

# The Financial Reforms (Interest Rate) And Financial Performance in Nigeria and Ghana

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**Abstract-** This study examine the effect of financial reforms on financial performance through interest rate with the proxy of deposit and lending interest rate and returns on asset for financial performance in Nigeria and Ghana. The principal objective of the study is to determined the effect of interest rate on commercial banks financial performance in Nigeria and Ghana.

Expost facto design and secondary data was employed for the purpose of this study, through the selected banks annual financial reports. Five common commercial banks were selected in Nigeria and Ghana between the period of 2012 -2017. (6years).

In an attempt to test the significance of the construct the study used regression statistics and the result of showed a positive significant effect of interest rate on financial performance of the selected banks in Nigeria while in Ghana all hypothesis were significant except lending interest rate( $p>0.05$ ).

The study concluded that an effective interest rate reform should be a regulatory imperative for a sustainable banking industry as joint deposit and lending interest rate had significant impact on financial performance in Nigerian and Ghana. It is therefore recommended that, management of banks should safeguard borrowers from exploitation by commercial banks and beefing up the capital in line with regulatory authorities.

**Index Terms-** Financial Performance, Lending interest, Deposit interest, Interest Reforms,

## I. INTRODUCTION

Diverse economy sectors exercise reformation to improve their system and foster their operational performance, banking sector inclusive. Financial reforms enhances the banking sector intermediation role towards achieving efficiency because, it focuses mainly on restructuring financial sectors, institutions and markets through various policy measures. (Anyanwu, 2010). Basically, Financial reform aims at increasing the size, improve the efficiency and raise the diversity of the financial system in an economy.

The financial reforms began in 1983 in Ghana and started in 1987 in Nigeria through Economic Recovery Programme (ERS) and Structural Adoption programme (SAP) respectively. This measures is to promote fiscal discipline, achieving efficiency and enhancing financial strength in all financial sectors in an economy (Lyndon & Oshiobugie, 2018).

Specifically, reforms were made in most countries on trade and exchange system and other wide-ranging measures such as exchange rate, interest rate, monetary policy, and capital market reforms in liberalisation and deregulation of many economic activities. However, with these dimensions interest rate liberalization reforms has been the main focus of this study in Nigeria and Ghana.

Interest rate liberalization leads to financial development and economic growth. (McKinnon, 1973). It was believed that low interest rates would promote investment spending and economic growth in both developed and developing countries. (Mohlo, 1986). Low interest rate policy needs to be followed by most countries in order to encourage investment and protect young borrowers, by fixing up a minimum savings rates for all deposit, minimum lending and monetary policy rates for commercial banks and non bank financial institution. This form an independence proxy for this findings.

In West African, financial sector is predominated by commercial banks and any failure in the sector has a grave consequence on the economic growth and development, indifferently any bankruptcy that could happen in the sector has a contagion effect that can lead to bank ruins, crises and bring overall financial crisis and economic tribulations (IMF, 2001).

Therefore, decisions on interest rate could either spell doom or boost the financial system and the economy as a whole. Financial and accounting reports employ various measures for profitability or performances, few of it are returns on Equity (ROE), returns on Investment (ROI), Liquidity (LIQ) and return on Asset (ROA) et.c. (Aziz, 2014)

Financial performance identifies the financial strengths and weakness of the firm by properly establishing the relationship between the financial indicators (Irungu, 2013). With various performance proxy, this study prefer return on asset (ROA) as the dependent variable to measure financial performance of the selected commercial banks in Nigeria and Ghana, because it shows how well a company controls its costs and utilizes its resources.

## II. STATEMENT OF PROBLEM

Reformation built efficiency, and most developed financial sector encourages economic growth and development. Unfortunately, most banks earnings, loans and credits were repress as a result of low level of savings or deposit caused by

in-stability of exchange and interest rate regulation. A rise in interest rate will avoid borrowing, this in turn will affect bank performance and vice versa in an economy (Bekaert,1998). Banking efficiency fosters economic growth while its inefficiency promote restrain as a result of low level of savings (Blum, et al, 2002) therefore, this study hunt out to investigate the effect of financial reforms (interest rate) on financial performance of five selected commercial banks in Nigeria and Ghana.

The broad objective of this study was to examine the impact of financial reforms (Interest rate) on financial performance of Nigerian and Ghana. Specifically, it sought to:

- identify the extent of flow of the selected interest rate ( lending, and deposit interest rate from 2012 to 2017) on selected commercial bank
- show the extent of effect of selected interest rate on financial performance from 2012 to 2017 on selected commercial banks.
- show the significant effect of the selected interest rate on financial performance of the selected commercial banks
- indicate the joint significant effect of the selected interest rate on financial performance of the selected banks

#### Research Question

- what is the flow of the selected interest rate in Nigeria and Ghana between 2012 to 2017
- to what extent had deposit interest rate affect financial performance on selected commercial banks in Nigeria and Ghana.
- to what extent had lending interest rate affect financial performance on selected commercial banks in Nigeria and Ghana
- to what extent have joint selected interest rate affect financial performance of the on selected commercial banks in Nigeria and Ghana

#### Research Hypothesis

- H<sub>0</sub>1: There is no significant effect of deposit interest rate on financial performance.
- H<sub>0</sub>2: There is no significant effect of lending interest rate on financial performance.
- H<sub>0</sub>3: There is no significant effect of the joint selected interest rate on financial performance of the selected commercial banks in Nigeria and Ghana.

