



### BANK-SPECIFIC DETERMINANTS OF ISLAMIC BANKING PROFITABILITY: EVIDENCE FROM SELECTED AFRICAN COUNTRIES

Jimoh, Abdulrazaq Taiye<sup>1</sup>, Salihu, Ismail<sup>2</sup>, Khaleel, Sa'adatu Ibrahim<sup>3</sup>, & Afolabi, Hafsat Olatanwa<sup>4</sup>

<sup>1</sup>Department of Finance, University of Ilorin, Email: [jimoh.at1@unilorin.edu.ng](mailto:jimoh.at1@unilorin.edu.ng)

<sup>2</sup>Department of Finance, University of Ilorin, Email: [soliuismail@gmail.com](mailto:soliuismail@gmail.com)

<sup>3</sup>Department of Finance, University of Abuja, Email:

<sup>4</sup>Department of Finance, Al-Hikmah University, Ilorin

\*Corresponding Author Email: [jimoh.at1@unilorin.edu.ng](mailto:jimoh.at1@unilorin.edu.ng)  
<https://doi.org/10.70118/aijbfd.01012026007>

#### KEYWORDS

Africa, Efficient  
Structure, IFSB,  
Islamic banking,  
operating efficiency,  
profitability

#### ABSTRACT

*The determinants of Islamic bank profitability in Africa remain a subject of empirical investigation as the extent to which bank-specific variables affect performance is underexplored by past studies. This study therefore investigated the effects of bank-specific characteristics on profitability of Islamic banks in Africa. Specifically, the study examined the effects of asset quality, liquidity, operational efficiency, revenue diversification and capital adequacy on Islamic bank profitability in selected African countries. The study population consists of 25 African Islamic Financial Services Board (IFSB) member countries as at January 2026. Purposive sampling technique was used to select 5 countries while quarterly data were collected from IFSB database for period, 2013 to 2024. The data were analysed using Fixed Effect Regression estimation technique. Results showed that capital adequacy ( $\beta=0.91$ ,  $p<0.05$ ), deposit liability ( $\beta=0.33$ ,  $p<0.05$ ), revenue diversification ( $\beta=0.69$ ,  $p<0.05$ ) and total financing ( $\beta=0.16$ ,  $p<0.05$ ) had positive and significant effects on return on assets. Conversely, non-performing financing ( $\beta=-0.28$ ,  $p<0.05$ ), cost to income ratio ( $\beta=-1.98$ ,  $p<0.05$ ), and liquidity ratio ( $\beta=-5.72$ ,  $p<0.01$ ) had negative significant impact on ROA. It was concluded based on these findings, that bank-specific factors affect profitability of Islamic banks in selected African countries. It is therefore recommended for policy implementation, that the management of Islamic banks in Africa should ensure that the banks are adequately capitalized by maintaining good capital adequacy to enhance their profitability. Islamic banks in Africa should also ensure that their financing activities are efficiently and effectively executed and monitored, to reduce non-performing facilities that are capable of depleting their profitability.*

#### ARTICLE HISTORY

Received: 05/12/2025

Received in Revised form:  
25/01/2026

Accepted: 15/02/2026

Available online: 15/04/2026

## 1. Introduction

Islamic banking in Africa has expanded over the past two decades, with countries such as Sudan, Egypt, Nigeria, Kenya, South Africa, and Morocco emerging as key players in the sector (Maulida, 2025; Chouikh & Blagui, 2017). A variety of factors, including the expansion of international financial organisations, the implementation of regulatory frameworks, and an increase in the Muslim population, have driven the development of Islamic banking in these countries. The increasing Muslim population in Africa, estimated at over 40% of the total population, has spurred demand for financial products that align with Islamic principles (Maulida, 2025; Mohanty, 2017). Countries with strong financial inclusion initiatives, like Kenya, have seen greater success in Islamic banking (Mohanty, 2017).

Notwithstanding the growth rate, Islamic banking remains a niche industry in Africa, with market penetration varying across countries. In Sudan, for instance, the banking system operates almost entirely on Islamic principles, whereas in countries like South Africa, Islamic banking accounts for a small fraction of the financial sector (Alali et al., 2024; Alharbi, 2017). This means that Islamic banks will have to often compete with well-established conventional banks, which may have better access to capital, more extensive branch networks, and diversified product offerings (Brahmaiah & Ranajee, 2018). The banks must be profitable for sustainable competition with their conventional banks. Capital adequacy, cost efficiency, asset quality, and revenue diversification, among others, have been identified as bank-specific factors affecting profitability (Handayani et al. 2024; Chouikh & Blagui, 2017; Menicucci & Paolucci, 2016).

Profitability of Islamic banks in Africa remains a major concern as many bank-specific characteristics tend to influence their performance. However, the extent to which the factors affect the banks' profitability remains underexplored as past studies focused largely on conventional banks (Anugra et al. 2025; Hartanti et al. 2024; Kawshala & Panditharathna, 2017; Mohanty, 2017; Shah & Khan, 2017). Considering this, the study was conducted to investigate bank-specific characteristics that influence the profitability of

Islamic banks across Africa. The study sought to evaluate how asset quality, liquidity, operational effectiveness, revenue diversification, and capital adequacy affected the profitability of Islamic banks in a few selected African countries.

The arrangement of this study includes an introduction followed by a literature review. Section 3 provides a detailed description of the data collection and analysis procedure. Section 4 presented and analysed the results, while section 5 detailed the conclusion and recommendations.

## 2. Literature Review

This section focuses on the theories that provided the theoretical foundation for the relationship between bank-specific variables and profitability. Past studies that are relevant to the study variables were also reviewed in this section.

### 2.1 Theoretical Review

#### 2.1.1 Efficient Structure Theory

Efficient structure theory which could be traced to Bourke (1989), argued that banks with superior management and operational efficiency achieve lower costs, better resource allocation, and enhanced profitability. The theory suggests that efficient banks can reduce costs and increase earnings. Efficiency leads to market dominance, allowing banks to gain higher profits. According to Al-Jafari and Alchami (2014), the theory holds that well-managed banks naturally outperform inefficient ones, gaining competitive advantages in the process.

