

## **EXCHANGE-BASED FINANCING CONTRACTS AND FINANCIAL PERFORMANCE OF ISLAMIC BANKS**

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### **Abstract**

This study aims to investigate the impact of exchange-based financing contracts on financial performance of Islamic banks in selected countries. Specifically, the study aims to examine the effects of murabaha, istisna' salam and tawarruq contracts on return on asset of the banks. The study employed ex-post facto research design and population of the study consists of 27 countries whose financial data exists on Islamic Financial Service Board (IFSB) database. A sample of 9 countries was purposively selected from the population. The selection of these 9 countries was informed of data availability. Quarterly data were collected from IFSB database from 2014Q1 to 2022Q4. Fixed Effects Regression technique was used to analyse the data. Results showed that Murabaha and Istisna' had positive, significant effects while Salam had negative, significant impact on ROA. The study also found that Tawarruq had no significant influence on ROA of the banks. Based on these findings, the study concluded that exchange-based financing exerted significant impact on financial performance of Islamic banks. The study recommended the development and adoption of exchange-based financial services as a form of financial innovation which tends to boost financial performance of Islamic banks. Aggressive marketing and awareness creation are also recommended for Istisna, Salam and Tawarruq to enable them to corroborate murahaba financing in enhancing financial performance of the banks.

**Keywords:** Exchange-based contracts; financial innovation, murabaha; istisna Salam, profit-sharing

### **1.0 Introduction**

Adoption of Islamic banking system with sharia-compliant financial services, has expanded the banking market across regions. Such financial services provide opportunity for Islamic banks to offers banking services in line with provisions of Islamic laws (Shariah). Some of these services are exchanged-based that allow exchanging of money for goods or goods for money (Jimoh et al., 2022). In other words, the exchange of one commodity for another, the transfer of one commodity for money, or the transfer of money for money, makes the transactions exchange-based financing arrangements. Exchange-based contracts represent a major class of Islamic banking services featuring financing services or contracts like cost-plus sale (Murabaha), forward sale (Salam) and manufacturing financing (Istisna') transactions (Hassan et al., 2013; Jimoh et al., 2022).

In Murabaha financing, customers are allowed to buy items and pay later, an agreed price (cost plus profit element) (Al Nuaimi et al., 2024). A sort of financial arrangement known as Murabaha occurs when a consumer asks a bank to purchase a certain good with the understanding that the customer will subsequently repurchase the good at the original price plus a profit margin (Mahdinur & Barkatullah, 2023). Usually, the entire transaction price is spread over a predetermined length of time and payment is made in installments. The vendor discloses the product's price as well as the profit margin in this transaction. Murabaha is thus a sale of good for profit, not a lending arrangement (Abdul-Khaliq, 2014).

Another exchange-based contract is Istisna', which details an arrangement in which one party promises to supply a certain good at a fixed with specified future delivery date, as long as the

good can be produced within a set of predetermined specifications (Abdul-Khaliq, 2014; Komarudin &Pratomo, 2025). This production commitment covers all manufacturing, construction, assembly, and packaging processes. Similar to Istisna' is Salam (deferred-delivery sale) which involves an immediate payment for an item on which delivery is delayed (Mulyany et al., 2021). It is a contract to sell certain items with established characteristics, such as quantity and price, with the expectation that payment will be made at the time of the contract, while delivery occurs at later date in future (Waluyo & Rozza, 2020). Salam is frequently used for agricultural financing, which enables farmers to get paid in advance for their produce, while istisna' contracts are frequently utilized for building real estate or other material assets (Ali et al., 2025).

It could be deduced from the foregoing that exchange-based contracts could impact the entire banking market as financial services can be offered by Islamic banks in compliance with Islamic law (*Shariah*). In fact, Islamic banks have profited from exchange-based contracts by offering services that satisfy the needs of the public, especially Muslims (Zafar & Siddiqui, 2019). Islamic banks serve those customers that were previously underserved or excluded by conventional banks. In addition, the contracts have helped Islamic banks perform better by allowing them to make money in a way that is morally and Shariah-compliant (Zafar & Siddiqui, 2019). Islamic banks have been able to strengthen their customers' confidence and loyalty by providing Islamic financial products like murabaha, istisna, and salam that are in line with their values and beliefs. This has resulted in increased profitability and growth(Hasmawati & Mohamad, 2019).