### III. LITERATURE REVIEW

#### Conceptual Review

Financial performance reflected by financial reports is one of the determinant to level of investment. Maintaining and improving financial performance is such a great requirement so that the stocks will exist and be interested by any investors (Rosikah, Prananingrum, Musthalib, Azis, & Rohansyah, 2018), performance of banks gives direction to shareholders in their decision making (Panayiotis, 2006).

Financial performance identifying the financial strengths and weakness of the firm by properly establishing the

relationship between the proxy in balance sheet and profit and loss account statements to ascertain an organization position, performance and prospects (Irungu, 2013)

Banks performance can be split between those that are internal and those that are external. Internal determinants are also sometimes called microeconomic determinants or inherent performance, while external determinants are variables that reflect economic and legal environment in which the bank operates. (Nassreddine, Fatma, & Anis, 2013).

Adequate management of capital in banking sector would devise an opportunity for better standards to affects banking performances (Olalekan & Adeyinka, 2013).

Oje and Oladele, (2017) found that, reforms in Nigeria banking sector were precipitated by banking crisis arising from highly undercapitalization deposit taking banks; weakness in regulatory and supervisory framework; weak management practices and the tolerance of deficiencies in the corporate governance behaviour of banks would affect the performance of the sectors

Globally, 2010 Basle committee determined the least capital adequacy ratio to be eight percent (8%) of banks credit taken as the bench mark for measuring the capital adequacy to assure their sustainability in the sector. (CBN, 2010)

Financial performance can be measured using the following techniques; operating income, earning before interest and taxes, net asset value, return on assets, returns on equity, returns on investment liquidity et.c (Gilchris, 2013). Return on Assets formula looks at the ability of a company to utilize its assets to gain a net profit, this to us is a better measure of a bank's survival than return on earnings (Kiarie, 2011).

It gives an idea on how efficient management uses its assets to generate earnings. (Etale & Bingilar, 2016). For any bank performance Returns on assets rely on banks policy decisions as well as uncontrollable factors relating to the economy and government regulations. Many regulators believe return on assets is the best measure of bank efficiency (Hassan & Bashir, 2003)

Financial policy reforms imply changes, re-organization, restructuring, re-shaping and overhauling of the financial system to get rid of imperfections and possible distortions affecting smooth operation and performance of the system. (Akpan, 2012). It comprises of interest rate reform, banking sector reform, liquidity reform et.c

Interest rates influence bank earnings through net interest margins/ net interest income which is a driving force to bank earnings and performance (Hayes, 2013). Increase interest rate can result in plodding economic growth and development due to high capital costs and defaults by individuals and firms who borrow from banks (Papa, 2014).

Financial sector reforms engage suitable indicators to track the progress of financial sector. This comprises the behaviour of an interest rate such as lending rate, savings and deposit and monetary policy rate, (they are the reward paid by a borrower (debtor) to a lender (creditor) for the use of money for a period and they are expressed in a percentage, per annum (pa) to make them comparable) positive rates of interest on deposit, and loans indicate progress in the implementation of the reforms because the interest rate spread between the lending and deposit rates also shows the efficiency of the banking system (Johnston & Pazarbasouglu, 1997) while high interest rate invite the opposite.

In African countries most indigenous banks were unable to participate in large transactions, such as the Tema port expansion, and were reluctant to support small and medium-sized enterprises (SMEs). They claim that large projects are structured and financed by foreign-owned commercial banks and bilateral and multilateral development finance institutions. (African report, 2019). Therefore, policy with high interest rate means that the other financial institution will have to charge high because they are all profit oriented. (Giovanni, 2006).

However, for banks to meet her customer obligations at all times bank capitalisation needs to be efficiently managed, better funding must be provided for the banking lending activities and ensure quality asset management. (Soludo, 2004)

In Nigeria, since the inception of interest rates deregulation in 1986, the government has pursued a market-determined interest rate regime, which does not permit a direct state intervention in the general direction of the economy (Adebiyi and Babatope, 2004)

In Ghana, Monetary policy rate was slashed by 150 basis points to 14.50%, this brought the rate to the lowest point since May 2012, this was chiefly driven by mounting fears of a marked economic slowdown due to the fast-spreading pandemic and came against the backdrop of easing inflationary pressures. Moreso, March 2019 Nigeria reduced her Monetary Policy Rate (MPR) by 500 basis points to 13.5 per cent from 14 per cent. It is on record that the rates had remained at 14 per cent since July 2016, a period over two years with repress. (Chizea, 2019)

Therefore, interest rate must be positive in real terms, that is, it must be above the level of inflation which has just been reported at 11.31 per cent as at the end of February, 2019 in Ghana as it continues its south bound trend which has been witnessed so far for many months in Nigeria (Chizea, 2019)

#### IV. THEORETICAL REVIEW

##### Classical Theory of Interest

According to classical theory of interest as the savings-investment theory, propounded by Keynes (1960). It stated that on the general equilibrium theory, the rate of interest is determined by the intersection of demand for and supply of capital which agreed with Caplan (2000). This theory was critiques as it assumed all level of income to be constant, which changes with a little change in investment. Also this theory sees savings and investment as interring dependent, but investments changes, likewise income too which lead to changes in savings. (kumar, 2017)

However, Fredman (1991) explains that the saving and investment are the two real factors determining the rate of interest.

