



Assessment of Macroeconomics Determinants on Islamic Banking Profitability and Liquidity in United Arab Emirates and Tanzania

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Author's contribution

The sole author designed, analyzed, interpreted and prepared the manuscript.

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ABSTRACT

Aims: This paper studies the determinants of Islamic banking profitability and liquidity in the United Arab Emirates (UAE) and Tanzania. It was comparative study. The study gives empirical comparisons between Islamic banks in United Arab Emirates (UAE) and Tanzania in their performance bases.

Study design: This study covers the samples of five (5) Islamic banks where by two (2) banks from Tanzania that are People Bank of Zanzibar in Islamic branch (PBZIB) and Amana Islamic bank (AIB). In the side of United Arab Emirates (UAE) three (3) Islamic banks were selected which includes Dubai Islamic Bank (DIB), First Abu Dhabi Bank (FAD) this is not an IB and Emirates Islamic Bank (EIB).

The study used secondary data of selected variables which employing panel data for the period of ten (10) years from 2010- 2019. Due to data was on panel bases which includes the two independents variables.

Methodology: To calculate profitability, the Return on Assets (ROA) was used and in liquidity in IBs deposit ratio (LDR) used to measure the liquidity .The study uses descriptive statistical analysis, correlation, multiple regression analysis for two equations according to settled objectives. The three

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macroeconomic variables were selected that are Gross Domestic Product per capita (GDP), inflation (INF) and exchange rate (EXCH). An autoregressive distributed lag (ARDL) model was applied because the result becomes mixed in the unit root test.

Results: The findings reveal satisfactory evidence that all selected variables are statistical significance in long run relationship except inflation in UAE. The outcomes of the study indicated that selected macroeconomic variables (GDP per capita, Inflation and exchange rates have a major 5% effect on bank profitability and liquidity in Tanzania and the United Arab Emirates.

Conclusion: The study therefore recommends the Tanzania Islamic banks should adopt several policies in order to control the liquidity which is very difference like UAE banks.

Keywords: Profitability; liquidity; Islamic bank; LDR; ROA; UAE; Tanzania.

1. INTRODUCTION

Until now despite the financial world is still dominated by conventional banks but currently, the number of Islamic banks is increasing in every country. Islamic banking has been rising at a very fast rate globally. It all began in the early '70s, and the planet has seen tremendous growth since then [1].

Profitability and liquidity used for the most of the organization in order to measure their performance and duties which lead easy way for management and better improvement. Most of financial institution regards profitability and liquidity as the most notable issues that any management aspires to maintain and control. Profitability is a measure of the amount by which a bank's revenues exceeds its expenses. Liquidity is the ability of the bank to pay current obligations; it is the ease by which an asset can be exchanged for cash with little or no loss of value. Bank profitability and liquidity are affected by both internal and external (macroeconomic) factors.

This research examines macroeconomic determinants on Islamic banking profitability and Liquidity, this study cover a sample of five Islamic banks by using annual panel data from 2010 to 2019 (10 years) where data will be collected from several sources includes UNCTAD, WB, and Bank of Tanzania (BOT) and annually financial statements of selected banks . The study will base on two specific objectives which including investigating the external determinants of profitability and liquidity of the five (5) selected Islamic Banks and to examine the comparative analysis of the liquidity and profitability of five (5) selected Islamic banks. That banks which selected two (2) from Tanzania and three (3) from United Arab Emirates. By Using Augmented Dickey Fuller test will test unit

root and an autoregressive distributed lag (ARDL) model that will be used to test the hypothesis.

1.1 Islamic Banks in Tanzania

Islamic banking in Tanzania for the first time was established in 2009. There are four Islamic banks which operated in Tanzania that are Kenya Commercial Bank (KCB), National Bank of Commerce (NBC), Amana Bank (AM) and the Peoples Bank of Zanzibar (PBZ) extended their Islamic banking services in Tanzania. Because the central bank of Tanzania that Bank of Tanzania (BoT) have mandate according to their law has allowed the operating of Islamic Bank in Tanzania. Apart from that there are a several laws which provide a window for the establishment the Islamic financial departments includes banks in Tanzania. Until now in Tanzania there is Amana bank which operates as a full-fledged Islamic bank. But other three operate as window Islamic banks such as National Bank of Commerce, the Stanbic Bank, the Kenya Commercial Bank and the Peoples' Bank of Zanzibar.

