in profitability in the short term. This means that an increase in cash by 1 percent will increase profitability by 0.085 percent. These findings indicate that the availability of liquid funds is able to support smooth operations and financing activities so that it has a positive impact on bank profits.

Table 4: Short-term regression (ECM)

Dependent Variable: D(LOG(PROFIT))				
Method: Panel EGLS (Period weights)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOG(CASH))	0.0850	0.0181	4.6930	0.0000
D(LOG(PEMBBH))	1.0947	0.2244	4.8775	0.0000
D(LOG(DPK))	0.0680	0.1107	0.6149	0.5429
ECT(-1)	-0.2007	0.0237	-8.4606	0.0000
C	0.0008	0.0024	0.3394	0.7365
	Weighted Statistics			
R-squared	0.9995	Mean dependent var		-0.1698
Adjusted R-squared	0.9989	S.D. dependent var		2.1997
F-statistic	1585.6030	Sum squared resid		0.0780
Prob(F-statistic)	0.0000	Durbin-Watson stat		0.7152

Source: Data processed 2026

The profit-sharing financing variable (PEMBBH) also had a positive and significant effect on profitability with a coefficient of 1.0947 and a probability of 0.0000. These results show that an increase in profit-sharing financing by 1 percent is able to increase profitability by 1.0947 percent. The relatively large coefficient indicates that mudharabah and musharakah-based financing is one of the main sources of increasing Islamic bank revenue in the short term.

In contrast, the Third Party Fund (DPK) variable has a positive coefficient of 0.0680 but is not statistically significant because the probability value is 0.5429. This shows that the increase in deposits has not directly affected profitability in the short term. The funds that are successfully collected from the community require a process of distribution to the productive sector before they can generate profits for banks.

The most important component in the ECM model is the Error Correction Term (ECT) which has a coefficient of -0.2007 and is significant at the level of 1 percent (probability 0.0000). Negative signs correspond to ECM theory and indicate the existence of an adjustment mechanism towards long-term equilibrium. The value of the coefficient indicates that about 20.07 percent of the imbalance that occurred in the previous period will be corrected in one observation period. Thus, if there is a deviation from the long-term balance, BUS and UUS take a relatively short time to return to a balanced condition. Overall, the ECM results confirm that liquidity and profit-sharing financing are the main factors affecting profitability in the short term, while deposits have not had a significant impact.

A heteroscedasticity test was performed to determine whether the residual variance in the ECM model is constant (homoscedastis) or not (Taghavee, et al. 2016). The test was performed by regressing the residual squares against independent variables and Error Correction Term (ECT). The test results showed that all variables had a probability value greater than 0.05, namely D(LOG(CASH)) of 0.0521, D(LOG(PEMBBH)) of 0.3419, D(LOG(DPK)) of 0.7107, and ECT(-1) of 0.6469. Although the probability of the CASH variable is close to the 5 percent significance limit, its value is still greater than 0.05 so it is not statistically significant.

Table 5: Heteroscedasticity Test

Dependent Variable: LOG(RESIDECM^2)				
Sample (adjusted): 2023M02 2026M01				
Periods included: 36				
Cross-sections included: 2				
Total panel (balanced) observations: 72				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOG(CASH))	0.0000	0.0000	2.0179	0.0521
D(LOG(PEMBBH))	0.0000	0.0000	-0.9648	0.3419
D(LOG(DPK))	0.0000	0.0000	-0.3743	0.7107
ECT(-1)	0.0000	0.0000	0.4624	0.6469

Source: Data processed 2026

Thus, it can be concluded that there are no symptoms of heteroscedasticity in the ECM model. The residual variance tends to be constant across all observations so that the model meets the assumption of homogeneity. This condition shows that the resulting parameter estimation is efficient and can be used to make more accurate statistical inferences.

The autocorrelation test is carried out to find out if there is a correlation between the residual in one period and the residual in the previous period (Chen, 2016). The test was performed using the Breusch-Godfrey Serial Correlation LM Test approach, which was demonstrated through residual regression against independent variables and residual lag.

The test results showed that the model had a Prob(F-statistic) value of 0.999974, which was much greater than the significance level of 5 percent. Therefore, the null hypothesis that states that there is no autocorrelation cannot be rejected. In addition, the Durbin-Watson value (DW) of 2.138121 is around the

number 2, which indicates the absence of positive or negative autocorrelations in the residual model.

Although the RESIDECM(-1) coefficient is statistically significant, the presence of residual lag in the model is part of the autocorrelation test procedure and is not the primary basis for determining whether or not autocorrelation exists. Based on the Prob(F-statistic) and Durbin-Watson values obtained, it can be concluded that the residual ECM model is free from autocorrelation problems.