##### Loan Pricing Theory

This theory was propounded by professors Fischer Black and Myron Scholes in 1973. The theory provided a powerful insights into the analysis of a variety of financial instruments and problems. This approaches have been applied to the valuation of corporate equity or debt, and capital investment (Satyajit, 1985). This approach agreed that Banks cannot always set high interest rates. Banks should consider adverse selection and moral hazard because it is difficult to determine the borrower type at the start

of the banking relationship (Stiglitz and Weiss, 1981). If interest rates are too high, it might cause adverse selection problems because only high risk borrowers are willing to borrow. Once they receive the loans they may develop moral hazard behavior since they are likely to take highly risky projects (Chodecai, 2004)

#### V. RATIONAL EXPECTATIONS THEORY OF INTEREST RATES

This theory was proposed by John Muth in 1961. He used this approach to describe an outcome which depends partly on people expectation. This is based on the idea that people formulate expectations based on all the information that is available in the market. It holds that the best estimation for future interest rates is the current spot rate and that changes in interest rates are primary due to unexpected information or changes in economic factors. The limiting factors of rational expectation theory are mostly related to the difficulty in gathering information and understanding how the public uses its information to form its expectation (Caplan, 2000). If interest rate rise, it will avoid borrowing, and this in turn will affect bank performance and vice versa due to the little information they heard. (Bekaert, 1998)

#### VI. EMPIRICAL REVIEW

Banks profitability determinants focuses on returns on assets, equity and the net interest margin as measures of performance (Govori, 2013).

Dziobek and Pazarbasoglu (1997), opined after studying the experience of 24 countries, argued and found evidence that, after the onset of bank restructuring programs, bank performance improves a decline in the following indicators: Non-performing loans/ total loans, loan loss provisions/total loans, and operating expenses/total assets. Gilchris, (2013) who stated that although it is difficult to determine the direction of the relationship between interest rates and profitability, studies confirm that interest rates instability affects Commercial Banks' financial performance. Indifferently, Keynes (2006) found that Inflation and inflationary expectations can press interest rate upward which affects lending rates resulting to reduce credit demand and lending ability of Commercial Banks and in Ghana it was proved that low interest rates would promote investment and spending.

A rise in interest rate will avoid borrowing, this in turn will affect bank performance and vice versa (Bekaert, 1998). Banking efficiency which will result in economic growth is hindered in the depressed financial system by low level of savings caused by interest rate regulation, instability of exchange rate. (Blum et al, 2002). Ngugi (2004) explained that low interest rates and small spread promote economic growth in big ways hence encouraged. Inflation and inflationary expectations can press interest rate upward which affects lending rates resulting to reduce credit demand and lending ability of Commercial Banks (Keynes, 2006). A reduction in the lending rate to investors so as to encourage investors to borrow more and increase investment (Ojima & Fabian)

Garza-Garcia (2011) analysed the determinants of bank performance in the Mexican banking sector for 2001-2009. The

results of the study indicate that the lagged performance variable is positive and significant, which shows the tendency of bank profits to persist over time. Hoffmann (2011) examined the determinants of the profitability of US banks during the period 1995-2007. Contrary to Garza-Garcia (2011), their findings document a negative link between the capital ratio and the profitability, which supports the notion that banks are operating over-cautiously and ignoring potentially profitable trading opportunities. They also find a significant negative relationship between the size of the bank and its profitability. Thus a bank can take advantage of the scale economies at a low asset size level, but these scale economies become exhausted as the bank's size increases

Ayanda et al. (2013) looked at the determinants of profitability in the Nigerian banking industry from 1980 to 2010. Applying the econometric analysis of co-integration and error correction techniques, they found capital adequacy and credit risk to be statistically significant and negatively related to profitability of loans. Efficiency management – which shows banks' ability to manage their cost in order to boost their profits – was, however, found to be positively related to net interest margin. For the external or macroeconomic variables, they found broad money supply growth rate to be a significant driver both in the long run and in the short run.

Ahokpossi (2013) examined the determinants of bank interest margins in sub-Saharan African countries and found market concentration, bank inefficiency, equity and credit risk to be positively associated with interest margins. Liquidity ratio

was negatively and significantly related to interest margins. Macroeconomic variables' relationship with bank performance in the study however appeared mixed. While inflation was positively related to interest margins, no evidence of significant relationship was found between economic growth and interest margins

## VII. GAPS OF THE STUDY

A healthy and strong economy depends on a sound, stable, robust, and modern financial system (Okpara, 2011) . However, Most researches had been conducted on financial reforms and financial performance but very few had specifically reviewed financial reforms with regards to interest rate extensively like Gilchris, (2013) who stated that although it is difficult to determine the direction of the relationship between interest rates and profitability, studies confirm that interest rates instability affects Commercial Banks' financial performance. Indifferently, Keynes (2006) found that Inflation and inflationary expectations can press interest rate upward which affects lending rates resulting to reduce credit demand and lending ability of Commercial Banks and in Ghana it was proved that low interest rates would promote investment and spending (African report, 2019) In light of this, no study had reviewed specifically the effect of different interest rate such as savings or deposits rate, and lending rate, on financial performance of banks in two West African countries. This vacuum of studies will be the finding which the researcher intend to fill