According to previous studies for instance from Simai [2] found that expenses management and money supply were positive significant in influential the Islamic banks profitability in Tanzania. Moreover Competition found to be negatively relationship with profitability of Islamic bank which operate in Tanzania.

1.2 Islamic Banks in United Arab Emirates (UAE)

In 1970s, Islamic banking in the UAE first mentioned that it would increase. Financial practices that comply with Shari ah transaction laws indicate that the United Arab Emirates is a leading force in the growth of modern Islamic finance. Dubai Islamic Bank, Abu Dhabi Islamic

Bank, Emirates Islamic Bank, Noor Islamic Bank, Al Hilal Bank, HSBC Amanah, Sharja Islamic bank, Badr Al-Islami (Mashreq Bank's Islamic Banking Division) and Attijari Al Islami are examples of Islamic banks operating. Dubai Islamic Bank (DIB) was incorporated in 1975 as the world's first commercial Islamic bank. Currently more than eight (8) Islamic Banks operate some are fully fledged and other are Islamic window operate.

The previous studies which conducted at UAE such that Tabash [2] shown that the determinates includes bank size, efficiency of operation, capital adequacy, financial risk and liquidity have positive significance with the profitability of Islamic banks in United Arab Emirates.

2. MOTIVATION

The study which based on the macroeconomic determinants of banks profitability and liquidity have already conducted while most of them focus on the conventional banks and Islamic banks nevertheless on the side of compare Islamic banks from different states have been little studies conducted. That few studies mostly based on one bank in the one country so this study was reliable for making comparative analysis and empirical analysis of the variables which affect Islamic banks in the different states.

Moreover, because there are few studies which conducted on the way like this and due to limited number of studies conducted, this study would help to add new knowledge to the existing literature. Therefore, the results of this study will provides the room for comparison with the previous research findings for further studies and findings for other countries.

Although the studies of Islamic banks which based on determinants have been examined from numerous studies. But they differ on their result revealed in term on the long run and causal relationship between them, most of the studies and empirical findings show inconsistent arguments. So this study will help to justify the approved side of the arguments which previous discovered.

2.1 Objectives of the Study

The general objective of this study is to compare the contribution of external determinants on

profitability and liquidity of Islamic banks in United Arab Emirates (UAE) and Tanzania.

2.1.1 Specific objectives

- i. To compare the contribution of external determinants on profitability of Islamic Bank between UAE and Tanzania cover the period from 2010 to 2019.
- ii. To compare the contribution of external determinants on liquidity of Islamic Bank between UAE and Tanzania cover the period from 2010 to 2019.

2.1.2 Hypothesis of the study

Due to the above objectives of this study, the two null hypotheses were created as following

H_0 : There is no long run relationship in the profitability between Tanzania Islamic banks and UAE Islamic banks.

H_0 : There no long run relationship in the liquidity between Tanzania Islamic banks and UAE Islamic banks.

2.1.3 Empirical review

This section briefly reviews the previous related literature on the most determinants of liquidity and profitability of Islamic banks. It tends to reflect the methodology, results and recommendations provided by various scholars in their empirical studies. It starts with theoretical reviews, followed by empirical works and ended up with the research gap that left behind by previous studies engaging in this field of study.

In (2018), the Milhem and Abadeh investigate the macro variables on profitability and liquidity in Jordan. Their study took the sample of 5 Islamic banks and 13 convectional banks also they collect the data from 2005 to 2015. The results revealed that there was a statistically significant positive impact of INF on conventional banks liquidity. But it was an insignificant impact of INF on conventional banks on profitability, whereas, there is a statistically significant positive impact of GDP on conventional banks profitability and conventional banks liquidity. However, there is a statistically insignificant impact of INF on Islamic banks profitability and liquidity, and there is a statistically insignificant impact of GDP on Islamic banks profitability and liquidity.

Azam and Siddiqui [3], the aims of their study was to evaluate and compare, on a quarterly basis, the profitability of domestic (public & private) and foreign banks operating in the

Pakistan banking sector between 2004 and 2010. This research also found that, by applying regression analysis, international banks are more profitable than all domestic banks, regardless of their ownership structure. Instead of acquiring an "existing player" in the host country, this may imply that it is easier for a multinational bank to create a subsidiary/branch. The empirical findings show that foreign banks are less affected than domestic banks by the host country's macroeconomic conditions and have a higher profitability margin in Pakistan.