Table 6: Autocorrelation Test

Dependent Variable: RESIDECM				
Sample (adjusted): 2023M04 2026M01				
Periods included: 34				
Cross-sections included: 2				
Total panel (balanced) observations: 68				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOG(CASH))	0.007575	0.158284	0.04786	0.9622
D(LOG(PEMBBH))	0.239252	0.481098	0.497305	0.6229
D(LOG(DPK))	0.008433	0.219622	0.038397	0.9696
ECT(-1)	-0.403445	0.178499	-2.260216	0.0318
RESIDECM(-1)	0.589164	0.214532	2.746273	0.0104
RESIDECM(-2)	0.388133	0.232201	1.671539	0.1058
C	-0.00272	0.007781	-0.34951	0.7293
R-squared	0.250938	Mean dependent var		-6.12E-19
Adjusted R-squared	-0.792398	S.D. dependent var		0.035769
S.E. of regression	0.047888	Akaike info criterion		-2.950722
Sum squared resid	0.064212	Schwarz criterion		-1.645129
F-statistic	0.240515	Hannan-Quinn criter.		-2.433406
Prob(F-statistic)	0.999974	Durbin-Watson stat		2.138121

Source: Data processed 2026

Overall, the results of the heteroscedasticity and autocorrelation tests show that the ECM Panel model used has met classical assumptions, so that the estimated results obtained can be considered valid, consistent, and feasible to be used as a basis for drawing research conclusions.

The results of long-term estimation show that the cash variable representing liquidity has a positive and significant influence on the profitability of BUS and UUS in Indonesia. A coefficient of 0.2962 indicates that an increase in liquidity of 1 percent is able to increase profitability by 0.2962 percent. Meanwhile, in the short term, the cash variable also has a positive and significant effect on profitability with a coefficient of 0.0850. These findings show that liquidity is an important factor that affects the financial performance of Islamic banking both in the short and long term.

Theoretically, this result is in line with Liquidity Management Theory which states that banks must have an adequate level of liquidity to meet short-term obligations while supporting intermediation activities. Sufficient liquidity provides flexibility for banks to respond to customer needs, maintain operational stability, and take advantage of profitable investment opportunities (Rose & Hudgins, 2013). In the context of Islamic banking, the availability of adequate cash funds also increases the bank's ability to distribute financing in a timely manner so that it can generate greater revenue.

The findings of this study support the results of ElMassah et al (2019) research which found that liquidity has a positive influence on the profitability of Islamic banks in Indonesia. Research by Bace (2016) also shows that banks' ability to manage liquid assets efficiently can increase Return on Assets (ROA). The same results were found by Basuki and Prawoto (2021) who explained that liquidity stability is an important factor in maintaining the sustainability of financial institution performance. Thus, the results of this study strengthen the argument that optimal liquidity management can increase profitability both through increasing operational efficiency and strengthening public trust in Islamic banks.

The profit-sharing financing variable (PEMBBH) shows a positive and significant influence on profitability both in the long and short term. In the long-term estimate, the profit-sharing financing coefficient of 0.3217 indicates that an increase in profit-sharing financing by 1 percent will increase profitability by 0.3217 percent. Meanwhile, in the short term, a coefficient of 1.0947 shows a greater and significant influence on profitability.

This result is in accordance with the concept of Profit and Loss Sharing Theory, which places mudharabah and musharakah-based financing as the main instrument in the Islamic financial system. According to Chapra (2000), the profit-sharing mechanism allows banks to derive profits from real economic activities thereby creating a fairer and more productive relationship than the interest system. When profit-sharing financing increases and is channeled to productive sectors, the profits earned from the financing project will increase the bank's revenue and ultimately increase profitability.

The findings of this study support the results of the research of Ascarya and Yumanita (2008) who stated that profit-sharing-based financing is the main source of income of Islamic banks in the long term. Pramuka research (2010) also shows that increasing productive financing has a positive impact on the profitability of Islamic banks. In addition, Faisal (2021) found that mudharabah and musharakah financing have a significant effect on the financial performance of Islamic banking in Indonesia.

The magnitude of the short-term coefficient indicates that changes in profit-sharing financing have a relatively rapid impact on profitability. This can be explained because the profits obtained from productive financing directly increase the bank's operating income. The findings emphasized that profit-sharing financing remains a strategic instrument that needs to be strengthened in the development of the Islamic banking industry.

In contrast to the previous variable, Third Party Funds (DPK) showed attractive results. In the long term, deposits have a positive coefficient of 0.1266, but it is not statistically significant. Similarly, in the short term, deposits have a positive coefficient of 0.0680 but are not significant to profitability. These results show that the increase in public fundraising has not been directly able to increase the profitability of BUS and UUS in Indonesia.