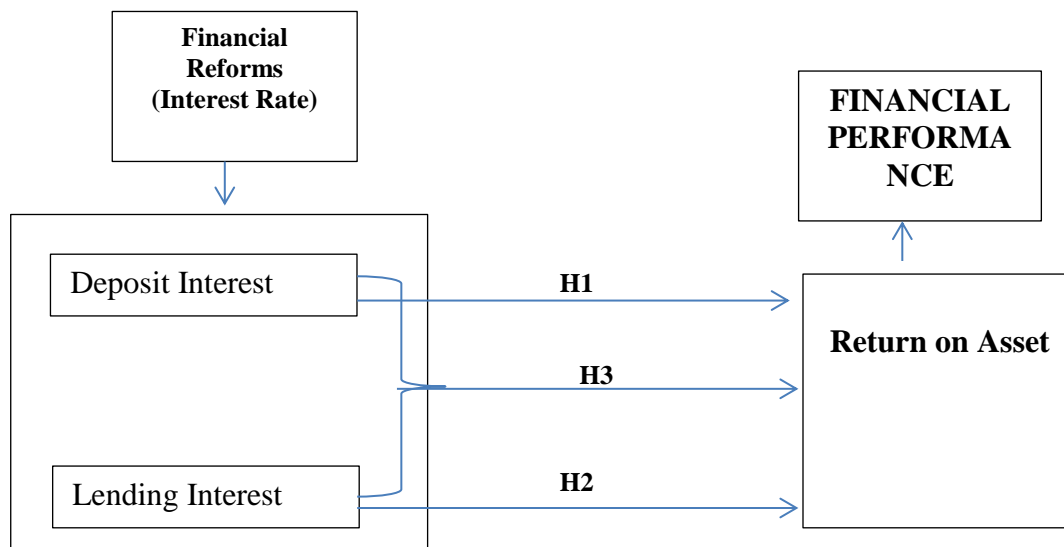


Figure 1: Conceptual model, 2020

## VIII. METHODOLOGY

### Research Design

The research employed the uses of ex- post facto research design. Ex- post facto research design is a consistently collection of data to explain and predict a given situation. It deals with time series data (2012-2017). In view of this, the analysis of the data set gathered were presented using two approaches, descriptive

approach and inferential (Regression analysis) for the test of hypothesis.

### Population of the Study

The population of this research work comprises of commercial banks in Nigeria and Ghana. Nigeria has twenty-five while Ghana has twenty-four commercial banks making a total of forty-nine banks. These banks are listed in table 7

**Sample Size and techniques**

In promotion for statistical efficiency, a non-probabilistic sampling technique of purposive sampling was employed to select the common banks between the two countries. Five commercial banks were found common and had been operating for the past nine years as a standing criteria for the selection. These banks are; Fidelity bank, Eco bank, Guarantee Trust Bank, Zenith bank and United African Bank.

**Data Collection and method of analysis**

The study will use secondary data and utilized panel data which will consist of time series and cross sections from 2012 to 2017. The data for all the variables in the study were extracted from published annual reports and financial statements of the selected banks in Nigerian and Ghana covering the period from 2012 to 2017 (6years). Descriptive statistics (mean, standard deviation, kurtosis et.c ) and inferential statistics (regression analysis) were the method used for the analyses.

**Definition of Variables**

**Return on Assets** Return on assets is a standard measure of bank performance obtained by dividing net profits after tax by total assets. The numerator can be either before- or after tax profits. It gives management and shareholders a sense of how well the available resources are being utilized.  $ROA = \text{Net Profit after Tax} / \text{Total Assets}$

**Lending rates:** A depository corporations rate that usually meets the short- and medium-term financing needs of the private sector. This rate is normally differentiated according to creditworthiness of borrowers and objectives of financing. The latest value for Lending interest rate (%) in Nigeria was 16.90 as of 2018. Over the past 48 years, the value for this indicator has fluctuated between 31.65 in 1993 and 6.00 in 1977. (IMF, 2020)

**Savings Deposit Rate:** The savings deposit rate is the amount paid by banks for funds withdrawable after giving seven days' notice. This restriction is, however, seldomly applied (Anyanwu, 2010). The value for Deposit interest rate (%) in Nigeria was 9.70 as of 2018, Over the past 48 years this indicator reached a maximum value of 23.24 in 1993 and a minimum value of 2.67 in 1976( IMF, 2020)

**Model specification**

To achieve the objective of this study, a regression model was used to determine the effect of selected interest rate on financial performance

The following models were stated to guide the test of hypothesis:

$ROA = f(DIR) \dots \dots \dots \text{equation 1}$

$ROA = f(LIR) \dots \dots \dots \text{equation 2}$

$ROA = f(DIR, LIR, MPR) \text{ equation 3}$

Equation above is specified as an econometric model below

$ROA_{it} = \beta_0 + \beta_1 DIR_{it} + \mu_{it}$

$ROA_{it} = \beta_0 + \beta_2 LIR_{it} + \mu_{it}$

$ROA_{it} = \beta_0 + \beta_1 DIR_{it} + \beta_2 LIR_{it} + \mu_{it}$

Where:

ROA= Return on Asset

DIR=Deposit Interest Rate

LIR= Lending Interest Rate

$\mu$  =Error Term

t=the period of study (2010-2018)

i= the firms under study

$\beta_0$  is the constant, and  $\beta_1, \beta_2$  coefficients of the independent variables of the model stated above which captures the impact of the changes in each independent variable on the dependent variable (ROA).  $\mu$  is the error term which signify the unexplained variation in the model

**Table 1: A priori expectation**

S/N	Coefficients	Expected
1	B <sub>1</sub>	+
2	B <sub>2</sub>	+

Source: Researchers field survey, 2020

Furthermore, it was expected that the coefficients of the dependent and independent variable be  $\beta_1, \beta_2 > 0$