The theory has been widely used to explain how various bank-specific factors like efficiency, liquidity and revenue diversification, affect profitability. Relating operating efficiency to bank profitability, the theory emphasized that cost-efficient banks can offer competitive rates, attract more customers, and increase their profitability. Berger and Humphrey (1997) stated that banks with higher cost-efficiency tend to achieve better financial performance. In terms of Liquidity, the theory holds that banks with higher liquidity can manage unexpected withdrawals and financial shocks, leading to stability and improved profitability (Gržeta et al., 2023). Regarding revenue diversification, it was argued that diversifying revenue sources stabilizes profits of the banks. Stiroh (2004) opined that banks with greater revenue diversification tend to have higher and

more stable profits. In the aspect of capital adequacy, the theory proposes that a well-capitalized bank is more stable and can take on profitable investments without excessive risk. For this reason, Athanasoglou et al. (2008) discovered a direct link between bank profitability and capital adequacy. The theory also provided an explanation for the relationship between asset quality and profitability. The theory holds that big non-performing loans (NPLs), a symptom of poor asset quality, result in higher loan loss provisions, which reduce profitability, and vice versa. According to Miller and Noulas (1997), better asset quality enhances profitability by reducing bad debt expenses. Studies like Guillén et al. (2014), Bucevska and Hadzi Misheva (2017), Hamdi et al. (2017), and Kou et al. (2019) have validated the theory of efficient structure in their respective research works relating to determinants of banks' profitability.

Relating the theory to Islamic banks' profitability, the banks operate under Shariah-compliant principles, which influence their efficiency and profitability. For instance, Islamic banks often have higher operational costs due to Shariah compliance. Well-managed and efficient Islamic banks can reduce costs through technology and economies of scale, and this will improve their profitability (Sufian, 2009). Also, Islamic banks face liquidity challenges due to limited Shariah-compliant instruments. Efficient liquidity management enhances profitability (Beck et al., 2013). Furthermore, Islamic banks rely on profit-sharing contracts which are riskier than conventional loans. Efficient banks with diversified revenue sources like fee-based services achieve higher profitability (Abduh & Idrees, 2013). Finally, on capital adequacy, higher capital buffers are required due to risk-sharing principles in Islamic banking. Efficiently managed Islamic banks maintain strong capital ratios, leading to higher returns and financial stability (Iqbal, 2001).

### 2.1.2. Risk-Return Trade Off Theory

The risk-return trade-off theory helps to explain the relationships between bank-specific factors and profitability through the effect of such factors on the level of risk, banks assume (Ozili, 2021). For example, A well-capitalized bank reduces risk exposure, leading to financial stability but potentially lower returns due to conservative

lending (Berger & Bouwman, 2013). Conversely, banks with lower capital buffers may engage in riskier lending to boost profitability but expose themselves to solvency risks. Also, high NPLs reduce profitability as banks need to make provisions for bad debts, reducing net income (Athanasoglou, et al., 2008). It has been established that low NPL ratios indicate strong asset quality and stable earnings (Mishkin & Eakins, 2021). On operating efficiency, efficient banks tend to have higher profitability due to reduced operational expenses (Sufian & Habibullah, 2010), while inefficient banks may get exposed to higher risks to sustain profits, leading to instability. In terms of liquidity, holding excess liquidity provides financial security but can lower returns due to the opportunity cost of holding idle cash (Tan & Floros, 2018). While low liquidity can boost short-term profitability, it also raises the possibility of a bank run. Finally, the relationship between revenue diversification and profitability was explained by the risk-return trade-off theory. By offering stability during economic downturns, diversified revenue sources lower risk and increase profitability. Banks must carefully weigh risk and reward while making financial choices, according to the Risk-reward Trade-Off Theory. By influencing risk levels, important bank-specific elements including capital adequacy, asset quality, operating efficiency, liquidity, and income diversification have a direct impact on profitability. **While** higher risks can lead to higher profits, excessive risk-taking can result in financial distress. Recent empirical studies like Dietrich and Wanzenried (2011), Tan and Floros (2018), El-Chaarani et al. (2021), Ozili (2021) support the idea that well-managed capital, efficient operations, strong asset quality, optimal liquidity levels, and diversified income streams enhance bank profitability.

### 2.1.3 Relative Market Power Theory

Relative Market Power (RMP) Theory, developed by Shepherd (1972), suggests that firms (including banks) with greater market power can set prices above competitive levels, allowing them to earn higher profits. The theory argues that a firm's individual market power, rather than industry-wide competition, determines its profitability (Khan et al., 2019). For banks, market power depends on capital strength, operational efficiency, asset quality, liquidity, and revenue diversification.

Banks with stronger financial fundamentals can gain a competitive advantage by charging higher fees, and leveraging economies of scale, which enhances profitability (Tan, 2016). Relating the theory to this study, Islamic banks that effectively leverage their market position through higher capital adequacy, asset quality, efficiency, can maintain superior profitability. Their ability to differentiate through Shariah-compliant products and operational efficiency enables them to sustain a competitive edge, even in highly contested banking markets.

## 2.2 Empirical Review

Previous research on the impact of bank-specific factors on profitability has produced conflicting results. This study reviewed and presented a few of these reports. According to Khediri & Khedhiri (2009), efficiency and capitalisation increased bank profits. The profitability of Islamic banks is positively impacted by bank capital, bank size, and financial structure, according to Karim et al. (2010). In a similar vein, bank size was found to be positively important in affecting profitability by Idris et al. (2011). In a different study, Khan et al. (2014) found that the gearing ratio, asset management, deposit ratio, and NPL ratio all had a substantial impact on Islamic banking profitability. Additionally, Samad's (2015) findings showed that profitability is highly influenced by the loan-deposit ratio, loan-loss provision to total assets, equity capital to total assets, and operating expenditures to total assets. Profitability was positively and statistically significantly impacted by equity financing (Chowdhury & Rasid, 2015). According to Alharbi's (2017) findings, Islamic banks were positively impacted by the capital ratio, other operating revenue, GDP per capita, bank size, concentration, and oil prices. Furthermore, bank size and liquidity boost profitability, according to Ashraf et al. (2017). Furthermore, Alzoubi (2018) discovered that the profitability of Islamic banks is significantly positively impacted by bank size, equity to assets, and deposits to assets. Similarly, Suppia and Che Arshad (2019) found that the deposit ratio and bank capital are important factors in Islamic banks' profitability. This finding suggests that since earnings are a source of capital, increased profitability may lead to larger capital ratios.