Researchers and analysts however observed that Islamic bank profitability could majorly be traced to exchange-based financing particularly, Murabaha transactions (Azizah & Mukaromah, 2020; Kulmie et al., 2023; Marliyah et al., 2021; Rosiana et al., 2019). Jaber (2024) noted that except for Murabaha financing, other exchange-based products are still struggling for market share. The nature of the transactions and the associated risk may be the cause of the poor performance and patronage attributed to other goods, such as Istisna and Salam. In addition to hurting their profitability, the banks' inability to draw clients and capital through Istisna and Salam will also cost them the chance to boost the economy through manufacturing, agricultural, and other industrial financing.

Even as Islamic banking has grown substantially in recent years, exchange-based financing, particularly Murabaha transactions, continues to account for a significant share of the industry's revenues. However, other Shariah-compliant exchanged-based products, such as Istisna and Salam, continue to have low market share. This mismatch raises concerns about the viability and diversification of Islamic banks' funding portfolios. Despite Istisna and Salam's significant potential to help vital industries such as manufacturing, agriculture, and industrial growth, their underutilization indicates the presence of institutional, structural, or risk-related barriers that have not yet been completely recognized and appreciated. As a result, Islamic banks may be passing up significant opportunities to boost profitability while also supporting real-sector economic growth. Therefore, there is a need to investigate how these instruments can be optimized to improve bank profitability.

Although there exists research evidence on the role of murabaha financing in enhancing profitability, empirical evidence is still lacking in relation to other exchange-based contracts like *Istisna'* and *Salam*. This study therefore addressed the problem empirically by investigating the effect of exchange-based financing contracts on financial performance of Islamic banks. Specifically, the study examined the effects of *Murabaha*, *Istisna'* and *Salam* financing on Islamic bank profitability in selected countries.

## **2.0 Literature Review**

The framework of financial innovation theory serves as the foundation for this investigation. The theory was reviewed to underpin the connection between exchange-based contracts and Islamic banks' financial performance. Also, previous research works were reviewed to provide empirical evidence for the relationship.

### **Theory of Financial Innovation**

The Schumpeter theory of innovation serves as the foundation for this study's theoretical framework. According to Schumpeter (1928), entrepreneurs who were either independent engineers or R&D engineers in big businesses made it possible for their inventions to generate new profits (Akderer & Benli, 2018). According to Schumpeter, innovation is the introduction qualitative changes to existing products, processes and markets (Chandra, 2024). Schumpeter's theory of innovation has been developed in phases by researchers and the theory now being applied to financial industry (Arthur, 2017; Rolando et al., 2024). Financial innovation theory held that financial institutions like banks aggressively developed new products or services to meet market demand (Rossignoli & Arnaboldi, 2009). This innovation is generally undergone to make some adjustment in response to consumer preferences and requirements (Khraisha & Arthur, 2018).

Thus, the idea highlights the necessity of creating new products to satisfy consumer demand in the financial market. Financial innovations are typically highly adaptable and malleable to market demands (Gennaioli et al., 2010; Rajan, 2006). Lerner and Tufano (2011) expressed a similar viewpoint while elucidating the theory that financial innovation encompasses the new product development. The theory's proponents contend that financial innovation, especially through product development, benefits the system by reducing transaction costs, facilitating risk transfer and liquidity management, improving credit availability, and providing funding for financial institutions (Khraisha & Arthur, 2018; Zouari-Hadiji, 2023). A new banking product should undoubtedly draw in more customers (Zouari-Hadiji, 2023).