**IX. RESULTS**

The tables 2 and 3 show the summary of the average results for the commercial banks. The tables clearly highlight interest reform situation for the various performance ratios of the selected banks following the six years. These results show a trend analysis of both Lending, deposit interest rate and their performance through returns on Asset (ROA) from 2012 to 2017 of the five selected commercial banks in two popular countries in West African (Ghana and Nigeria). From tables 2 and 3; the following observations are made:

In 2012, Nigeria Guarantee trust bank had the highest rate of interest 11.2% and 16.7% (Deposit and Lending respectively)still, it had the highest returns for the period. This was as a result of incorporated incentives and their marketing strategies adopted to convince their customers. Although it was reduced in 2013 from 11.2% to 9.4%, 13.6% from 16.7% and the returns reduces by 0.7%.

However, in 2017 UBA bank increases her deposit rate by 0.8% making 7.2% and Lending rate by 0.6% to make 12.4% lending rate their return was reduced from 2.1 to 1.9. Meanwhile fidelity increases her rate too and her returns was increased from 8.1 to 8.7. Moreso, 2017 as ECO bank had the highest returns from 4.2 to 6.7 due to her reduction in both deposit interest rate of 7.2 to 5.8 and lending rate from 10.4% to 8.8% while Guarantee trust bank reduces her deposit rate from 9.3 to 4.7 but increases her lending interest rate from 12.3% to 17.0% which yielded a little percent of increase in returns for the past 6years.

Nevertheless, this table showed that the fluctuation of the interest rate slated decreases in the returns except in 2017 when most selected commercial banks of had the high returns than ever. This implied that, the lower the interest rate, high the financial performance.

In Ghana, Guarantee trust bank had the highest returns except on 2015 when ECO bank 0.3% more returns than GT bank but in 2017 United Bank of African in Ghana reduces her lending rate had better 3.6% returns more than ever.

Table 3 and figure 2 shows descriptive statistics of all the variable of interest in order to have a good statistical view of the variables. The descriptive statistics for the flow of interest rate – proxies by Lending (LIR) and Deposit (DIR) Interest rate revealed the mean of the variable as Deposit interest rate, Nigeria =7.1%, for Ghana 10.1%, likewise lending interest rate as =10.4% and 20.9% for Nigeria and Ghana respectively. This represent the average data for the selected banks in Nigeria and Ghana from 2012 to 2017. The max and min values are (In Nigeria DIR : 3.7 and 11.2; LIR= 6 and 17 respectively. In Performance (ROA), Nigeria had a fairly symmetric Skewness (Sk=0.72) but had highly skewed symmetric performance in Ghana (Sk=3.31). The value of ROA is more than zero (0.72) and her kurkosis was found negative since it less than three (3) (-0.05) while in Ghana, her skewness and kurtosis are (3.31 and -0.203 respectively). Negative kurkosis (platykurtic). This buttresses less than normality in the financial performance of the two countries.

#### Test of hypotheses

**Research question two : to what extent had deposit interest rate affect financial performance on selected commercial banks in Nigeria and Ghana**

**Hypothesis one  $H_0$ : There is no significant effect between deposit interest rate on selected commercial banks financial performance in Nigeria and Ghana**

Table 4 indicates the deposit Interest rate Reforms show that it contributed positively to the banking financial performance up to the tune of (0.039 < 0.05) in Nigeria and (0.010 < 0.05 in Ghana) this was statistically significant at 5% level. The constant (c) was positively signed and statistically significant implying continual effect of reforms at enhancing banking performance in Nigeria and Ghana. Further, the R2 statistic of 0.143 in Nigeria and 0.213 in Ghana implied that the model accounts for 14.3% and 21.3% in Nigeria and Ghana respectively are of the total variation in the bank performance; and that the model is jointly significant at 5%, as shown by both the F-statistic and the probability of F-statistic values of (NG=4.669; GH=7.476 and NG= 0.039; GH =0.010) respectively. Therefore, with this result, there exist a significant effect of deposit interest rate on financial performance and null hypothesis is hereby rejected by this findings.

Hypothesis two:

**Research question three: To what extent had lending interest rate affect financial performance on selected commercial banks in Nigeria and Ghana**

**Hypothesis two:  $H_0$  There is no significant effect between lending interest rate on financial performance**

Table 5 tested the effect of lending interest rate (LIR) on Return on Asset (ROA) in Nigeria and Ghana. The result revealed a positive effect of LIR on ROA as can be found from their coefficients; for Nigeria  $\beta_1 = 0.629$ ;  $0.00 < 0.05$ , Ghana = 0.070;  $0.713 > 0.05$ .

This effect is statistically insignificant in Ghana but significant in Nigeria; this can be seen by their probability value

(NG=0.000 < 0.05; GH=0.713 > 0.05). Moreover, the R-square which is the coefficient of determination and adjusted R2 showed the magnitude of variations caused on ROA by lending interest rate in Nigeria and Ghana. Which is to be (NG=39.6%; GH = 0.5%) This indicates that 39.6% and 0.5% variation in ROA is attributed to lending interest rate in Nigeria and Ghana respectively while remaining 60.4% and 99.5%, were caused by other factors outside this model. Thus, the result indicates that in Nigeria lending interest rate has a significant effect compare to Ghana with an insignificant effect of lending interest rate on Return on Asset (ROA). Since ROA is one of the important profitability ratios, it shows that LIR has a significant and insignificant effect on banks' performance in terms of ROA as a measure of profitability in Nigeria and Ghana respectively..