Furthermore, Mennawi and Ahmed (2020) found that investment in short-term securities, operational cost effectiveness, and bank capitalisation all had a major impact on Islamic bank profitability. According to Chowdhury et al. (2022), bank-centric factors significantly and favourably affected the banks' return on equity and return on assets. According to Gazi et al. (2024), profitability was strongly correlated with credit risk, liquidity, and asset management quality.

On the other hand, it was discovered that profitability was negatively impacted by operating efficiency (Karim et al., 2010). Rahaman and Akhter (2015) discovered that the return on assets (ROA) was significantly impacted negatively by bank size and deposits in another study of features unique to banks. According to Chowdhury and Rasid (2015), operating efficiency has a statistically significant negative impact on Islamic banks' profitability. Similarly, Ashraf et al. (2017) observed that leverage had a substantial negative impact on bank profitability. The profitability of the bank is inversely connected with capital sufficiency, operating efficiency, and bank size (Gazi et al., 2024).

However, AL-Omar and AL-Mutairi (2008) showed that operational efficiency (loan-assets ratio and operating expenses ratio) was statistically negligible when they examined the influence of bank-specific factors on banks' profitability in Kuwait. Additionally, a negative but negligible correlation was found between the bank's size and profitability (Akhtar et al., 2011). Additionally, it was discovered that loan and expense ratios have little bearing on bank profitability (Rahaman & Akhter, 2015). Furthermore, Samad (2015) discovered that bank profit was unaffected by bank size. Bank profitability is unaffected by loans to assets or cash to assets (Alzoubi, 2018). Additionally, it was discovered that there was little correlation between bank performance and bank size, liquidity, credit risk, and expense ratio (Quan et al., 2019).

When investigating the factors that influence Islamic banking profitability, a number of bank-specific features were discovered to be significant, including capital sufficiency, asset quality, operating efficiency, bank size, and liquidity. However, because specific areas and information were not covered by the investigations, resulting in study gaps, the conclusions could not be considered

valid for long-term generalisation. Previous research has identified a number of bank-specific characteristics, including capital adequacy, asset quality, operational efficiency, bank size, liquidity, and bank deposits. Revenue diversification is an important bank-specific feature in Islamic banking profitability, according to theoretical study. Unfortunately, previous studies did not incorporate revenue diversification into their models. This study used revenue diversification to assess how returns from various financing operations affect bank profitability. Furthermore, because the majority of previous studies focused on a single country, it failed to account for the Islamic banking sector's level of development. Since the current study broadened its scope to include a few selected African nations, it became important to account for the level of development of Islamic banking markets in the chosen countries.

### 3 Methodology

#### 3.1 Population, Sample and Sampling Technique

The population of the study consists of 25 African Islamic Financial Service Board (IFSB) member countries. The countries are Ghana, Mauritania, Senegal, Guinea-Bissau, Mali, Ivory Coast, Burkina Faso, Togo, Benin, Niger, Nigeria, Mauritius, Djibouti, Somalia, Uganda, Kenya, Tanzania, South Africa, Zambia, Mozambique, Morocco, Libya, Egypt, Sudan and Algeria. The study's sample was drawn from five different countries using purposive sampling technique. The selection method was based on data availability because the sample consists of countries whose Islamic banking data are available in the IFSB database. As a result, the study focused on Nigeria, Morocco, Libya, Sudan, and Egypt.

#### 3.2 Data and Data Collection and Analysis Methods

The study made use of secondary data that was gathered. The IFSB database was used to gather quarterly data on bank-specific characteristics and profitability metrics from 2013 to 2023. Both descriptive and inferential statistical analysis were used to examine the data. For data analysis and interpretation, pooled OLS, fixed, and

random effects models were estimated. Initially, the Breusch-Pagan Lagrange Multiplier (BP LM) test was used to assess the suitability of the Pooled OLS regression. The choice between fixed effect and random effect models was then made using the Hausman test. The impact of bank-specific factors on the profitability of Islamic banks in the chosen nations was then examined using a fixed effect regression model.

#### 3.3 Model Specification

The model is used to express the relationship between bank-specific factors and Islamic banking profitability. The relationship between the dependent and independent variables was expressed as follows:

*Bank Profitability =*

*f{Bank – Specific Factors }*

In establishing this relationship, the study adapted the model of Gazi et al. (2024) on the relationship between bank-specific factors and profitability. The model was specified as follows:

$$ROA_{it} = \beta_0 + \beta_1 CAR_{it} + \beta_2 NPF_{it} + \beta_3 CIR_{it} + \beta_4 DEP_{it} + \beta_5 BSZ_{it} + \beta_6 LIQ_{it} + \mu_{it} \dots \dots \dots 3.3.1$$

In modifying the model, this study introduced revenue diversification (RVD) and change in total financing (TFN). The TFN variable was included to control for Islamic market development, in each of the selected countries. Therefore, the model of Khan et al (2014) was modified and adopted as follows:

$$ROA_{it} = \beta_0 + \beta_1 CAR_{it} + \beta_2 NPF_{it} + \beta_3 CIR_{it} + \beta_4 DEP_{it} + \beta_5 LIQ_{it} + \beta_6 BSZ_{it} + \beta_7 RVD_{it} + \beta_8 TFN + \mu_{it} \dots \dots \dots 3.3.2$$

#### Measurement of Variables

In this study, the dependent variable and independent variables were indicated by some proxies as specified in the model. The measurements of the proxies were presented in Table 1 below.