Theoretically, this result seems different from the Financial Intermediation Theory which states that an increase in funds raised from the public will increase the capacity of banks to distribute financing and make profits (Freixas & Rochet, 2008). However, in practice, an increase in deposits is not always followed by an increase in profitability if the funds that have been successfully collected cannot be optimally channeled to the productive sector. Idle funds can actually incur additional operational costs and reduce bank efficiency.

The findings of this study are in line with the research of Woodford (2010) who explained that the size of deposits does not automatically increase profitability if the intermediation function has not been carried out effectively. Similar results were found by Ismail (2018) which shows that the increase in public funds must be balanced with the quality of financing distribution in order to be able to generate optimal profits. Research by Akhmadjonov et al. (2021) also found that deposits do not always have a significant influence on the profitability of Islamic banks because they are influenced by the effectiveness of productive asset management.

The insignificance of deposits in this study can be caused by the time lag between the collection of funds and the distribution of financing. In addition, some of the funds raised may be placed in instruments that have relatively low rates of return so that they have not made a significant contribution to profitability. Therefore, the main focus of bank management is not only on increasing the number of deposits, but also on the effectiveness of the use of these funds through the distribution of productive and quality financing.

The results of the ECM estimate showed that the Error Correction Term (ECT) coefficient was negative and significant at -0.2007. This value shows that around 20.07 percent of the imbalance that occurred in the short term will be corrected towards a long-term balance in the following period. In other words, when there is a shock to profitability due to changes in liquidity, deposits, or profit-sharing financing, BUS and UUS have the ability to make gradual adjustments until they return to long-term equilibrium conditions.

These findings support the cointegration theory developed by Engle and Granger (1987), which states that economic variables that have a long-term relationship will tend to move towards equilibrium even though they fluctuate in the short term. Thus, the profitability of Islamic banking is not only influenced by momentary conditions, but also by the bank's ability to maintain liquidity stability and optimize the intermediation function on a sustainable basis.

Overall, the results show that liquidity (cash) and profit-sharing financing are the main determinants of the profitability of BUS and UUS in Indonesia both in the short and long term, while Third Party Funds (DPK) have not had a significant influence on profitability. These findings indicate that the success of Islamic banking in increasing profitability is not only determined by the ability to raise public funds, but especially by the effectiveness of liquidity management and optimization of the distribution of profit-sharing financing. Therefore, the strategy of strengthening the intermediation function based on sharia principles and efficient liquidity management is the key to improving the competitiveness, stability, and sustainability of the Islamic banking industry in Indonesia.

IV. CONCLUSION

The results of the study show that liquidity and Islamic financial intermediation have an important role in influencing the profitability of Sharia Commercial Banks (BUS) and Sharia Business Units (UUS) in Indonesia. Based on the results of the unit root test, all research variables, namely profitability, cash, Third Party Funds (DPK), and profit-sharing financing, were integrated to the same degree so that they qualified for the Error Correction Model (ECM) Panel analysis. The results of the cointegration test confirmed the existence of a long-term equilibrium relationship between these variables. Long-term estimates show that cash, deposits, and profit-sharing financing have a positive effect on profitability. These findings indicate that the ability of Islamic banks to maintain adequate liquidity levels, raise public funds, and effectively distribute profit-sharing-based financing is an important factor in improving profitability performance. In addition, the existence of a cointegration relationship indicates that when there is a disruption or imbalance in the short term, the system will make adjustments to return to long-term equilibrium.

Based on these results, the management of BUS and UUS is advised to strengthen the strategy of raising Third Party Funds through the innovation of deposit products that are competitive and in accordance with customer needs. In addition, the optimization of profit-sharing financing needs to be continuously improved because it has a positive contribution to profitability while reflecting the main characteristics of Islamic banking. Liquidity management also needs to be carried out efficiently so that the available funds are not too large idle cash, but are still able to meet operational needs and risk mitigation. For regulators, the results of this research can be input in formulating policies that support the strengthening of the intermediation function and stability of the Islamic banking industry in Indonesia.

This research has several limitations. First, the number of cross-sections used is still limited so that it does not fully describe all the characteristics of the national Islamic banking industry. Second, the study only used the variables of cash, deposits, and profit-sharing financing as determinants of profitability, while other factors such as asset quality, operational efficiency, capital adequacy, financing risk, inflation, interest rates, and economic growth have not been included in the model. Third, a relatively short observation period can limit the ability of researchers to capture long-term dynamics more comprehensively. Therefore, further research is recommended to use a wider range of data, longer observation periods, and add internal and macroeconomic variables to gain a deeper understanding of the factors affecting the profitability of Islamic banking in Indonesia.

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