Hypothesis three:

**Research question: to what extent have joint selected interest rate affect financial performance on selected commercial banks in Nigeria and Ghana**

**Hypothesis three  $H_0$ : There is no significant effect between the joint selected interest rate on financial performance of the selected commercial banks in Nigeria and Ghana.**

The results of the regression estimates in table 6 indicates the joint effect of interest rate (deposit and lending interest rate) on Return on Asset in Nigeria and Ghana. The result shows that the combination of both deposit and lending interest rate in Nigeria and Ghana as a positive significant effect on ROA in the two settings. This can be revealed as seen from their coefficients. R-square which is the coefficient of determination and adjusted R2 shows the magnitude of variations caused on two variables on ROA. In Nigeria by these joint variables to be about 41.3% and in Ghana, it was almost 24.4%. This indicates that about 41.3% and 24.4% variations in ROA are attributed to joint interest rate respectively while the remaining 58.7% and 75.6% were caused by other factors outside this model. Furthermore, the result is seen to be statistically significant. In Nigeria, this is shown by the overall Probability of F-statistics at 0.001, lower than the acceptable level at 0.05, while in Ghana it showed  $0.023 < 0.05$ . This shows that the interest rate in Nigeria and Ghana has a positive significant effect on selected banks performances for the selected period of time.

## X. DISCUSSION

Descriptive summary table 3 showed that the fluctuation of the interest rate slated decreases in the returns except in 2017 when most selected commercial banks of had the high returns than ever. This implied that lower interest rate would attract high financial performance. This is line with a study conducted by Bekaert (1998) who found that a rise in interest rate will avoid borrowing, this in turn will affect bank performance and vice versa in an economy.

This findings also revealed a positive significant effect of deposit interest rate on financial performance this correlate with a study led by Ngure (2014) who revealed from her study that interest rate have a significant positive effect on financial performance of commercial banks.

Moreso, The study showed a significant effect of lending interest in Nigeria but otherwise in Ghana. This relates with a study conducted by Okech (2003) who found a weak positive relationship between lending rates and financial performance of commercial banks.

Finding revealed a strong positive significant effect of interest rate on financial performance of financial institutions. This relate with a study conducted by Irungu (2013) who found the effect of interest rate spread on the performance of commercial banks. The study found that there is strong positive relationship between financial performance of commercial banks and interest rate spread, because it increases the cost of loans charged on the borrowers and regulation on interest rates.

## XI. CONCLUSION AND RECOMMENDATION

### Conclusion

The study established in the two selected country in West African that the selected banks deposit interest rate affect the banks performance and it joint with lending interest rate would significantly affect their financial performance but in Ghana, lending interest rate had positive effect but not significant.

### Recommendation

- i. Borrowers should be Safeguard from exploitation by commercial banks through interest rate regulations.
- ii. Policy of income source diversification should made known to foster better performance among banks
- iii. Proper regulation of capital adequacy, to encourage lending activity and avoid liquidity

### Summary of findings

The study used secondary data covering the period from 2012 to 2017 for analysis. The data was sourced from annual financial reports of all the selected commercial bank in Nigeria and Ghana. The researcher sought to investigate the effect of the selected interest rates on the financial performance of the commercial banks in Nigeria and Ghana. The extracted data was inputed using Statistical Package for Social Sciences (SPSS v. 21). For the analysis Descriptive statistics was used to determine the relationship between the variables while regression analysis was further used for the inferential.

The result show a positive significant effect of deposit interest rate and joint interest rate on financial performance in Nigeria and Ghana.

In Ghana lending rate had no significant effect on financial performance ( $0.713 > 0.05$ ) but significant effect on ROA in Nigeria ( $0.000 < 0.05$ ).

### Areas for further study

- Further study should be focus on a longer time series, probably 15 to 20 years, this would clarify whether the observed relationship changes over the years.
- Moreso, macroeconomic factors and external environmental factors should be added to improve the expiatory power of the model linking interest rates to financial performance of commercial banks

### Limitation of study

- It is important to note that he study was not without limitation. This findings used secondary data and was depend on irrespective of means of data extraction, and other assumption that were used in the presentation of the data .

Other factors that could affect commercial banks financial performance are not considered

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**Table 2: Descriptive Statistics of Panel data of Commercial banks in Nigeria and Ghana 2012-2017**