**Table 1: Variable Measurements**

| S/N | Variable      | Proxy                 | Measurement             | Source(s)                                |
|-----|---------------|-----------------------|-------------------------|------------------------------------------|
| 1   | Profitability | Return on Asset (ROA) | Net income/ Total Asset | Samad (2015); Mukhibad and Khafid (2018) |

|   |                            |                                                     |                                                               |                                                           |
|---|----------------------------|-----------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------|
| 2 | Capital adequacy ratio     | CAR                                                 | Capital to asset ratio                                        | Alharbi (2017); Almaqtari et al. (2018)                   |
| 3 | Asset Quality              | Non-performing financing (NPF)                      | Non-performing financing to total financing                   | Alfadli, and Rjoub (2019); Almaqtari et al. (2018)        |
| 4 | Operating efficiency       | Cost-to-income ratio (CIR)                          | Operating cost as a percentage of operating income            | Quan et al. (2019);                                       |
| 5 | Liquidity                  | Liquid asset-to total asset ratio                   | Liquid asset as percentage of Total Asset                     | Ashraf et al. (2017), Alzoubi (2018)                      |
| 6 | Deposit                    | Deposit ratio (DEP)                                 | Total deposit/ total asset                                    | Khan et al. (2014); Gazi et al. (2024)                    |
| 7 | Revenue Diversification    | Revenue Div (RVD)                                   | Income from financing contracts as percentage of total income | <b>Alandejani &amp; Asutay (2017); Beck et al. (2013)</b> |
| 8 | Bank Size                  | Size of Islamic banking market in the country (BSZ) | Log of aggregate total assets                                 | Mennawi and Ahmed (2020)                                  |
| 9 | Islamic Market Development | Growth rate of Total Financing (TFN)                | Percentage change in Total Financing                          | Gazi et al. (2024)                                        |

#### 4 Results and Discussion

Results of both descriptive and inferential analysis were presented and discussed in this section.

##### 4.1 Descriptive Analysis

Table 2 provides the descriptive analysis results as summary statistics, including the variables' mean, standard deviation, minimum, and maximum values.

**Table 2: Summary Statistics**

| Var. | Mean  | Std Dev | Min.  | Max.  | Obs |
|------|-------|---------|-------|-------|-----|
| ROA  | 2.304 | 5.260   | -31.0 | 24.53 | 220 |
| CAR  | 22.3  | 0.321   | -4.93 | 51.70 | 220 |
| NPF  | 8.07  | 5.780   | 3.14  | 36.31 | 220 |
| CIR  | 16.74 | 3.111   | 9.73  | 22.10 | 220 |
| DEP  | 12.62 | 10.83   | 2.38  | 74.63 | 220 |
| LIQ  | 15.33 | 1.970   | 2.46  | 27.29 | 220 |
| BSZ  | 25.00 | 3.45    | 7.91  | 31.25 | 220 |
| RVD  | 17.00 | 1.26    | 2.22  | 67.15 | 220 |

TFN                      23.70                      0.03                      11.19                      48.83                      220

*Source: Author's Computation, 2025*

The results of summary statistics to characterise the characteristics of the variables gathered for the study are shown in Table 2. From 2013Q1 to 2023Q4, Islamic banks from the chosen nations had an average return on asset (ROA) of 2.30%, as the table illustrates. The average value of the capital adequacy ratio was 22.3%. Additionally, the chart indicates that during the period under examination, the average non-performing financing ratio (NPF) and cost to income ratio (CIR) were 8.07% and 16.74%, respectively. In a similar vein, the average rise of deposit liability (DEP) and liquidity ratio (LIQ) for the five Islamic banks studied across the chosen nations was 12.62% and 41.84%, respectively. Additionally, the average value of revenue diversification (RVD) is 17%. Bank size and total financing were used to gauge the extent of Islamic banking development in each of the chosen nations. For the period under review, the growth rate of total financing had a mean value of 23.70%, while the bank size (BSZ), which was determined by the log of aggregate total assets, had a mean value of 15.33%.

While the minimum and maximum values recorded throughout the period are shown in the table, standard deviations are also used to report the degree to which data on the corresponding variables deviate from or approach their mean values. The ROA standard deviation was 5.26%. This implies that the banks' actual return on assets (ROA) could deviate from the average value by plus or minus 6%. Furthermore, CIR's standard deviation, which shows the range around the cost-to-income ratio mean, was 3.11%. Table 3 also shows a 10.8% standard deviation for the DEP mean. The substantial deviation from the mean indicates that DEP values deviate significantly from the mean. Additionally, the standard deviation of RVD was determined to be 1.26%, but the standard deviation of LIQ was 1.97%. The two measures of Islamic banking development across the countries, bank size (BSZ) and growth rate of total financing (TFN) had standard deviation values of 3.45% and 0.03% respectively.

This section features the results of multicollinearity via pair-wise correlation and variance inflation factor analysis. Breusch Pagan Lagrange Multiplier (BP/LM) and Hausman tests results were also presented in this section.

**Table 3: Pair-Wise Correlation**

| Variable | CAR   | NPF  | CIR  | DEP  | LIQ  | BSZ  | RVD | TFN | VIF  | TOLs |
|----------|-------|------|------|------|------|------|-----|-----|------|------|
| CAR      | 1.00  |      |      |      |      |      |     |     | 1.41 | 0.71 |
| NPF      | -0.21 | 1.00 |      |      |      |      |     |     | 1.49 | 0.68 |
| CIR      | 0.23  | 0.14 | 1.00 |      |      |      |     |     | 1.59 | 0.63 |
| DEP      | 0.09  | 0.06 | 0.31 | 1.00 |      |      |     |     | 1.20 | 0.83 |
| LIQ      | 0.14  | 0.29 | 0.45 | 0.39 | 1.00 |      |     |     | 1.34 | 0.75 |
| BSZ      | 0.11  | 0.23 | 0.51 | 0.01 | 0.17 | 1.00 |     |     | 1.97 | 0.50 |

only differ by roughly 5.3% from the average predicted ROA. When it comes to the factors that determine Islamic banking profitability, CAR deviates from its mean value by 0.32%, but NPF has a standard deviation of roughly 5.78%, meaning that it deviates from the average value by plus or minus 6%. Furthermore, CIR's standard deviation, which shows the range around the cost-to-income ratio mean, was 3.11%. Table 3 also shows a 10.8% standard deviation for the DEP mean. The substantial deviation from the mean indicates that DEP values deviate significantly from the mean. Additionally, the standard deviation of RVD was determined to be 1.26%, but the standard deviation of LIQ was 1.97%. The two measures of Islamic banking development across the countries, bank size (BSZ) and growth rate of total financing (TFN) had standard deviation values of 3.45% and 0.03% respectively.