Al-Harbi [4], analyzing the liquidity determinants of banks: facts from OIC countries. The aim of this paper, in particular, is to identify the key factors affecting bank liquidity in developing/less-developing countries. In this paper, the author uses the usual least-square fixe in an unbalanced panel data set of all conventional banks (686 banks) operating in the organization of Islamic cooperation countries for the period 1989-2008. Findings The results of the calculation show that all the determinants have a liquidity relationship that is statistically significant (with the exception of concentration), but with different signs. On the one hand, the capital ratio, foreign ownership, credit risk, inflation rate, monetary policy and deposit insurance have had a negative effect on the liquidity of banks, while on the other hand, competitiveness, size, off-balance sheet activity, market capitalization and concentration have a positive impact on banks

Abdillah, Hosen, and Muhari [5], the study investigates the determinants factor of Islamic bank's profitability and liquidity in Indonesia. This analysis aims to examine the profitability and liquidity determinants of Bank Muamalat Indonesia, Bank Syariah Mandiri, and Bank Mega Syariah. ROA (return on asset) profitability variable and fast ratio liquidity variable. The quick ratio, Vehicle, and ROA are an independent variable factor affecting profitability. CAR, NPF, and OER are independent variable variables influencing liquidity. Multiple regression analysis is the empirical process used in this report. The data used consists of quarterly data from 2008 to 2015. The study showed that the rapid ratio and OER had a negative and substantial impact on profitability and that CAR had a positive and substantial impact on profitability. CAR has a positive and substantial impact on liquidity, OER has a negative and substantial adverse effect on liquidity, and NPF has no substantial effect on liquidity.

Ledhem and Mekidiche [6], they examine the financial performance of Islamic finance and economic growth in CAMELS. They used GMM estimator with the quarterly data from 1:2014 to 4:2018. The results proved that the only significant factor of the financial performance of Islamic finance, which affects the endogenous economic growth, is profitability through return on equity (ROE). The investigational findings indicated the requirement of motivating other financial performance factors of Islamic finance to achieve a significant contribution to economic growth.

In addition, Naama Trad, et al. [7], investigated whether Islamic finance could be an alternative to the conventional financial system and, in times of crisis, ensure stability. For this reason, 78 Islamic banks in 12 countries were studied over an eight-year period from 2004 to 2013. In order to understand the soundness of Islamic banking in terms of profitability as calculated by ROA and ROE, and risk split into credit risk, a number of bank-specific and other country-specific indicators are combined. The objective is to estimate five regressions using econometrics for dynamic panel data (GMM system). The findings suggest that the key factors responsible for increasing the profitability and stability of Islamic banks and reducing their credit risk are bank size and resources. The ratios forming the vector liquidity and consistency of properties, however, frequently lead to inconclusive outcomes. Macroeconomic factors are also found to be capable of enhancing the stability of Islamic banks, with the exception of inflation. In terms of their profitability and risk characteristics, the inference is that there are no significant differences between IBs and CBs.

Alzoubi [8], Their findings showed that a negative correlation existed between the liquidity risk and the cash ratio, as well as a negative correlation between the liquidity risk and the securities of the selected banks. Bank size indicates a negative association with liquidity risk as larger banks tend to have more stability and customers feel safer dealing with big banks. Bank equity also has a negative liquidity risk link, since equity is a more stable source of bank financing; liquidity risk is minimized by a higher equity ratio. As banks transfer their portfolio to more profitable assets in order to increase their profits, there is a positive correlation with high profit assets; there is also a positive connection with poor finance provision.

3. DATA AND METHODOLOGY

This study is a comparative analysis research study regarding the five (5) Islamic banks in this study. The study was used return on asset (ROA) in order for assessing the bank profitability and loan deposit ratio (LDR) in order for examines liquidity of selected banks. The study collects data which range from 2010 to 2019. The study sample consists of 5 banks, Two (2) Islamic banks from Tanzania that are People Bank of Zanzibar in Islamic branch (PBZIB) with Amana Islamic bank (AIB) this due to presence of few islamic banks in Tanzania with inadequate of availability data In addition to that three (3) Islamic banks were selected from United Arab Emirates (UAE) which includes Dubai Islamic Bank (DIB), First Abu Dhabi Islamic Bank (FAD) and Emirates Islamic Bank (EIB) these banks selected due to easy and availability of the.in the every annual financial report in the website.