		SELECTED BANKS														
		UNITED BANK OF AFRICAN			FIDELITY			GUARANTEE TRUST			ECO			ZENITH		
	Year	DIR	LIR	ROA	DIR	LIR	ROA	DIR	LIR	ROA	DIR	LIR	ROA	DIR	LIR	ROA
NIGERIA	2012	5.2	13.3	2.4	5.1	8.2	2	11.2	16.7	5	5.6	7.3	1.4	8.1	13.4	3.9
	2013	3.7	8.5	1.5	3.8	6	0.7	9.4	13.6	4.3	6.1	8.3	0.7	8.3	12.5	3
	2014	4.8	9.4	1.7	5.9	7.9	1.2	8.6	11.1	4.2	5.4	7	1.5	8.1	9.2	2.6
	2015	6.2	12.7	2.2	7.9	9.3	1.1	9.8	11.6	3.9	6.6	8.8	0.5	8.8	9.9	2.6
	2016	6.4	10.8	2.1	7.8	8.1	0.8	9.3	12.3	4.2	7.2	10.4	4.2	8	8.7	2.7
	2017	7.2	12.4	1.9	9.2	8.7	1.4	4.7	17.0	5.1	5.8	8.8	6.7	7.5	9.9	3.2
	AVR	5.6	11.2	1.96	6.6	8	1.2	8.8	13.7	4.5	6.1	8.4	2.5	8.1	10.6	3
	MAX	7.2	13.3	2.4	9.2	9.3	2.0	11.2	17.0	11.2	7.2	10.4	6.7	8.8	13.4	3.9
	MIN	3.7	8.5	1.5	3.8	6.0	0.7	4.7	11.1	4.7	5.4	7	0.5	7.5	8.7	2.6
	SKW	-0.3	-0.4	-0.19	-0.18	-1.3	0.9	-1.5	0.6	0.6	0.8	0.5	1.2	0.2	0.8	1.4
KURT	-0.6	-1.8	-1.0	-1.3	2.6	0.9	3.4	-1.9	-1.5	-3.1	0.2	0.5	1.6	-1.3	1.7	
GHANA	2012	5.1	13.3	2.4	7.1	31.2	2	4.3	8.5	5.7	9.9	12.1	3.9	7	16.7	3.2
	2013	4.7	10.7	1.8	8.7	12.4	2.5	4.6	10.1	5.6	10.3	12.7	4.1	12.4	19.6	5.4
	2014	4.8	9.5	1.7	10.2	12.4	2.7	11.6	19.3	5.4	12.6	13.3	5.5	14.2	23.9	4.5
	2015	10.5	24.3	2.6	12.2	12.4	3.6	10.3	15.5	4.5	13.5	21.9	4.8	13.5	28.1	3.2
	2016	12.7	20.5	3.8	11	26.6	2.1	11.6	21.5	4.8	12.1	20.7	4	9.8	25.9	4.3



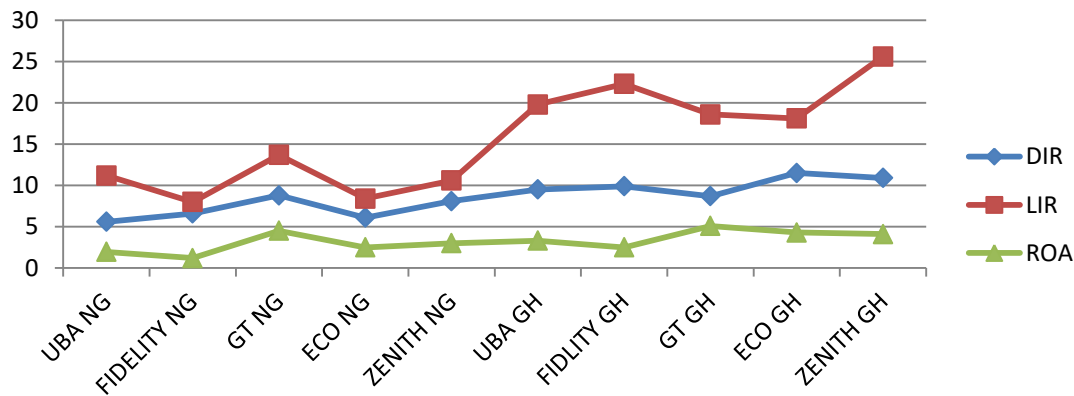
2017	19.4	4.1	7.4	10.5	38.9	1.8	9.8	36.4	4.7	10.4	27.7	3.4	9	39.1	3.7
AVR	9.5	19.8	3.3	9.9	22.3	2.5	8.7	18.6	5.1	11.5	18.1	4.3	10.9	25.6	4.1
MAX	19.4	41.0	7.4	12.2	38.9	3.6	11.6	36.4	5.7	13.5	27.7	5.5	14.	39.1	5.5
MIN	4.7	9.5	1.7	7.1	12.4	1.8	4.3	8.5	4.5	9.9	12.1	3.4	3.2	16.0	3.2
SKW	1.0	1.3	1.8	-0.6	0.5	1.2	-0.8	1.2	-0.0	0.3	0.5	0.8	-0.3	0.1	0.6
KUR	0.2	1.6	3.5	0.1	-0.8	1.3	-1.9	1.6	-2.5	-2.0	-1.3	0.3	-1.6	1.4	-0.5

Source: Annual Financial Reports 2012-2017

**Table 3: Descriptive Summary for construct data pooled in Nigeria and Ghana (2012-2017)**

	CONSTRUCTS	MEAN	SD	SKEWNESS	KURKTOSIS	MINIMUM	MAXIMUM
NIGERIA	DIR	7.1	1.9	0.09	0.59	3.7	11.2
	LIV	10.4	2.7	0.82	0.36	6	17
	ROA	2.6	1.6	0.72	-0.05	0.5	6.7
GHANA	DIR	10.1	3.4	0.139	0.886	4.3	19.4
	LIV	20.9	9.5	0.678	-0.447	8.5	41
	ROA	3.8	1.4	3.31	-0.203	1.7	7.4

Source: Annual Financial Reports 2012-2017



**Figure 2: Average Flow Of Lending, Deposit Interest And ROA In Five Selected Commercial Banks In Nigeria And Ghana For 6years 2012-2017**