Table 3 also included the lowest and maximum observations for the independent and dependent variables. Table 3 displays the total number of observations for each variable, which was 220. This indicates that throughout an 11-year period (2013Q1-2023Q4), data on Islamic banking was gathered from five nations for each variable. According to the descriptive study shown in Table 3, the variables are not static and can have an impact on how ROA, a gauge of the profitability of Islamic banks in particular nations, moves.

#### 4.2 Preliminary Analysis

|     |       |      |       |       |      |       |      |      |      |      |
|-----|-------|------|-------|-------|------|-------|------|------|------|------|
| RVD | -0.35 | 0.61 | -0.18 | 0.29  | 0.03 | -0.53 | 1.00 |      | 1.78 | 0.56 |
| TFN | -0.22 | 0.11 | 0.43  | -0.12 | 0.09 | -0.48 | 0.55 | 1.00 | 1.95 | 0.51 |

*Source: Author's Computation, 2025*

A strong correlation between independent variables is an indicator of collinearity, which is a serious violation of the Least Squares regression technique. The results of the correlation analysis, which are shown in Table 3, demonstrate that there is no multicollinearity among the variables. The correlation results show that the relationship between pairs of variables used as predictors is weak and low.

The degree to which the standard error of regression coefficients may be inflated as a result of the link between the predictor variables is made more apparent by Variance Inflation Factor (VIF) estimates. To put it another way, the variance inflation factors quantify how strongly two independent variables are correlated. Generally speaking, a variable is very collinear when the VIF is more than 10; collinearity is absent when the VIF is lower than 10. The absence of correlation is

implied by a VIF of precisely 1. The table shows that the VIFs are marginally higher than 1, indicating a weak correlation between the predictor variables. Tolerance levels (TOLs), the opposite of VIFs, provide evidence for this, with findings that are much higher than the typical cutoff of 0.20. Therefore, there is no chance that the regression coefficients' standard errors would have been incorrectly inflated. It follows that OLS regression can be performed without requiring thinking about the dependability of the outcome. This is due to the fact that multicollinearity between independent variables leads to erroneous findings. The results of OLS regression will be unreliable due to incorrect estimation of T-statistics, F-statistics, and R-squared. However, Table 3 shows that this is not the case in this investigation. As a result, OLS regression can be carried out with confidence.

**Table 4: Breusch–Pagan LM Test Results**

| Test                  | Statistic | df  | p    |
|-----------------------|-----------|-----|------|
| Breusch–Pagan LM Test | 17.330    | 197 | .014 |

*Source: Author's Computation (2025)*

Table 4 displays the outcomes of the Breusch Pagan Lagrange Multiplier (BP/LM) test used to compare simple OLS and Effect models. The Breusch Pagan LM Test estimate has a p-value of 0.014, which is less than 0.05, as the table illustrates. This indicates the rejection of the hypothesis that the random effect's variance is zero. It follows that the Pooled

OLS model is inappropriate for the estimation. Finding a better estimator between fixed and random effects models was the next stage. The Hausman test was used to test this. Table 5 displayed the Hausman test results.

**Table 5: Hausman Test Results**

| Test Summary         | $\chi^2$ | df  | p     |
|----------------------|----------|-----|-------|
| Cross-section random | 87.514   | 217 | < .01 |

*Source: Author's Computation (2025)*

According to Table 5, the null hypothesis that the differences between the estimated parameters produced by the two estimation techniques are not systematic was rejected because the Hausman test estimate (87.514) is high and significant, and its

computed p-value (0.0000) is also less than the 1% level of significance. Rejection of null hypothesis implies that the fixed effects model is more suitable for the investigation. As a result, the Fixed Effects technique was employed in this study since it produces more reliable results.

### 4.3: Regression Result

**Table 6: Pooled OLS, Fixed Effects, and Random Effects Model Estimation (Dependent Variable: ROA)**

| Variable                    | Pooled OLS            | Fixed Effects          | Random Effects        |
|-----------------------------|-----------------------|------------------------|-----------------------|
| Constant                    | 9.3327***<br>(3.1510) | 5.4011**<br>(2.0223)   | -2.5057**<br>(1.1419) |
| CAR                         | 0.3351**<br>(0.1260)  | 0.9076**<br>(0.3290)   | 0.1153**<br>(0.0331)  |
| NPF                         | -0.1427**<br>(0.0553) | -0.2845**<br>(0.1286)  | -0.0974**<br>(0.0287) |
| CIR                         | 0.5527**<br>(0.2011)  | -1.9798**<br>(0.5002)  | 0.4570**<br>(0.2120)  |
| DEP                         | -0.7890**<br>(0.3845) | 0.3319**<br>(0.1559)   | 1.7910**<br>(0.7900)  |
| LIQ                         | 2.2000<br>(1.2130)    | -5.7199***<br>(0.9524) | 5.5545<br>(2.8875)    |
| BSZ                         | 0.4050**<br>(0.1531)  | 0.2137<br>(0.2968)     | 0.0579**<br>(0.0195)  |
| RVD                         | 0.0842**<br>(0.0211)  | 0.6850**<br>(0.2005)   | 0.9594**<br>(0.3145)  |
| TFN                         | -0.0522<br>(0.0354)   | 0.1557**<br>(0.0378)   | 0.8720<br>(0.5370)    |
| F-statistic / Wald $\chi^2$ | 9.061***              | 7.412***               | 19.263***             |
| R <sup>2</sup>              | 0.75                  | 0.79                   | 0.82                  |

Note. Standard errors are in parentheses. \*\*\* $p < .01$ . \*\* $p < .05$ .  $p < .10$ .

Source: Author's computation (2025).

Table 6 shows that the capital adequacy ratio (CAR) is positively connected to return on asset (ROA), with a 1% increase in CAR resulting in a 0.91%

increase in ROA for Islamic banks in the selected countries. The association was discovered to be significant at the 5% level of significance. Similarly, deposit liability was found to have a

positive and significant association with return on asset for Islamic banks in selected nations. A 1% increase in deposit liability (DEP) will result in a 0.33% return on assets for banks. Similarly, revenue diversification (RVD) has a favourable and significant link with banks' return on assets. A 1% increase in bank revenue sources from Shariah-compliant opportunities increases bank profitability by 0.68%.