Based on past studies, financial innovation improves performance (Chipeta & Muthinja, 2018; Kamau & Oluoch, 2016; Lotto, 2019; Mohd Haridan et al., 2023), linking the theory of financial innovation to this study, Islamic banks tend to achieve a significant level of profitability, if they implement a combination of financial innovations. The financial performance of Islamic banks is anticipated to be improved by exchange-based financial contracts such murabaha, istisna', and salam, which are seen as innovations.

### **Empirical Review**

Moustapha and Nadir (2023) investigated the impact of Ijarah, Istisnaa, Murabaha, and Musharaka funding on profitability of Islamic banks in Qatar between 2011 and 2023. The

findings of estimating the Autoregressive Distributed Lag (ARDL) Model showed that Musharaka funding significantly increased ROE. However, murabaha funding has a major and adverse impact on ROE. Similarly, the impact of murabaha, mudharaba, and musharaka financings on operational performance of Indonesian Sharia Commercial Banks was examined by Afrizal et al. (2023). Purposive sampling was used to choose 11 banks. Annual data were extracted from the banks' annual reports from 2010 to 2019. Regression study results indicated that financing through murabahah and mudharabah had positive significant effect on ROA. However, the banks' ROA was not significantly impacted by musharakah financing. Furthermore, Sari and Maharani (2022) analysed bank profitability was affected by murabahah, musyarakah, and ijarah financing between 2016 and 2020 in Indonesia. Over the course of the five-year study, eight banks were chosen using purposeful sampling. Panel data regression model estimation was used to analyze the data gathered from the chosen banks' annual reports. The study's findings demonstrated that murabahah financing had a significant and positive influence on the banks' ROA.

Rumaishaa and Zamzami (2018) investigated the effects of Istishna and murabahah financings net income of Islamic banks from 2018 to 2020 as part of their study on cost-plus financing of Islamic banks in Indonesia. The study's data came from the annual reports of the three banks that were chosen. Regression research revealed that murabahah funding increased the banks' net income, a measure of profitability. However, it was determined that the impact of Istishna finance was negligible. Additionally, Belkhaoui et al. (2020) investigated the financing strategies, efficiency, risk-taking, and Islamic bank profitability in GCC countries. It was discovered that financing modes had significant impact on bank profitability. The findings demonstrated that murabahah financing increases profitability for Islamic banks in the GCC while simultaneously enhancing cost effectiveness and the capitalization ratio.

Aress and Abdul (2023) investigated the impact of Islamic banking products on the financial performance of Kenyan banks. Questionnaires and bank account records were used to gather primary and secondary data, respectively. Multiple regression analysis revealed that the asset-backed lending products (murabaha, ijara, and salam) and profit and loss sharing programs (musharaka and Mudaraba) had a substantial impact on the financial performance of the selected banks.

Empirical review indicates that exchange-based financial services such murabaha, istisna, salam and tawarruq have not been properly explored. Most studies focused on murabaha while few that considered other products reported mixed results. This study therefore considered murabaha, Istisna, Salam and Tawarruq as variables for measuring the effect of exchange-based contracts on financial performance of Islamic banks.

### **3.0 Methodology**

This study adopts an ex-post facto research design, which is appropriate because it relies on already existing financial data without any manipulation of variables. The design is suitable for examining relationships between Islamic financing modes and bank profitability, as the variables of interest have already occurred and cannot be controlled by the researcher. The population of the study comprises 27 countries whose Islamic banking financial data are available in the Islamic Financial Services Board (IFSB) database. From this population, a sample of nine

countries was purposively selected based on the availability and completeness of relevant data. The selected countries include Indonesia, Iraq, Jordan, Kuwait, Malaysia, Nigeria, Oman, Saudi Arabia, and Sudan. This purposive sampling technique ensures that only countries with sufficient and reliable data are included, thereby enhancing the validity and robustness of the analysis. Data for the study were obtained from secondary sources, specifically the IFSB database, which provides standardized and credible financial information on Islamic banking operations across countries. The key variables include exchange-based financing instruments (Murabaha, Istisna, and Salam) and measures of bank profitability.