**Table 4: Effect of Deposit Interest rate on selected banks financial performance (ROA) in Nigeria and Ghana**

Model		Sum of Squares	Df	Mean Square	F	Sig.
NIGERIA	Regression	9.973	1	9.973	4.669	.039 <sup>b</sup>
	Residual	59.801	28	2.136		
	<b>Total</b>	<b>69.774</b>	<b>29</b>			
GHANA	Regression	12.294	1	12.294	7.576	.010 <sup>b</sup>
	Residual	45.436	28	1.623		
	<b>Total</b>	<b>57.730</b>	<b>29</b>			

Nigeria  
R= 0.378  
R Square = 0.143  
Adjusted R Square = 0.112  
Durbin Watson= 1.205  
B=0.378

Ghana  
R= 0.461  
R Square = 0.213  
Adjusted R Square = 0.185  
Durbin Watson =1.254  
β=0.461

a. Dependent Variable: ROA b. Predictors: (Constant), DIR

Source: Field survey, 2020

**Table 5: Effect of Lending Interest rate on selected banks financial performance (ROA) in Nigeria and Ghana**

Model		Sum of Squares	Df	Mean Square	F	Sig.
<b>NIGERIA</b>	Regression	27.616	1	27.616	18.342	.000 <sup>b</sup>
	Residual	42.157	28	1.506		
	<b>Total</b>	<b>69.774</b>	<b>29</b>			
<b>GHANA</b>	Regression	.284	1	.284	.138	.713 <sup>b</sup>
	Residual	57.446	28	2.052		
	<b>Total</b>	<b>57.730</b>	<b>29</b>			
Nigeria R= 0.629 R Square = 0.396 Adjusted R Square = 0.374 Durbin Watson= 1.276 $\beta$ =0.629			Ghana R= 0.070 R Square = 0.005 Adjusted R Square = -0.031 Durbin Watson =1.379 $\beta$ =0.070			

a. Dependent Variable: ROA b. Predictors: (Constant), LIR

Source: Field survey, 2020

**Table 6: Joint Effect of Lending and deposit Interest rate on selected banks financial performance (ROA) in Nigeria and Ghana**

Model		Sum of Squares	Df	Mean Square	F	Sig.
<b>NIGERIA</b>	Regression	28.818	2	14.409	9.499	.001 <sup>b</sup>
	Residual	40.956	27	1.517		
	<b>Total</b>	<b>69.774</b>	<b>29</b>			
<b>GHANA</b>	Regression	14.111	2	7.055	4.367	.023 <sup>b</sup>
	Residual	43.619	27	1.616		
	<b>Total</b>	<b>57.730</b>	<b>29</b>			
Nigeria R= 0.643 R Square = 0.413 Adjusted R Square = 0.370 Durbin Watson= 1.384 $\beta$ ; LIR=0.570, DIR=0.144			Ghana R= 0.494 R Square = 0.244 Adjusted R Square = 0.188 Durbin Watson =1.198 $\beta$ =LIR=-0.203; DIR= 0.561			

a. Dependent Variable: ROA; b. Predictors: (Constant), DIR, LIR

**Table 7: Commercial banks in the selected countries**

TABLE 7 ; LIST OF COMMERCIAL BANKS IN NIGERIA AND GHANA	
Nigeria commercial banks	<ul style="list-style-type: none"> <li>• Access Bank Plc</li> <li>• Fidelity Bank Plc</li> <li>• First City Monument Bank Limited</li> <li>• First Bank of Nigeria Limited</li> <li>• Guaranty Trust Bank Plc</li> <li>• Union Bank of Nigeria Plc</li> <li>• United Bank for Africa Plc</li> <li>• Zenith Bank Plc</li> <li>• Citibank Nigeria Limited</li> <li>• Ecobank Nigeria Plc</li> <li>• Heritage Banking Company Limited</li> <li>• Keystone Bank Limited</li> <li>• Polaris Bank Limited. The successor to Skye Bank Plc.<sup>[2]</sup></li> <li>• Stanbic IBTC Bank Plc</li> <li>• Standard Chartered</li> <li>• Sterling Bank Plc</li> <li>• Titan Trust Bank Limited</li> <li>• Unity Bank Plc</li> <li>• Wema Bank Plc</li> </ul>
Ghana Banks	<ul style="list-style-type: none"> <li>• Bank Ghana Limited</li> <li>• Access Bank Ghana Limited</li> <li>• Agricultural Development Bank of Ghana</li> <li>• Bank of Africa Ghana Limited</li> <li>• CAL Bank Limited</li> <li>• Consolidated Bank Ghana Limited</li> <li>• Ecobank Ghana Limited</li> <li>• FBN Bank Ghana Limited</li> <li>• Fidelity Bank Ghana Limited</li> <li>• First Atlantic Bank Limited</li> <li>• First National Bank Ghana Limited*</li> <li>• GCB Bank Limited</li> <li>• GHIL Bank Limited*</li> <li>• Guaranty Trust Bank Ghana Limited</li> <li>• National Investment Bank Limited</li> <li>• OmniBSIC Bank Ghana Limited</li> <li>• Prudential Bank Limited</li> <li>• Republic Bank Ghana Limited</li> <li>• Société Générale Ghana Limited</li> <li>• Stanbic Bank Ghana Limited</li> <li>• Standard Chartered Bank Ghana Limited</li> <li>• United Bank for Africa Ghana Limited</li> <li>• Universal Merchant Bank Limited</li> <li>• Zenith Bank Ghana Limited</li> </ul>

Source : Wikipedia, 2020

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