Conversely, Non-performing financing ratio (NPF), Cost to Income ratio (CIR), and liquid ratio (LIQ) were found to have significantly negative effect on ROA. According to Fixed Effects model presented in Table 4.6, NPF is negatively correlated with ROA in such a way that an increase of 1% in non-performing financing ratio will result to about 0.28% decrease in ROA. The relationship is significant at 5% level of significance as indicated in Table 6.I the like manner, CIR has negative and significant effect on return on asset of the banks. A slight increase of about 1% in the ratio of cost to income tends to bring ROA down by approximately 2.0%. In the case of liquidity ratio, LIQ was also found to be negatively correlated with ROA. This means that as bank liquidity increases, profitability decreases such that an increase of 1% in LIQ will cause ROA to drop by about 5.7%.

On the effect of Islamic banking development in the selected countries, the growth rate of total financing had positive effect on return on asset. The effect was also found to be significant at 5% level of significance. According to Table 6, 1% increase in total financing (TFN) tends to increase the banks' ROA by 0.16%. However, the relationship between bank size (BSZ) measured as the natural log of total asset, was found to be insignificant. For the goodness of fit of the Fixed Effects model, the R-Squared value of 0.79 shows that 79% of the systematic variations in returns on assets were explained by variations in the various determinants.

#### 4.4 Discussion of Findings

Fixed Effects model results were used to examine the determinants of profitability of Islamic banks in Nigeria, Morocco, Libya, Sudan and Egypt. The results showed that return on assets is positively related with capital adequacy of the selected Islamic banks. This implies that Islamic banks tend to perform better in terms of profitability when they are adequately capitalized. The finding supports the

assumption of CAMEL model which provides that capital adequacy is one of the variants for measuring bank performance. The finding of the study also conforms with the work of Hamed and Bashir (2005). The finding was also in tandem with Suppia and Che Arshad (2019) which reported positive effect on bank profitability.

Similarly, deposit liability and revenue diversification were both found to have had significant effect on profitability of Islamic banks in the selected African countries. The study found that the banks become more profitable with higher deposit mobilisation which enables them to finance profitable ventures. This is consistent with Almaqtari et al. (2018), Alfadli, and Rjoub (2019), and Mennawi and Ahmed (2020) which reported positive and significant relationship between deposit liability and profitability. The positive effect of revenue diversification was in line with observation of Alandejani and Asutay (2017), and Beck et al. (2013).

However, the profitability measure, return on asset inversely related to ratio of non-performing financing (NPF), cost to income ratio and liquidity ratio of the banks. Non-performing financing ration measures the quality of banks' assets (asset quality). The negative relationship that was found between nonperforming financing ratio and return on asset implies that low asset quality in terms of financing affects profitability. The higher cost of facilitating the repayment of financing facilities, the lower the profitability of the banks. The lower the non-performing financing ratio, the higher the profitability as assumed for the CAMEL model. The result of this study in relation to the relationship between non-performing financing and return on asset is similar to Chowdhury et al. (2022) and Gazi et al. (2024).

Furthermore, the study found that cost to income ratio which could be referred to as a measure of managerial efficiency, was found to have negative impact on bank profitability. It follows therefore that the higher the cost to income ratio, the lower the efficiency of management and the lower the profitability of Islamic banks. This finding corroborates the work of Alzoubi (2018) which reported that low management efficiency results in low profitability. More so, liquidity of the banks was found to have influenced their profitability negatively. The finding of this study was in tandem

with the theory because, the more liquid the banks become, the less they are profitable as liquid asset yield little or nothing to improve profitability. Mukhibad and Khafid (2018) had reported findings that were in tandem with this current research work on the relationship between liquidity and profitability. For Islamic banking development variable, growth rate of total financing in the selected countries had significant on profitability of Islamic banks while the effect of bank size was not significant.

## 5 Conclusion and Recommendations

The study examined the determinants of Islamic banking profitability in selected African countries for period, 2012Q1 to 2023Q4. Although this area has been explored by previous studies, the results have remained mixed and present study is unique on the grounds of its primary focus on cross-country analysis of bank-specific variables as they affect Islamic banks' profitability. In carrying out this research, data were collected on aggregate financial data of Islamic banks from IFSB database. The study found that all the bank-specific variables except bank size had significant effect on profitability. The effects of capital adequacy, deposit liability and revenue diversification were positive and significant while non-performing financing, cost-to-income ratio and liquidity ratio had negative and significant effects on return on assets of the banks. Based on these findings, the study concluded that bank-specific factors affect profitability of Islamic banks in selected African countries.

It is therefore recommended for policy implementation, that the management of Islamic banks in Africa should ensure that the banks are adequately capitalized by maintaining good capital adequacy ratio to enhance their profitability. Islamic banks in Africa should also ensure that their financing activities are efficiently and effectively executed and monitored, to reduce non-performing facilities that are capable of depleting their profitability. Additionally, the banks should ensure that management staff are motivated via series of incentives to enhance their efficiency such as performance-based bonuses, salary enhancement, recognition and awards. Furthermore, the banks should always ensure that surplus liquid asset is invested in profitable investment like Islamic bond (Sukuk), equity investment, Islamic mutual funds as

too much of liquidity hampers profitability. Finally, Islamic banks in Africa should diversify to more shariah-compliant products like Murabaha (cost-plus finance), Ijara (leasing), Murabaha (partnership) to improve their profitability.