The relationship between exchange-based financial services and financial performance of Islamic banks was expressed as follows:

$$Financial\ Performance = f\{Exchange - Based\ financial\ services\}$$

The study adopted the model of Samail et al. (2018) and it was modified as follows:

$$ROA_{it} = \beta_0 + \beta_1 MUR_{it} + \beta_2 IST_{it} + \beta_3 SLM_{it} + \beta_4 TWR_{it} + \beta_5 LIQ_{it} + \beta_6 ISMD_{it} + \mu_{it}$$

Where:

ROA = return on asset

MUR = Murabaha financing

IST = Istisna' financing

SLM = Salam financing

TWR = Tawarruq Financing

LIQ = Islamic banking Liquidity

ISMD = Size (Level) of Islamic banking market development

$\mu_{it}$  = random error term

The data was collected on quarterly basis from 2014Q1 to 2022Q4 totaling 36 observations for each country, and 324 observations for the study.

**Table 1:**  
**Measurement of Variables**

S/N	Variable	Proxy	Measurement	Source(s)
1	Financial Performance	Return on Asset (ROA)	Net income/ Total Asset	Badawi et al. (2023),
2	Murabaha financing	Murabaha	murabaha financing/total financing	Halim (2020)
5	Istisna' financing	Istisna' (IST)	istsna' financing/total financing	Moustapha and Nadir (2023)
6	Salam financing	Salam (SLM)	salam financing/total financing	Elgadi and Yu (2018)
7	Tawarruq Financing	Tawarruq (TWR)	tawarruq financing/total financing	Alzoubi (2017)

9	Liquidity	Liquid asset ratio (Abdul-Khaliq)	Liquid Asset/Total Asset	Jimoh et al. (2022)
10	Islamic Market Development	ISMD	Growth rate of Islamic financing to private sector	Wani et al. (2021); Léon and Weill (2018)

**Source:** Author’s compilation (2025).

For data analysis, panel data regression techniques were employed to examine the relationship between exchange-based financing modes and Islamic bank profitability across the selected countries over time. Descriptive statistics were first used to summarize the data, followed by inferential analysis using fixed effects and/or random effects models, depending on the outcome of the Hausman specification test. These methods are appropriate as they account for both cross-sectional and time-series variations, thereby providing more reliable and generalizable results.

### Results and Discussion

Results of descriptive analysis, and panel regression analysis were presented and interpreted in this section. Descriptive analysis detailed the explanations of the parameters in the summary statistics. Analysis of the regression was made after some preliminary tests such as multicollinearity and Hausman tests have been conducted.

**Table 2:**  
*Summary Statistics*

Variable	Obs	Mean	Std Dev.	Min	Max
MUR	324	57.62337	25.65982	17.5892	100.0000
IST	324	3.67582	6.363967	0.010764	27.9788
SLM	324	2.30957	7.35446	0.00000	22.12835
TWR	324	1.16167	0.412922	0.00000	7.32257
LIQ	324	26.06553	14.71607	-0.014957	70.8125
ISMD	324	40.11515	197.5493	-11.39384	2447.453
ROA	324	1.143652	1.512161	-4.78185	4.898387

**Source:** Author’s computation (2025).

The mean, or average values of the variables of Islamic banking data for the chosen nations across the study periods, is shown in Table 2. Murabaha finance as an average value of 57.62%. In other words, from the first quarter of 2014 and the fourth quarter of 2022, Murabaha accounts for an average of 57% of all Islamic bank financing in the chosen nations. This indicates that during the periods under investigation, murabaha financing accounted for more than half of the Islamic banking sector. Additionally, the table displays a standard deviation of roughly 25% for

MUR, indicating a 25% dispersion around the mean value in the percentage of total credit granted to murabaha. To put it another way, murabaha financing for a given time frame may be 25% more or lower than the average amount. The minimum and maximum values shown in the table are additional significant parameters of relevance. Table 2 shows that Murabaha finance accounted for at least 17.59% of overall financing, with a maximum value of 100%. The greatest value of 100% indicates that, at one point in time, at least one nation had exclusively murabaha funding available for the whole Islamic banking market. Accordingly, murabaha has dominated the market for Islamic banking.