A part from that, this study focus in Tanzania because current Tanzania several Islamic banks have been emerged and continue as a time go on so it is infant nation on the Islamic banks sectors but in case of UAE, This is the among the nation which have been highly developed on the Islamic banks and Islamic finance , so we compare this two nations in order to get clear comparison and pictures so that Tanzania could learn from their others.

Because the study was based on quantitative approach, it is natures of data were collected from secondary sources. The data on macroeconomic variables according to selected countries that are Tanzania and United Arab Emirate were taken from World Bank database and data of profitability of each bank were collected from their annually financial statements of corresponding banks. The macroeconomic variables which were used in this study which influence the bank's profitability and liquidity namely Gross Domestic Product per capital, Inflation (INF) as well as exchange rate (EXCH)

3.1 Variable Description

There are many methods that can be used to calculate bank profitability, including return on assets, return on deposits, net interest margin, return on equity, and profit margin. But the return on assets and the return on equity are the most widely used and used by many research and individuals in calculating profitability ratios.

ROA is a calculation of benefit per asset dollar [9]. This illustrates how a bank can turn its resources into net earnings. The higher ROA ratio typically means a company's better financial productivity efficiency. Return on assets (ROA) is commonly used as a profitability proxy for banks [10,11,12,13]. But the return on asset (ROA) will be used and regarded as a good indicator of profitability in this report.

3.1.1 Liquidity

The determination of the company's liquidity ratios will allow the company's ability to satisfy its short-term debt obligations [10], Liquidity Ratios will illustrate the relationship between the current assets of a company and its current liabilities, and thus display the company's ability to meet its maturing debt [14], in this paper Loan Deposit Ratio (LDR).LDR ratio widely used as a proxy for banks liquidity [15,16]

3.1.2 Some of macroeconomics determinants of profitability and liquidity of Islamic Banks

Regarding the previous works who scrutinize the most factors which determine profitability and liquidity of Islamic bank, In Most of those studies several indicators of both micro and macro determinants of profitability and liquidity have been employed including Inflation rate, Exchange rate, GDP per capita, money supply and so on. In most of this study, the money supply, inflation and exchange rate were given much consideration and therefore, this study will use these indicators to examine the extent to which these indicators influence the profitability and liquidity of Islamic bank using a reference from United Arabs Emirates and Tanzania.

3.2 Estimation Model

In the study, estimations were made on the two models,

To compare the macroeconomic factors which affect the Profitability and liquidity of five selected Islamic banks, the two models were created and analyzed:

3.2.1 First Model for objective number one

$$\text{Profitability} = \beta_0 + \beta_1 \text{INF} + \beta_2 \text{GDP} + \beta_3 \text{EXCH} + \epsilon$$

Where by

Dependent variable: Profitability ratios: Return on asset (ROA),

Independent variables:

INF: Inflation,
 GDP: gross domestic product,
 EXCH: exchange rate and
 ε: Error term

Those variables were then converted to the logarithm in the linear regression model, as follows:

$$\log ROA_t = \beta_0 + \beta_1 \log INF_t + \beta_2 \log GDP_t + \beta_3 \log EXCH_t + \varepsilon_t$$

3.2.2 Second Model for objective number two

$$\text{Liquidity} = \beta_0 + \beta_1 \text{INF} + \beta_2 \text{GDP} + \beta_3 \text{EXCH} + \varepsilon$$

Where by:

Dependent variable: Loan deposit ratio (LDR),
 Independent variables: INF: Inflation,
 GDP: gross domestic product,
 EXCH: exchange rate
 ε: Error term

Then the variables were transfer into logarithm in the linear regression model is represented as follows:

$$\log LDR_t = \beta_0 + \beta_1 \log INF_t + \beta_2 \log GDP_t + \beta_3 \log EXCH_t + \varepsilon_t$$

3.3 Estimation Techniques

To measure and compare the long run relationship between dependent variables and independents variables so as to meet the study objectives panel unit root test and ARDL (Autoregressive Distributed Lag) Model used to test. So the following steps followed to meet the objectives.

3.4 Panel Unit Root Test

The study test unit root problem in order to know the stationarity of the data in their series. Because the data were in panel form automatically unit root test made and analyze through panel ways. There are several ways to identify a unit root problem in panel data, such as, Im Pesaran and Shin (IPS), Levin, Lin and Chu (LLC), PP- Fisher Chi- square and ADF - Fisher Chi-square.