## References

- Abduh, M., & Idrees, Y. (2013). Determinants of Islamic banking profitability in Malaysia. *Journal of Islamic Economics, Banking and Finance*, 9(2), 115-130.
- Akhtar, M. F, Ali, K., & Sadaqat, S. (2011). Factors Influencing the Profitability of Islamic Banks of Pakistan. *International Research Journal of Finance and Economics*, 66, 125-136.
- Alali, S. M., Shawaqfeh, G. N., & Almomani, M. A. (2024). Bank Profitability Indicators In The Context Of Modern Technology: A Comparative Study. *Revista De Gestão Social e Ambiental*, 18(9), 1-17. <https://doi.org/10.24857/rgsa.v18n9-034>
- Alandejani, M., & Asutay, M. (2017). Nonperforming Loans in the GCC Banking Sectors: Does the Islamic Finance Matter? *Research in International Business and Finance*, 42, 832-54.
- Alfadli, A., & Rjoub, H. (2019). The impacts of bank-specific, industry-specific and macroeconomic variables on commercial bank financial performance: evidence from the Gulf cooperation council countries. *Applied Economics Letters*, 1-5. <https://doi.org/10.1080/13504851.2019.1676870>
- Alharbi, A. T. (2017). Determinants of Islamic banks' profitability: international evidence. *International Journal of Islamic and Middle Eastern Finance and Management*, 10(3), 331-350. <https://doi.org/10.1108/imefm-12-2015-0161>

- Al-Jafari, M. K. & Alchami, M. (2014). Determinants of Bank Profitability: Evidence from Syria. *Journal of Applied Finance & Banking*, 4(1), 17-45.
- Almaqtari, F. A., Al-Homaidi, E. A., Tabash, M. I., & Farhan, N. H. (2018). The determinants of profitability of Indian commercial banks: A panel data approach. *International Journal of Finance & Economics*, 3(4), 18-23. <https://doi.org/10.1002/ijfe.1655>
- AL- Omar, H. and AL- Mutairi, A. (2008). Bank-Specific Determinants of Profitability: The case of Kuwait. *Journal of Economic and Administrative Sciences*, 24(2), 20-34. <https://doi.org/10.1108/10264116200800006>
- Alzoubi, T. (2018). Determinants of bank profitability: Islamic versus conventional banks. *Banks and Bank Systems*, 2(3), 106-113.
- Anugra, T. S., Fathihani, F., & Saputri, I. P. (2025). Determinants of Profitability in Indonesian Islamic Banks. *Indonesian Journal of Innovation Multidisciplinary Research*, 3(1), 21-32. <https://doi.org/10.69693/ijim.v3i1.273>
- Ashraf, M., Haider, Z. & Sarwar, M. B. (2017). Bank Specific and Macroeconomic Determinants Impact on Banks Profitability: Evidence from Asian Countries. *International Journal of Sciences: Basic and Applied Research*, 33(3), 187-199.
- Athanasoglou, P. P., Brissimis, S. N., & Delis, M. D. (2008). Bank-specific, industry-specific and macroeconomic determinants of bank profitability. *Journal of International Financial Markets, Institutions and Money*, 18(2), 121-136.
- Beck, T., Demirgüç-Kunt, A., & Merrouche, O. (2013). Islamic vs. conventional banking: Business model, efficiency, and stability. *Journal of Banking & Finance*, 37(2), 433-447.
- Berger, A. N., & Humphrey, D. B. (1997). Efficiency of financial institutions: International survey and directions for future research. *European Journal of Operational Research*, 98(2), 175-212.
- Bourke, P. (1989). Concentration and other determinants of bank profitability in Europe, North America and Australia. *Journal of Banking and Finance*, 13(1), 65-79.
- Brahmaiah, B. and Ranajee (2018). Factors influencing profitability of banks in India. *Theoretical Economics Letters*, 8(14): 3046-61
- Bucevska, V., Hadzi Misheva, B. (2017). The determinants of profitability in the banking industry: empirical research on selected Balkan Countries. *East Eur Econom*, 00(00), 1-22. <https://doi.org/10.1080/00128775.2016.1260473>
- Chouikh, A. and Blagui, Y. (2017). The determinants of bank performance: The case of Tunisian listed banks. *Journal of Finance and Accounting*, 5(2): 53-60. Available: [https://www.researchgate.net/publication/319398065\\_The\\_Determinants\\_of\\_Bank\\_Performance\\_The\\_Case\\_of\\_Tunisian\\_Listed\\_Banks](https://www.researchgate.net/publication/319398065_The_Determinants_of_Bank_Performance_The_Case_of_Tunisian_Listed_Banks)
- Chowdhury, E. K., Dhar, B. K., Thanakijombat, T. & Stasi, A. (2022). Strategies to determine the determinants of financial performance of conventional and Islamic commercial banks: Evidence from Bangladesh. *Business Strategy and Development*, 5(4), 405-423. <https://doi.org/10.1002/bsd2.207>
- Chowdhury, M. A. F., & Rasid, M. E. S. M. (2016). Determinants of Performance of Islamic Banks in GCC Countries: Dynamic GMM

- Approach. *Advances in Islamic Finance, Marketing, and Management*, 49–80. doi:10.1108/978-1-78635-899-820161005
- Dietrich, A., & Wanzenried, G. (2011). Determinants of bank profitability before and during the crisis: Evidence from Switzerland. *Journal of International Financial Markets, Institutions and Money*, 21(3), 307-327.
- El-Chaarani, H., Vrontis, D., El-Chaarani, S., & El-Abiad, Z. (2021). The impact of liquidity on bank profitability: New evidence from European banks. *Journal of Financial Stability*,
- Gazi, M. A. I., Rejaul, K., Senathirajah, S. A., Mahfuj Ullah, A. K. M., Afrin, K. H. & Nahiduzzaman, M. (2024). Bank-Specific and Macroeconomic Determinants of Profitability of Islamic Shariah-Based Banks: Evidence from New Economic Horizon Using Panel Data. *Economies*, 12, 66. <https://doi.org/10.3390/>
- Gržeta, I., Žiković, S. & Žiković, I. T. (2023). Size matters: analyzing bank profitability and efficiency under the Basel III framework. *Financial Innovation*, 9(43), 1-28. <https://doi.org/10.1186/s40854-022-00412-y>
- Guillén, J., Rengifo, E.W., & Ozsoz, E. (2014). Relative power and efficiency as a main determinant of banks' profitability in Latin America. *Borsa Istanbul Rev*, 14(2), 119–125. <https://doi.org/10.1016/j.bir.2014.02.003>
- Hamdi, H., Hakimi, A. & Zaghdoudi, K. (2017). Diversification, bank performance and risk: have Tunisian banks adopted the new business model? *Financ Innov*, 3(1), 22-34. <https://doi.org/10.1186/s40854-017-0069-6>
- Handayani, P. N., Widodo, S., & Budiyo, I. (2024). Factors Affecting the Profitability of Islamic Commercial Banks for the Period 2018-2022. *Kompartemen : Jurnal Ilmiah Akuntansi*, 22(1), 86–98. <https://doi.org/10.30595/kompartemen.v22i1.18945>
- Hartanti, H., Ratiyah, R., Setyaningsih, E. D., & Imelda Sari. (2025). Determinants of Profitability in Bank Syariah Indonesia Post-Merger: an Empirical Analysis of CAR, BOPO, and NPF on ROA During 2021–2024. *Jurnal Multidisiplin Sahombu*, 5(07), 2433–2439. Retrieved from <https://ejournal.seaninstitute.or.id/index.php/JMS/article/view/7706>
- Idris, A. R., Asari, F. A., Taufik, N. A., Salim, N. J., Mustaffa, R. & Jusoff, K. (2011). Determinant of Islamic Banking Institutions' Profitability in Malaysia. *World Applied Sciences Journal*, 12, 01-07
- Iqbal, Z. (2001). Islamic and conventional banking in the nineties: A comparative study. *Islamic Economic Studies*, 8(2), 1-27.
- Karim, B. K., Mohamed Sami, B. A., & Hichem, B.-K. (2010). Bank-Specific, Industry-specific and Macroeconomic Determinants of African Islamic Banks' Profitability. *International Journal of Business and Management Science*, 3(1), 39–56. <https://search.informit.org/doi/10.3316/info.rmit.762462165033903>
- Kawshala, H. and Panditharathna, K. (2017). The factors effecting on bank profitability. *International Journal of Scientific and Research Publications*, 7(2): 212-16
- Khan, M. ul H., & Hanif, M. N. (2019). Empirical evaluation of 'structure-conduct-performance' and 'efficient-structure' paradigms in banking sector of Pakistan. *International Review of Applied Economics*, 33(5), 682–696. <https://doi.org/10.1080/02692171.2018.1518411>
- Khan, M. M. S., Ijaz, F. & Aslam, E. (2014). Determinants of Profitability of Islamic Banking Industry: An Evidence from

