

Impact of Interest Rate on the Financial Performance of Listed Manufacturing Companies in Nigeria

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Abstract

This study examines the impact of interest rate on the financial performance of listed manufacturing firms in Nigeria from 2009 to 2018. The dependent variable of the study was financial performance measured by return on assets (ROA) and return on equity (ROE), while the independent variable was interest rate (ITR). Secondary data on financial performance was obtained from the annual reports and accounts of 28 sampled manufacturing companies for the period 2009 – 2018 while data for interest rate was obtained from the Central Bank of Nigeria (CBN). Correlation research design was adopted and cross-sectional/time series data was extracted from the reports of the firms, while panel multiple regression was used to analyse the data in order to establish relationship between the variables using EViews-10. The findings showed that interest rates had a significant impact on ROA but no significant impact on ROE of listed manufacturing firms in Nigeria. It is therefore recommended that interest rates should be set at values that would not negatively impact the financial performance of listed manufacturing firms in Nigeria.

Keywords: Interest Rate, Financial Performance, Return on Assets, Return on equity, Earnings per share

INTRODUCTION

Interest rate is a key macroeconomic factor that can pose a positive or negative threat to the performance of a firm (World Bank Group, 2015). Other macroeconomic factors include the consumer price index, inflation rate, unemployment, gross domestic product (GDP), stock market index and corporate tax rate (Broadstock et al., 2011). While micro factors are within the control of management, the macro factors such as interest rates are beyond the control of management (Dioha, Mohammed and Okpanachi, 2018).

Interest rate is the price a borrower pays for the use of money they borrow from a lender or fee paid on borrowed assets. Ngugi (2001) described interest rate as a price of money that reflects market information regarding expected change in the purchasing power of money or future inflation. Interest rates are important because they control the flow of money in the economy (Murungi, 2014). High interest rates curb inflation but also slow down the economy. Low interest rates stimulate the economy, but could lead to inflation. In Nigeria, the increases in the nominal interest rate and inflation rate intensify the aggregate rates of failure or default of firms (Davis, 1995; Robson, 1996). Khan and Mahmood (2013) showed that

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the financial structure of some industry makes firms in that industry more susceptible to interest rates volatilities than others. A significant relationship between interest rate and financial performance of micro enterprises in Kenya was reported by Mwangi et al. (2016), although Barnor (2014) found a significant negative effect of interest rate on stock market returns of listed firms in Ghana.

Financial performance is the measure of how well a firm can use its assets from its primary business to generate revenues. It can be measured by variables which involve productivity, profitability, growth or, even customers' satisfaction. The measures of financial performance includes return on investment (ROI), residual income (RI), earning per share (EPS), dividend yield, return on assets (ROA), growth in sales, return on equity (ROE),e.t.c (Stanford, 2009). The performance of the manufacturing sector in Nigeria indicates low productivity, as its share of about 9.2% of Nigeria's Gross Domestic Product as at 2018 (NBS, 2019) is poor when compared with between 20% to 40% in many industrialized and industrializing nations. The lack of access to credit and resultant sky high costs of production are signs that interest rates whether high or unstable have deprived the manufacturing sector of its funds to grow. If the interest rate is too high, the cost of borrowing goes up, resulting in the high cost of doing business and consequently poor performance (Dunmade, 2012). The unstable financial performance of companies in the sector in terms of their ROA, ROE and EPS could be as a result of continued lack of access to cheap finance characterized by rising lending rate or the interest being paid on the borrowed assets/funds. Hence, the study seeks to assess the impact of interest rate on the financial performance of manufacturing companies in Nigeria. In line with the aim of the study, the following hypotheses were formulated:

H₀₁: Interest rate has no significant impact on ROA of listed manufacturing firms in Nigeria.

H₀₂: Interest rate has no significant impact on ROE of listed manufacturing firms in Nigeria.