3.5 ARDL (Autoregressive Distributed Lag) Model

In the report, ARDL have been used the panel data method for calculation of the relationship between liquidity and profitability in the short and

long term of macroeconomic variables in Islamic banks in Tanzania and the UAE. Panel data analysis allows greater analysis of findings because it incorporates both the time dimension and the size of the segment. The panel addresses the time series of horizontal and cross-sectional data, offering more flexibility, less linear connectivity between variables and more activity [17]. The basic equation used in panel data analysis techniques is shown below.

$$Y_{it} = \alpha + X_{it}\beta + u_{it} \quad i=1,2,\dots,N \text{ ve } t=1,2,\dots,T$$

In Equation 2, the approximate equation in the analysis is shown:

$$ROA_{it} = \alpha + EXCH_{it} \beta + GDP_{it} \beta + INF_{it} \beta + u_{it}$$

$$LDR_{it} = \alpha + EXCH_{it} \beta + GDP_{it} \beta + INF_{it} \beta + u_{it}$$

In equation 2, ROA is the return on assets, LA is the quality of assets, NPL is the non-performing loans, GDPG is the rate of economic development, INF is the rate of inflation and I is the country of data, i.e. the horizontal component, t is the year in which the data belongs, and μ is the terms of error.

4. RESULTS AND DISCUSSION

This part of the paper represent the output of this study that deal with compare the contribution of external determinants of liquidity and profitability of Islamic bank between UAE and Tanzania. Firstly this section describes the descriptive statistics to view the nature of data used in this study, secondly it presents the correlation matrix to highlight the degree of association among the underlying variables used in this study and later the series are being tested by using Levin, Lin and Chu (LLC) and ADF - Fisher Chi-square to avoid the generation of spurious results. Finally, this section reports the comparison results of the profitability and liquidity of selected banks from Tanzania and UAE. Autoregressive distributed lag (ARDL) was applied because the unit root result reveal that there are the mixed results, where some variables are integrated at order zero I(0) while other at I(1). Lastly individual result of each bank has also been presented.

Table (3) show the result of descriptive statistics for all selected variables which employ in the study "Independent and dependent" for Islamic banks from Tanzania and three Islamic banks from United Arab emirate. Table (3) presents the behavior of the variables in terms of their

statistical mean, standard deviation, minimum, and maximum values revealed. The results presented that banks profitability based on Return on Assets (ROA). Also in term of liquidity the result of descriptive statistics reveal through loan deposit ratio.

4.1 Descriptive Statistics Analysis

Because the dependent variables of the two mention equation are ROA and LDR, the mean for ROA for Tanzania Islamic banks and United Arab Emirate over the period from 2010 to 2019 are 0.9 and 0.09 respectively. The mean for LDR for Tanzania Islamic banks and United Arab Emirate banks are 34.8 and 0.99 respectively. Tanzania Islamic banks have a higher

performance than United Arab Emirate Islamic banks in terms of ROA, but also Tanzania Islamic banks have higher performance compare than United Arab Emirate Islamic banks of their liquidity. UAE selected banks were made better in liquidity. Because their liquidity is low this is due better ways to control it as well as to make more investment compare to Tanzania Islamic Bank.

In terms of standard deviation show that also Tanzania Islamic banks have high percentage compare to standard deviation of United Arab Emirate Islamic banks in ROA as well as LDR of $0.9 > 0.2$ and $33.7 > 1.9$ respectively.

Table 1. Variables used, their definition and sources of their data

Variables	Definition of Variables	Source of Author	Data source
Dependent variable			
ROA	Return On Asset = Profits/total assets	Naama Trad, et al. [7], Milhem and Abadeh [16], Hong and Razak, [10]	Financial report of respective bank
LDR	Loan deposit Ratio = Loan/Deposit	Yimer, [20] and Al-Mamun et al. [16], Milhem and Abadeh [16], Hong and Razak, [10]	Financial report of respective bank
Independent Variables			
GDP	GDP per capital	Milhem and Abadeh [16], Kiganda [12], Hong and Razak, [10]	WB
INF	Inflation, consumer prices (annual %)	Milhem and Abadeh [16], Hong and Razak, [10]	WB
EXCH	Official exchange rate	Kiganda, [12]	WB