Islamic banks also offer a financial product called Istisna' (IST). Table 2 shows that the mean value of IST was 3.67%, meaning that the percentage of Istisna' funding to the total financing of Islamic banks in the chosen nations was only roughly 4%. Accordingly, Istisna' only made up a very tiny percentage of all Islamic banks' financing agreements in a few chosen nations. The reliability of the mean estimations is implied by the standard deviation of 6.36, which demonstrated that the dispersion around the mean score is not very large. More so, the data showed that the minimal amount of Istisna' financing was 0.01%, which suggests that in certain markets for Islamic banking products, Istisna' financing is insignificant. The maximum IST of 27.98% was likewise reported in Table 2. The highest percentage of Istisna' funding demonstrated that, despite the product's mediocre performance, some Islamic banking markets in certain nations had a sizable amount of popularity.

With respect to Salam (SLM) finance, the average ratio of Salam financing to overall financing was found to be 2.31%. According to the mean ratio, salam transactions accounted for, on average, 2% of Islamic banks' overall financing. This indicates that, in terms of market share of exchange-based contracts, salam came in second, right behind murabaha. The standard deviation of the mean score was 7.35%, which indicates a wide range of plus or minus 7% around the mean. In other words, the actual salam financing from a typical bank may be 7% greater or lower than the mean value at any given time. A minimum of 0.00% was also recorded for salam funding, indicating that, at least in certain instances, Islamic banks in a nation did not execute any salam contracts. However, the highest amount of salam financing was shown to be 22.13% of the overall amount of finance. This exceeded the average value of murabaha funding by even more, indicating that for a while, salam contracts received more business than even the murabaha, which controlled the market.

On *Tawarruq* (TWR) financing contract, Table 2 showed low value for the parameters of the summary statistics. From the Table, TWR had a mean value of 1.16% with a standard deviation of 0.41%, which is the average *Tawarruq* financing ratio to total financing in the periods under review. This means that total *Tawarruq* financing was occupying less than 2% of the entire market of Islamic banking services. The standard deviation indicates a spread around the mean value of plus or minus 0.41%. Also, the minimum value was reported to be 0.00% buttressing the low patronage of the service of *Tawarruq* by many Islamic banks' customers across the region. In other words, *Tawarruq* financing occupies a very small portion of the market and this is supported by the maximum value of 7.32% as the highest value of *Tawarruq* financing over the periods of the study.

Return on Asset (ROA) is the dependent variable of the model and was taken to be a function of other variables. The behaviour of ROA was also determined by the descriptive statistics presented in Table 1. ROA, according to Table 2 had a mean value of 1.14% and a standard deviation of 1.51%. This showed that the banks were averagely profitable during the period under study. The minimum value was a negative of -4.78% indicating that some banks recorded net loss in at least one year of their operations during the period under consideration. The maximum of 4.90% showed that net income of Islamic banks in selected countries has never been more than 5% of total asset of the banks. Notwithstanding the statistics for minimum and maximum values, the descriptive statistics showed that the banks were doing averagely well in terms of financial performance.