LITERATURE REVIEW

Conceptual Framework

Interest Rate

According to Keynes, interest is the reward for not hoarding but for parting with liquidity for a specific period of time. Keynes' definition of interest rate focuses more on the lending rate. Adebisi (2001) defines interest rate as the return or yield on equity or opportunity cost of deferring current consumption into the future. Some examples of interest rate include the saving rate, lending rate, and the discount rate. Jhingan (2003) defines interest as the price which equates the supply of 'Credit' or savings plus the net increase in the amount of money in the period, to the demand for credit or investment plus net 'hoarding' in the period. This definition implies that an interest rate is the price of credit which like other price is determined by the forces of demand and supply; in this case, the demand and supply of loanable funds.

Firms' Financial Performance

Performance is multi-faceted, and the appropriate measure selected to assess corporate performance depends on the type of organization evaluated, and the objectives to be achieved through that evaluation (Kaguri, 2013). Firm performance encompasses three specific areas: financial performance (profits, ROA, ROI, EPS, etc.); product market performance (sales, market share, etc.); and shareholder return (total shareholder return, economic value added) (Richard, Devinney, Yip & Johnson, 2009). Financial performance refers to a firm's ability to achieve planned financial results as measured against its intended outputs (Mutende, Mwangi, Njihia and Ochieng, 2017). Financial performance is usually measured using financial ratios, such as ROE, ROA, return on capital, return on sales (ROS) and operating margin (Gilchris, 2013). Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues (Van Horn, 2005; Pandey, 2001). A firm's financial performance is of importance to investors, stakeholders and the economy at large.

Return on Assets (ROA)

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Return on Asset (ROA) is operationalized as the proportion of net income generated from the total assets of a company. It measures the naira earnings an organization derive from each naira of assets they control and utilized. It is a useful for comparing rival companies in the same industry. ROA gives a manager, investor, or analyst an idea as to how efficient a company's management is at using its assets to generate earnings (Hargrave, 2019). Return on assets is displayed as a percentage. ROA, as an accounting-based measurement, gauges the operating and financial performance of the firm (Klapper & Love, 2002). The measurement is such that the higher the ROA, the effective is the use of assets to the advantage of shareholders (Haniffa & Huduib, 2006). Higher ROA also reflects the company's effective use of its assets in serving the economic interests of its shareholders (Ibrahim & AbdulSamad, 2011).

Return on Equity (ROE)

Return on Equity (ROE) is operationalized as the percentage of income generated as a return to shareholders on their capital investment in a company. ROE is calculated by taking the profit after tax and preference dividends of a given year and dividing it by the book value of equity (ordinary shares) at the beginning of the year (de Wet and Toit, 2007). It measures the profitability of a business in relation to shareholders' equity, which is also known as net assets or rather asset minus liabilities. A potential investor assesses the company's future by looking at the extent of the growth of the company's profitability. And the indicator that is often used is Return on Equity (ROE), which illustrates the extent to which the company's ability to generate profit that can be obtained by shareholders (Kamar, 2017). The high of ROE reflects that the company managed to generate a profit from its own capital. The increase of the value of ROE will increase the value of selling the company, which would certainly impact on stock price.

Empirical Review

Interest Rate and Return on Assets (ROA)

Egbunike and Okerekeoti (2018) investigated the effect of interest rate, inflation rate, exchange rate and the gross domestic product (GDP) growth rate, while the firm characteristics were size, leverage and liquidity. The dependent variable financial performance was measured as return on assets (ROA). The study used the ex post facto research design and the population comprised all quoted manufacturing firms on the Nigerian Stock Exchange. The sample was restricted to companies in the consumer goods sector, selected using non-probability sampling method. The study used multiple linear regression as the method of validating the hypotheses. The study found no significant effect for interest rate and exchange rate, but a significant effect for inflation rate and GDP growth rate on ROA. Second, the firm characteristics showed that firm size, leverage and liquidity were significant. The study recommended that managers should effectively consider interest rates in making borrowing decisions as it might affect the cost of debt. Zulfiqar and Ud-Din (2015) investigated the effects of macroeconomic variables on the performance of textile industry of Pakistan. The panel data of fifty different textile firms listed at Karachi stock exchange were sampled for the research and tested using the hypothesis regression model. They found out that inflation and interest rate has a significant and positive impact on Return on Asset (ROA). Furthermore, the inflation rate was found to be positively insignificant with Return on Equity (ROE) but interest rate was found to be highly significant and having a positive impact on ROE. The study recommended that inflation rate should be kept in single digit for the further betterment of the overall economy.