- Pakistan. *Business & Economic Review*, 6(2), 27-46.
- Khediri, K. & Khedhiri, H. (2009). Determinants of Islamic bank profitability in the MENA region. *International Journal of Monetary Economics and Finance*, 2(3),17-26.
- Kou, G., Chao, X., Peng, Y., Alsaadi, F.E. & Herrera-Viedma, E. (2019). Machine learning methods for systemic risk analysis in financial sectors. *Technol Econ Dev Econ*, 25(5):716–742
- Maulida, S. (2025). Determinants of Islamic Banking Profitability: A Cross-Country Panel Analysis from IFSB Data (2016-2024). *International Journal of Islamic Finance*, 3(2), 1-18. <https://doi.org/10.14421/ijif.v3i2.2772>
- Menicucci, E. and Paolucci, G. (2016). The determinants of bank profitability: empirical evidence from European banking sector. *Journal of Financial Reporting and Accounting*, 86-115. Available: <https://www.emerald.com/insight/content/doi/10.1108/JFRA-05-2015-0060/full/html>
- Mennawi, A. N., & Ahmed A. A. (2020). Influential Factors on Profitability of Islamic Banks: Evidence from Sudan. *International Journal of Economics and Finance*, 12(6), 1-12. doi:10.5539/ijef.v12n6p1
- Miller, S. M., & Noulas, A. G. (1997). Portfolio mix and large-bank profitability in the USA. *Applied Economics*, 29(4), 505-512.
- Mohanty, A. K. (2017). Factors affecting bank profitability of commercial bank of Ethiopia: An econometric analysis. *International Journal of Management, IT and Engineering*, 7(8): 118-36.
- Mukhibad, H. & Khafid, M. (2018). Financial Performance Determinant of Islamic Banking in Indonesia. *Jurnal Keuangan dan Perbankan*, 22(3), 506–517. <http://jurnal.unmer.ac.id/index.php/jkdp>
- Ozili, P. K. (2021). Bank capital and profitability in Africa and Asia: Does risk-taking matter? *Research in International Business and Finance*, 55, 101-117.
- Quan L. J., Ramasamy, S., Rasiah, D., Yen, Y. Y. & Pillay, S. D. (2019). Determinants of islamic banking performance: an empirical study in Malaysia (2007 TO 2016). *Humanities & Social Sciences Reviews*, 7(6), 380-401. <https://doi.org/10.18510/hssr.2019.7664>.
- Rahaman, M. M. & Akhter, S. (2015). Bank-Specific Factors Influencing Profitability of Islamic Banks in Bangladesh. *Journal of Business and Technology*, 10(1), 21-36. <https://doi.org/10.3329/jbt.v10i1.26904>
- Samad, A. (2015). Determinants Bank Profitability: Empirical Evidence from Bangladesh Commercial Banks. *International Journal of Financial Research*, 6(3), 173-179. doi:10.5430/ijfr.v6n3p173
- Shah, M. H. and Khan, S. (2017). Factors affecting commercial banks profitability in Pakistan. *Journal of Business and Tourism*, 3(1): 1-12.
- Shepherd, W. G. (1972). The Elements of Market Structure. *Review of Economics and Statistics*, 54, 25–37. doi:10.2307/1927492.
- Stiroh, K. J. (2004). Diversification in banking: Is noninterest income the answer? *Journal of Money, Credit, and Banking*, 36(5), 853-882.
- Sufian, F. (2009). Determinants of bank efficiency during unstable macroeconomic environment: Empirical evidence from Malaysia. *Research in International Business and Finance*, 23(1), 54-77.
- Sufian, F., & Habibullah, M. S. (2009). Bank-specific and macroeconomic determinants of bank profitability: Empirical evidence from the China banking sector. *Frontiers of Economics in China*, 4(2), 274-291.

Suppia, N. M. I. & Che Arshad, N. (2019). Bank specific characteristics and profitability of Islamic and conventional banks in Malaysia. *International Journal of Islamic Business*, 4(1), 39–53. <https://doi.org/10.32890/ijib2019.4.1.3>

Tan, Y. (2016). The impacts of risk and competition on bank profitability in China. *Journal of International Financial Markets, Institutions & Money*, 40, 85-110.

Tan, Y., & Floros, C. (2018). Risk, profitability, and competition: Evidence from the Chinese banking industry. *Journal of International Financial Markets, Institutions & Money*, 52, 1-15.