**Table 3:**  
*Pair-wise correlation*

Variable	MUR	IST	SLM	TWR	LIQ	ISMD	Source: Authors computation (2025). Table 3 displays
MUR	1.0000	-0.1712	-0.5192	0.2219	-0.3420	0.0829	displays the correlational matrix for each pair of independent variables. According to Gujarati (2004), there is an issue with the relationship between two independent variables when the correlation coefficient is more than 0.8. Put another way, a multicollinearity problem arises when there is a strong correlation of greater than 80% between two explanatory variables, and a regression analysis result that is tainted by multicollinearity is typically untrustworthy. But it's evident from Table 3 that none of the coefficients even come close to 0.8. Consequently, the variables in the regression model would not have any problems with multicollinearity. A regression model was then created to ascertain the impact of the explanatory variables because the test result demonstrated the lack of multicollinearity.
IST	-0.1712	1.0000	-0.2522	-0.0121	0.1100	-0.0231	
SLM	-0.5192	-0.2522	1.0000	-0.6129	-0.0142	0.2000	
TWR	0.2219	-0.0121	-0.6129	1.0000	0.1103	-0.0159	
LIQ	-0.3420	0.1100	-0.0142	0.1103	1.0000	-0.0130	
ISMD	0.0829	-0.0231	-0.0142	0.1103	-0.0130	1.0000	
ISMD			0.2000	-0.0159	-0.0130	1.0000	

**Table 4:**  
*Variance inflation Factor*

Variable	VIF	1/VIF
MUR	2.43	0.411021
IST	3.06	0.326307
SLM	3.72	0.269073

	2.36	0.424035
TWR		
	2.53	0.395538
LIQ		
	1.37	0.731476
ISMD		
<b>Mean VIF</b>	<b>2.58</b>	

Source: Author's computation (2025).

Table 4 above displays the VIF and its inverse, or tolerance in technical language, for each independent variable. According to Abdulkarim et al. (2023), VIF of less than 5 indicates absence of multicollinearity. Therefore, the results presented in Table 4, shows that there is no multicollinearity issue in the model.

**Table 5:**  
*Results of Unit Root Tests*

Variable	LLC		HT		Fisher-PP	
	Stat.	p-value	Stat.	p-value	Stat.	p-value
ROA	9.42	0.000	-5.19	0.000	4.21	0.001
MUR	-7.61	0.000	-6.75	0.000	8.17	0.000
IST	-8.44	0.000	3.49	0.030	6.11	0.000
SLM	10.15	0.000	8.71	0.000	9.00	0.000
TWR	3.10	0.021	2.78	0.034	5.91	0.000
LIQ	9.93	0.000	3.11	0.014	3.09	0.021
ISMD	4.12	0.001	9.41	0.000	6.45	0.000

Source: Author's Computation (2025).

The unit root test results and p-values for the statistics of each procedure's unit root test are shown in Table 5. Given that "presence of unit root" is the null hypothesis for every test, the test statistic's significance will show that the absence of unit root is the null hypothesis's preferred outcome. Model estimates using fixed effects, random effects, or pooled OLS approaches are therefore credible because the tests showed that the variables are stationary.

**Table 6:**  
*Regression Results*

Variable	OLS			Fixed Effects			Random Effects		
	Coef.	T	p-value	Coef.	T	p-value	Coef.	Z	p-value
MUR	0.18	4.17	0.000	0.25	3.78	0.012	0.57	1.09	0.374
IST	0.34	1.11	0.617	0.13	3.89	0.010	0.40	2.41	0.021

SLM	-0.16	-4.23	0.000	-0.48	-5.55	0.000	-0.11	-6.20	0.000
TWR	0.08	2.31	0.041	0.10	1.49	0.210	-0.12	-2.15	0.029
LIQ	0.07	2.15	0.019	-0.09	-0.94	0.751	0.23	5.77	0.000
ISMD	-0.11	-6.81	0.000	0.01	7.18	0.000	-0.42	-5.11	0.000
Constant	2.16	2..92	0.021	1.71	4.02	0.001	1.26	3.2	0.001
R-squ	0.65	-	-	0.79	-	-	0.68	-	-
F-stat.	11.7	-	0.000	13.33	-	0.000	-	-	-
Wald Chi-squ	-	-	-	-	-	-	101.2	-	0.000
F-test of Homo.				7.11		0.000			
BP-CW test				2.25		0.164			
Hausm test				44.17		0.000			
Autocorrelation test				2.17		0.416			
Av. VIF				2.58		-			