Table 2. Show the descriptive statistics of all variables according to countries

		Observations	Mean	Maximum	Minimum	Std. Dev.
Panel 1: TZ Islamic Banks	EXCH	20	0.401565	0.459120	0.350624	0.032341
	GDP	20	863.1064	985.4482	743.4038	80.25754
	INF	20	7.193495	16.00109	3.464281	3.948698
	LDR	20	34.80696	80.00000	2.886967	33.70589
	ROA	20	0.990695	2.300000	0.001914	0.969357
Panel 2: UAE Islamic Banks	EXCH	30	0.594240	0.639061	0.522385	0.028816
	GDP	30	38491.99	41460.28	33893.30	2926.666
	INF	30	1.851898	4.069966	0.662269	1.046978
	LDR	30	0.960787	8.544000	0.005900	1.910705
	ROA	30	0.092234	0.820000	0.000150	0.207507

4.2 Correlation Results

Table 4 shows the correlation coefficients between all variables. Multicollinearity is a concern that sometimes arises if the pair-wise correlation coefficients between two regressors are above 0.8 in the regression analysis. Table 3 indicates that there were less than 0.8 correlation coefficients between variables. This suggests that the variables for both Islamic banks in Tanzania and Islamic banks in the UAE are not multicollinear. Table 3 shows that the relationships between independent variables and dependent variables are positive and negative. The liquidity has a positive link with ROA, EXCH,

GDP for Tanzanian Islamic banks, which means that when ROA, EXCH, GDP increases, LDR will also increase. The same result in the UAE, except that ROA has a negative with LDR, also has a negative correlation with ROA, suggesting that ROA decreases for Islamic banks in the UAE when LRD increases. The correlation coefficients between study variables are demonstrated in Table (3). Islamic banks and INFs in Islamic banks range from 0.056 to 0.310, with the ROA of Tanzania, while the correlation coefficients vary between 0.073 and 0.291 between research variables and GDP. Islamic banks in their correlation study.

Table 3. Show the correlation of all variables according to countries

COUNTRY		LNEXCH	LNGDP	LNINF	LNLDR	LNROA
Panel 1: TZ Islamic Banks	LNEXCH	1.000000	0.274681	-0.11334	0.024925	0.234393
	LNGDP	0.274681	1.000000	-0.78115	0.087174	0.321932
	LNINF	-0.11334	-0.78115	1.000000	-0.07397	-0.21653
	LNLDR	0.024925	0.087174	-0.07397	1.000000	0.868453
	LNROA	0.234393	0.321932	-0.21653	0.868453	1.000000
Panel 2: UAE Islamic Banks	LNROA	1.000000	0.233071	0.300963	0.371935	0.503127
	LNLDR	0.233071	1.000000	-0.03878	-0.06089	-0.03667
	LNINF	0.300963	-0.03878	1.000000	0.808846	0.539216
	LNGDP	0.371935	-0.06089	0.808846	1.000000	0.748527
	LNEXCH	0.503127	-0.03667	0.539216	0.748527	1.000000

Table 4. Results of unit root tests of panel data

COUNTRY		Levin, Lin & Chu t*		ADF - Fisher Chi-square		
Panel 1: TZ Islamic Banks	Variable	Constant without trend	Constant with trend	Constant without trend	Constant with trend	
	At Level					
	LNINF	-1.02222	-5.71019***	2.34174	14.3507***	
	LNGDP	0.21276	-3.68457***	0.25872	6.14991	
	LNLDR	-1.84785**	0.51807	3.92733	2.14737	
	LNROA	-13.8030***	-13.2704***	22.1240***	18.3120***	
	LNEXCH	-6.08786***	-7.42227***	17.6345***	11.9632**	
At first difference						
D(LNLDR)	****	0.0001*	0.0003*	0.0364*		
Panel 2: UAE Islamic Banks						
LNINF	2.4345***	-0.43379	4.80426	3.06422		
LNGDP	-4.50290***	0.34641	9.87960	1.98102		
LNLDR	-7.25425***	-5.08783***	17.8294***	9.75548		
LNROA	-1.48220*	-1.61122*	-1.03456	8.85984		
LNEXCH	0.34931	1.40493	5.27227	6.20864		
At first difference						
D(LNEXCH)	-3.72228****	****	18.7612***	****		

Note: * at 5 percent statistical significance

4.3 Panel Unit Roots

The unit root test is used to test the presence of series of data in order to determine whether they are stationary or non-stationary. When the variables are stationary, it implies that at the very moment they are measured, their mean, variance and auto covariance are the same. The panel unit root test was applied to avoid the issue of spuriousness. The null and alternative hypotheses were then used to evaluate the unit root in the panel and formulated as:

H0: All panels contain roots for units.