Owoputi, Kayode, and Adeyefa (2014) examined the impact of bank-specific, industry-specific and macroeconomic factors on profitability of banks in Nigeria over the time period from 1998 to 2012, using random-effect model. Bank profitability was proxied by ROA, ROE and net interest margin (NIM). They found that inflation rate was significant for both ROA and ROE. But Interest rate was significant for ROA and NIM. The real growth rate of GDP was not significant. Among the bank-specific variables, size was found significant for the profitability measures of ROA, ROE and NIM. However, they recommended

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that an aggressive deposit mobilisation with efficient expenses management are needed to increase Bank profits.

Interest Rate and Return on Equity (ROE)

Hasan, Islam and Wahid (2018) examined the impact of some selected macroeconomic variables on the performance of 32 non-life insurance companies of Bangladesh over the period of 7 years (2009–2015) giving rise to 224 panel observations. Two performance measures, like return on asset (ROA) and return on equity (ROE) were used as dependent variables. The explanatory variables were inflation rate, GDP growth rate, interest rate, and exchange rate. The research employed panel data regression methodology. The regression results suggested that inflation rate, GDP growth rate and exchange rate, except interest rate, had no statistically significant influence on the performance of non-life insurance companies. The study recommended that interest rate along with firm-specific factors (age, sizes, loss ratio, solvency margin, tangibility of assets) should be identified as determinants of the performance of the Bangladeshi non-life insurance companies. Osamwonyi and Michael (2014) investigated the impact of macroeconomic variables on profitability of banks in Nigeria from 1990 to 2013. They used pooled ordinary least squares (OLS) regression. The macroeconomic variables were: GDP, interest and inflation rate; profitability was proxied using ROE. The study reported a positive effect of GDP on ROE. Interest rate had a significant negative effect on ROE, while inflation was not significant at all levels of significance. The study recommended that investors should consider interest rates in their investment decisions because it affects profitability of banks.

Kanwal and Nadeem (2013) investigated the impact of macroeconomic variables on profitability of public limited commercial banks in Pakistan for years 2001–2011. They used Pooled Ordinary Least Square (OLS) regression technique to examine the effect of three major external factors: inflation rate, real GDP and real interest rate on profitability indicators: ROA, ROE and equity multiplier (EM) ratios in three separate models. The study finds that there is a negative relationship of inflation rate with all three profitability measures (ROA, ROE and EM). The study recommended that government should be wary of the prevailing interest rate because of its negative effect on manufacturing capacity utilization.

Theoretical Framework

Modern Portfolio Theory

Any investment firm should have a portfolio of investments in different types of investment to maximize returns and minimize risks. Its standard practice for private equity firms to invest in a diversified portfolio to minimize risk and harness the returns of the various investment options on offer (Cumming, 2009). The modern portfolio theory (MPT) is a theory of finance that attempts to maximize expected portfolio returns for a given amount of portfolio risk, or equivalently minimize risk for a given level of return by carefully choosing the proportions of various assets. MPT models a portfolio as weighted combination of assets, so that the return of a portfolio is the weighted combination of the assets return. The process of selecting a portfolio may be divided into two stages. The first stage starts with observation and experience and ends with beliefs about the future performances of available securities. The second stage starts with the relevant beliefs about future performances and ends with the choice of portfolio. One type of rule concerning choice of portfolio is that the investor does (or should) maximize the discounted (or capitalized) value of future returns. Since the future is not known with certainty, it must be "expected" or "anticipated" returns which are discounted. Through combining different assets whose returns are not perfectly positively correlated, MPT seeks to reduce the total variance of the portfolio return. MPT also assumes that investors are rational and the markets are efficient (Markowitz, 1952).

Mackinnon and Shaw saving and investment hypothesis

Mckinnon (1973) and Shaw (1973) argue that increase in the real interest rate will have strong positive effects on savings which can be utilized in investment, because those with excess liquidity will be

encouraged to save because of the high interest rate, thus banks will have excess money to lend to investors for investment purpose thereby raising the volume of productive investment. The empirical works of Mckinnon (1973) showed evidence to support the hypothesis that interest rate determine investment. Thus, there are two transmission channels through which interest rate affects investment. They relate to investment as cost of capital. They also opined that interest rate encourages loans (external finance).