**Source:** Author's computation (2025).

Table 6 demonstrates the significance of the test result with a p-value of 0.000 and a statistic value of 7.11 for the F-test of homogeneity. The F-test for homogeneity is predicated on assumption that panel members are all the same. If there is heterogeneity among the panel observations, the null hypothesis of homogeneity is rejected, as indicated by the significance of the test statistic. Breusch-Pagan/Cook-Weisberg (BP/CW) test for heteroskedasticity was equally conducted to determine the appropriateness of Pooled OLS regression. According to Table 6, BP/WC statistics of 2.25 and p-value of 0.164 mean that the hypothesis of constant variance would be rejected. This implies that Pooled OLS was not appropriate for model estimation. Therefore, it was preferred to use heterogeneous panel methods of either fixed or random effects.

However, the Hausman test was used to select between the Effects models. The Hausman test indicates a statistically significant result (p-value of 0.000 and statistic value of 44.17). The hypothesis of Hausman test is that there was no systematic difference between the coefficients of the fixed and random effects results. Results of the Hausman test, which are shown in Table 6, suggested that the Fixed Effects model estimates were better suited for interpreting regression results.

The variance inflation factor (VIF) also has an average value of 2.58, which is significantly less than the 10 recommended for the rule of thumb (Asteriou & Hall, 2016). The Wooldridge test of autocorrelation has a statistic value of 2.17 with a p-value of 0.416, indicating that the observations are free from autocorrelation issues. The R-squared presented for the random

effects method is 0.79, which indicates that approximately 79 percent of variations in return on asset (ROA) of Islamic banks in specific countries were explained by the regression model. This indicates that there is no multicollinearity in the model. After confirming that the models fit well and choosing the Fixed Effects model estimator as the best estimate technique, the effects of the explanatory factors on the dependent variable (ROA) were reported as follows.

The result demonstrates that murabaha financing improved the banks' return on assets (ROA). The coefficient of 0.25 indicates the direction of this effect, and the t-value of 3.78 and p-value of 0.012 indicated that the result was statistically significant at the 5% level of significance. In the same vein, *Istisna'* (IST) financing was also found to have positive and significant relationship with ROA. According to Table 6, 1% increase in IST tends to result in about 0.13% increase in ROA. The result was statistically significant as the value of t-statistic is 3.89 with a p-value of 0.010 which is less than 5% level of significance.

The ROA of Islamic banks was considerably impacted negatively by salam (SLM). The coefficient of -0.48, t-value of -5.55, and p-value of 0.000 all show that the banks' return on asset (ROA) will decrease with increasing SLM size. Positive relationship was found between *Tawarruq* (TWR) as an exchange-based financing, and return on asset (ROA) of the banks. The coefficient of 0.10 means that 1% increase in TWR financing would result to 0.1% increase in ROA of the banks. The relationship between TWR and ROA was found to be statistically insignificant with a p-value of 0.210 (> 5%). On the control variables, Islamic banking liquidity (Abdul-Khaliq) was found to be negatively correlated with ROA but the result was not significant as the p-value of 0.751 is greater than 0.05. Conversely, positive, significant relationship was found between Islamic banking market development (ISMD) and return on asset (ROA). The significance of the relationship was supported by t-value of 7.18 and p-value of 0.000 as reported in Table 6.

Regression results showed that the return on assets (ROA) of Islamic banks in the chosen countries was positively and significantly impacted by murabaha funding. This suggests that raising the share of murabaha financing in Islamic banks' overall financing will improve the banks' overall profitability and return on assets. This is likely be so since murabaha takes the largest share of the entire islamic banking market. The study's findings about the correlation between murabaha financing and return on asset align with those of Kulmie et al. (2023), who found that murabaha financing had a positive and significant impact on Somalian banks' profitability. However, Moustapha and Nadir (2023) found negative effect of murabaha financing on return on equity as a measure of profitability. Thus, finding of this work regarding murabaha financing contradicted that of Moustapha and Nadir (2023).