H1: One panel is at least stationary.

Table 5 shows the results for unit root test (ADF-Fisher Chi-square and LLC test). The results indicate that some variables were reject the null hypothesis and other failed to reject of unit root at level at the end the result become mixed. However, after taking first differentiation, the non-stationary series becomes stationary. The findings therefore clearly suggest that certain variables at level I (0) become stationary and other variables are stationary at first difference I (1). All variables are shown clearly, as below.

4.4 Estimation Results

4.4.1 Objective one: To compare the contribution of external determinants on profitability of Islamic Bank between UAE and Tanzania

The estimation results below reveals the comparative results of long run relationship between profitability of Islamic banks and its determinants in UAE and Tanzania's Islamic banks. When reference made with Islamic Banks of UAE, the result of Exchange rate (LnEXCH) reveal positive relationship with LnROA, the result becomes statistical significance at five percent level. This signifies that as a percentage changes in exchange rate, the return on assets of the Islamic banking in this country will increases by 67.7 percent in the long run relation. In compare with Tanzania's Islamic Bank, the result of exchange is revealed to reduce the profitability of Islamic bank and this might be related with the unstable and depreciation of Tanzania currency compare to the currency of the UAE.

One percentage positive changes of exchange rate, the profitability of Islamic banks will falls by

1.13 percent. Therefore, this signifies that, unstable and severe depreciation of domestic currency undermines the capacity of Islamic bank to generate maximum profits. Moreover, the growth of the economy also seems to enhance the profitability of Islamic bank in both UAE and Tanzania. The findings in same table contend the positive and statistical significance relationship between GDP and ROA of Islamic bank. In fact, the high the growth of GDP in a country, the more the profitability of these bank will obtain for the case of Tanzania, although the economic growth leading to the similar results but the magnitude of growth on ROA is slightly lower compare to Islamic banks in UAE. A percentage change in GDP of the UAE, it cause the return on asset to rise by 2.8 percent while the economic growth in Tanzania, a one percentage change leads a change of ROA by 2.06 percent. However, for the case of Inflation rate (LNINF), the result shows there is a negative relationship with RAO in both UAE and Tanzania but the result becomes statistically insignificant in the long run for the case of UAE while significant results at 10 percent level depicted in Tanzania.

These findings are corresponding with the result of Nahar and Sarker [18] which exchange rate influence negative with bank performance, Hong and Razak, [10] obtained positive relation with ROA like the above findings and the same author got inflation with negative relationship with profitability of banks.

4.4.2 Objective two: To compare the contribution of external determinants on liquidity of Islamic Bank between UAE and Tanzania

The table below shows the comparative result of the long run relationship between selected Islamic banks in UAE and Tanzania in liquidity. When reference made with Islamic Banks of UAE, the result of Exchange rate (LnEXCH) reveal negative relationship with LnLDR, the result becomes statistical significance at five percent level. This signifies that as a percentage changes in exchange rate, the loan deposit ratio of the UAE Islamic banking will increases by - 58.24 percent in the long run relation. In compare with Tanzania's Islamic Bank, the result of exchange is revealed to increase the liquidity of Islamic bank and this might be related with the unstable and depreciation of Tanzania currency compare to the currency of the UAE.

Table 5. Long-run estimation results between profitability of Islamic bank and its external determinants

Dependent Variable: D(LNROA)					
Method: ARDL					
Dynamic regressors (1 lag, fixed): LNEXCH LNINF LNGDP					
	Variable	Coefficient	Std. Error	t-Statistic	Prob.*
Long Run Equation					
Panel 1: UAE Islamic Banks	LNEXCH	67.76342	20.4302	3.316826	0.0047
	LNINF	-0.152992	0.481659	-0.31764	0.7551
	LNGDP	2.819873	0.932216	3.024914	0.0085
Long Run Equation					
Panel 2: TZ Islamic Banks	LNINF	-0.313192	0.163084	-1.92044	0.0963
	LNGDP	2.061541	0.473895	4.35021	0.0034
	LNEXCH	-1.130429	0.140958	-8.01961	0.0001

Table 6. Long-run estimation results between profitability of Islamic bank and its external determinants