The Classical Theory of Interest Rate

The Classical theory of interest rate enumerated by Alfred Marshall and Pigou as enumerated in Jhingan (2003) argues that the demand for capital consists of the demand for production and consumption purposes. But, it should be noted that the productivity of capital is subject to the law of variable proportion. That is, upon addition of units of capital to a fixed factor, a stage comes when the employment of an additional unit will not add more productivity. Thus, the demand for capital is inversely related to the rate of interest, and the schedule for capital or investment or investment slopes downward from left to right. A rise in the rate of interest will make loan less desirable, hence a fall in investment and output of manufacturing firms. This theory underpins this study.

METHODOLOGY

This study used secondary data obtained from the annual reports and accounts of the sampled manufacturing firms and Nigerian Stock Exchange Fact Book. Cross-sectional/time series data was extracted from the annual reports and accounts of the firms for the purpose of assessing the relationship between the variables of the study for the period 2009–2018. Secondary data for interest rate was obtained from the Annual Report and Statement of Accounts of the CBN. Correlation research design was adopted based on positivism paradigm. Panel data was used in the study in order to detect and measure effect that cannot be simply observed by pure cross section or pure time series data. Panel data multiple regression analysis was used to analyse the data in order to establish relationship between the variables. The population of this study consisted of the 79 manufacturing firms listed on the Nigerian Stock Exchange as at December 2018. The firms were classified into nine (9) sub-subsectors. For the purpose of this study, stratified and random sampling techniques were used considering the sectorial grouping of firms in the stock market. The sample size of the study was twenty eight (28) manufacturing firms drawn from the defined population and it was arrived at by using Yamane sample size formula, which is represented below.

$$n = N / (1 + Ne^2)$$

Where n = Number of samples; N = Total population; e = Error tolerance (margin of error)

$$\text{Hence: } n = 79 / (1 + 79 (0.15)^2) = 28$$

Procedure of Model Specification

The variables of the study consist of the dependent variable, financial performance which proxies are ROA (Net income/Total assets) and ROE (Net income/Total equity), and the independent variable which is interest rate (ITR). The Interest rates are as determined and documented by the CBN for the study period. The model that was used in testing the hypotheses of the study is presented below:

$$ROA_{it} = \beta_0 + \beta_1 INT_t + \varepsilon_{it} \quad \dots \dots \dots \quad (i)$$

$$ROE_{it} = \beta_0 + \beta_1 INT_t + \varepsilon_{it} \quad \dots \dots \dots \quad (ii)$$

Where: ε = error term signifying other variables not captured in the study; and it = Firm i at time t.

The study used statistical software such as Microsoft Excel and Eviews-10 to analyze the data. Given that the study model is multivariate and descriptive in nature, the study used multiple regression technique in analyzing the relationship between the selected determinants and the financial performance of listed manufacturing firms. The analyses entailed the computation of the interest rate correlated against the ROA and ROE. In the test for significance, t-statistics was used to test the hypothesis of the study.

RESULTS AND DISCUSSION

Descriptive Statistics

In order to have glimpse of the data used in the study, a first pass at the data in form of descriptive statistics was carried out. This gives us a good idea of the patterns in the data used for the analysis. The summary statistics is presented in Table 1.

Table 1: Descriptive Statistics Results

	INR	ROA	ROE
Mean	17.06	0.198912	0.284676
Std. Dev.	0.808849	1.376769	0.715984
Skewness	1.166577	16.26334	8.120632
Kurtosis	3.67781	269.4241	77.85817
Jarque-Bera	68.8687	840464.2	68454.44
Probability	0.0000	0.0000	0.0000
Observations	280	280	280

Source: Authors Computation, 2020 (Eviews-10)

From the descriptive statistics results in Table 1, it could be observed that INR has a mean value of 17.06 percent. ROA has a mean value of 0.198; and this was followed closely by ROE with a mean value of 0.284. The analysis was also fortified by the value of the skewness and kurtosis of all the variables involved in the model. All the variables were found to be positively skewed. Variables with value of kurtosis less than three are called platykurtic (fat or short-tailed), and no variables qualified for this during the study period. On the other hand, variables whose kurtosis value is greater than three are called leptokurtic (slim or long tailed) and all the variables qualified for this during the study period. Jarque-Bera test shows that all the variables were not normally distributed as their probability values were found to be less than 5%. In summary, the descriptive statistics revealed that on the average, the data sets are not normally distributed.