Regarding *Istisna'* financing, a positively significant effect was found on return on asset. Although, *Istisna'* financing is still negligible, the result indicates that channeling more funds to manufacturing sector through *Istisna'* financing will boost the profitability of Islamic banks. The report of this study also contradicted the finding of Moustapha and Nadir (2023) which found no significant relationship between *Istisna'* and profitability of Islamic banks in Qatar. The findings of this work were also not consistent with Ar Rumaishaa and Zamzami (2022) who reported insignificant effect of *Istisna* on profitability.

On *Salam* financing, a significantly negative effect was found on return on asset of Islamic banks in the selected countries. Even though *Salam* financing has the potentials to promote agriculture, the banks could not maximise the opportunity to boost their profitability. This could have been because of low patronage, or perhaps the banks were reluctant to finance *salam* contracts due to the risk involved in agricultural financing. The results of this study on *Salam* financing, however, were at odds with those of Elgadi and Yu (2018), who found that the *Salam* form of financing had no discernible effect on the banks' return on equity (ROE) or return on assets (ROA).

The result of regression analysis also revealed that *Tawarruq* could not exert any significant influence on financial performance of Islamic banks. This implies that Islamic banks customers have not been using *Tawarruq* to boost their liquidity to an extent it will affect financial performance of the banks. Regarding the two control variables of liquidity and size of Islamic banking market development, the study found significantly negative relationship between liquidity and profitability of the banks. The finding is understandable for the liquidity profitability trade off. Conversely, the market for Islamic banking significantly and favourably impacted Islamic banks' profits.

The findings of this study regarding exchange-based financial services and their impacts on financial performance were in line with the theories of financial innovation. In this context, development and adoption of exchange-based financial services is a form of financial innovation and offering such products by Islamic banks tends to boost their performance.

As contributions to literature, this study provides robust cross-country empirical evidence on the differential impact of exchange-based financing instruments on bank profitability. By demonstrating that *Murabaha* financing has a positive and significant effect on return on assets (ROA), the study reinforces its central role as the primary driver of profitability in Islamic banking systems. Also, existing knowledge was extended by establishing the positive and significant effect of *Istisna'* financing on profitability, despite its currently negligible share in Islamic banks' financing portfolios. This finding is particularly important as it highlights the untapped potential of *Istisna'* as a viable instrument for enhancing bank performance while simultaneously supporting real sector activities such as manufacturing and industrial development.

Furthermore, the study contributes by providing evidence of the negative impact of *Salam* financing on profitability. This offers an understanding of why certain exchanged-based financial products remain underutilized, pointing to the operational challenges and inherent risks attributable to agricultural financing. Additionally, the study highlights the insignificant role of *Tawarruq* financing in influencing performance, indicating ineffectiveness of the instrument in the selected countries. From a broader perspective, the study contributes to the theory of financial innovation by showing that while innovation in Islamic financial products can enhance bank performance, its impact is uneven across instruments. The findings underscore the need for strategic diversification beyond dominant products like *Murabaha* to achieve sustainable profitability.

## 5.0 Conclusion

The study's findings showed that, in the selected countries, the return on assets of Islamic banks was significantly impacted negatively by salam and positively by murabaha and istisna. Also, Islamic banking market development was found with positive, significant effect while liquidity had no effect on return on asset of Islamic banks. Based on these findings, the study concluded that exchange-based have exerted significant impact on financial performance of Islamic banks in the selected countries. The study therefore recommended that Islamic banks should employ aggressive marketing and awareness creation strategies for Istisna' product. This will enable the banks to channel more funds to manufacturing industries and enhance financial performance of the banks. Islamic banks should also put more efforts on improving the patronage of *salam* financing by reaching out to commercial farmers for agricultural financing. This can help to increase the volume of *Salam* funds in the market and enhance banks' performance in terms of profitability. Finally, customers of the banks should be made aware of the possibility of improving their short-term liquidity position through tawarruq finance. This will also lead to improved financial performance of the banks.

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