Dependent Variable: D(LNLDR)					
Method: ARDL					
Dynamic regressors (1 lag, fixed): LNINF LNGDP LNEXCH					
	Variable	Coefficient	Std. Error	t-Statistic	Prob.*
Long Run Equation					
Panel 1: UAE Islamic Banks	LNINF	2.232107	0.519088	4.300053	0.001
	LNGDP	-18.4101	4.696805	-3.91971	0.002
	LNEXCH	-58.24346	12.41396	-4.69177	0.0005
Long Run Equation					
Panel 2: TZ Islamic Banks	LNGDP	4.529302	0.249548	18.15001	0.0000
	LNINF	0.619835	0.05401	11.4762	0.0000
	LNEXCH	0.737373	0.100086	7.367402	0.0002

Table 7. Show the result of individual Islamic bank on return of asset (ROA) measurement for making comparison

RETURN OF ASSET (ROA)					
	UNITED ARAB EMIRATES			TANZANIA	
Variable	FAD	DIB	EIB	AB	PBZ
	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient
COINTEQ01	-0.66418*** (0.010257)	-0.96987*** (0.001537)	2.010355* (0.645157)	2.010355** (0.645157)	-0.32529*** (0.032155)
D(LNINF)	-3.95429*** (0.472402)	-3.13659*** (0.029715)	13.87072 (20.4918)	13.87072 (20.4918)	-0.28628 (0.3265)
D(LNGDP)	70.35594 (393.8928)	16.30325 (35.76665)	-325.043 (11811.78)	-325.043 (11811.78)	-45.6942 (304.3177)
D(LNEXCH)	4.130927 (48.15747)	-38.3637*** (5.798977)	13.54537 (147.5198)	13.54537 (147.5198)	3.875353 (5.950223)
C	376.9343 (3503.558)	551.8698 (724.8347)	-1134.1 (204650.8)	-1134.1 (204650.8)	-3.96132 (11.26739)

Also in case of inflation both countries experience positive long run relationship with liquidity. A one percentage positive changes of inflation, the liquidity of Islamic banks of UAE and Tanzania will rise by 2.2percent 0.61 percent

respectively. This variable is significance for this equation. Furthermore, the growth of the economy also seems to affect the liquidity of Islamic bank in both UAE and Tanzania in different ways. The findings show that GDP in

Tanzania is positive and statistical significance relationship between LDR of Islamic bank. In fact, the high the growth of GDP in a Tanzania because the increase of liquidity in Islamic banks, it is contrary in UAE where the GDP has negative effect long run relationship with statistical significance with InLDR. This suggests that bad lending declines as the economy grows stronger. If there is a 1% rise in economic growth, loans in the UAE will decrease by 18.4% in the long run.

The results which shown liquidity was positive relation with inflation and GDP is consistence with the findings from Milhem and Abadeh [16], Abduh and Idrees, [19]. Yimer, [15] and (Kanwal and Nadeem, [13] But contrary with the findings from Ahmad, Al-Harbi [4].

5. CONCLUSION AND POLICY IMPLICATIONS

Throughout the study which examine the macroeconomic factors which affect the performance of Islamic banks in the United Arab Emirates (UAE) and Tanzania (TZ) We used return on assets (ROA) as a measure of profitability of the banks and loan deposit ratio (LDR) as a measure of liquidity for Islamic banks and both stand as dependent variables of this study. The result findings show that all variables are statistically significance in long run relationship by using ARDL except Inflation is insignificance in UAE by ROA as dependent variable.

Moreover some variables in terms their relation differ in terms of countries for instance in RAO GDP appear positive relation in both countries but Inflation in Tanzania is negative but UAE is positive. Exchange rate have positive relation in UAE but also negative in Tanzania. In order to monitor liquidity and boost profitability, the findings of this study are very important for policy makers of the UAE and Tanzania by taking strong account of the flow of the selected variables for better ways to improve the performance of their banks, including by setting corrective measures and regulations for best risk management practices, resulting in improving the efficiency of their banks.

Finally, for future studies, it is recommended to use more than two dependent variable, instead of using return on assets and loan deposit ratio, Other measures for profitability and liquidity includes Cash Deposit Ratio (CDR), Current

Asset Ratio (CAR) and return on equity (ROE) also more sample size and determinant factors can be included in determining the effects on bank profitability and liquidity can increase for better verification of this result.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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