Correlation Analysis

The results in Table 2 indicate that a positive and significant correlation exists between ROA and INR. This relationship was also found to be good as indicated by the strong correlation coefficient value of 0.556165, and with a p-value of 0.0488. However, negative but significant and strong correlation was found to exist between ROE and INR. This was captured by the correlation coefficient value of -0.811429 (and a p-value of 0.0210) among the two variables of interest. Therefore, among the two correlations of interest based on the model specification, the correlation between ROE and INR was found to be the strongest; in summary thus showing that interest rates and financial performance of listed manufacturing companies in Nigeria has strong correlational association.

Correlation Matrix Result

Covariance Analysis: Ordinary

Date: 09/11/20 Time: 15:54

Sample: 2009 2018

Included observations: 280

Correlation Probability	INR	ROA	ROE
INR	1.000000 -----		
ROA	0.556195	1.000000	

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	0.0488	----	
ROE	-0.811429	0.025322	1.000000
	0.0210	0.6731	----

Source: Authors Computation, 2020 (Eviews-10)

Hausmann Test

For the crosssectionrandom effect result, we perform the Hausman Test to determine the viability of the model (Table 3). The Hausman test (1978), is used to decide whether a random effect model or fixed effect model should be used for a panel data model. Hausman test has an asymptotic distribution with a null hypothesis that the fixed effect and random effect do not differ substantially. The choice of the appropriate model depends on the rejection or acceptance of the null hypothesis. The nullhypothesis underlying the Hausman test is that the FEM and REM estimators do not differ substantially. If correlated(H0 is rejected), a random effect model produces biased estimators, so a fixed effect model is preferred. The testhas a chi-square distribution if the null hypothesis is rejected, the conclusion is that random effect model (REM) is not appropriate andFixed effect model(FEM) is better.

Hausman Test Result

<i>Correlated Random Effects - Hausman Test</i>					
	Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.	Decision
ROA Model	Cross-section random	4.52641	1	0.0860	Random Effect
ROE Model	Cross-section random	7.25411	1	0.0489	Fixed Effect

Source: Authors Computation, 2020 (Eviews-10)

ROA Model

From Table 3, the Hausman diagnostic test showed that the null hypothesis was accepted at 5% significant level as the probability value of 0.0860 was found to be greater than 0.05. Thus, there is an insignificant uncorrelated fixed effect in the model. Hence, we conclude that the random effect model significantly performs better than the fixed effect. In view of this, the study adopts the results from the random effect model as basis to interpret the relationship between the dependent variable and independent variables in ROA model.

ROE Model

In the result shown in Table 3, the Hausman Test revealed a Chi-square statistic of about 7.25411, with a probability value of 0.0265 which is less than 0.05. This provides a strong argument for the alternative hypothesis that there is no misspecification when fixed effect model is employed and thus provides the justification for the acceptance of the fixed effect estimates. The implication of this result is that the fixed effects model will not be bias and inconsistent.

Test of Hypothesis One:

H0₁: Interest rates has no significant impact on ROA of listed manufacturing firms in Nigeria

Table 4: Random Effect Model

Dependent Variable: ROA
 Method: Panel EGLS (Cross-section random effects)
 Date: 09/11/20 Time: 15:50
 Sample: 2009 2018
 Periods included: 10
 Cross-sections included: 28
 Total panel (balanced) observations: 280
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
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INR	0.265865	0.100534	2.644522	0.0086
C	-4.336742	1.717151	-2.525545	0.0121
Effects Specification				
			S.D.	Rho
Cross-section random			0.106554	0.0061
Idiosyncratic random			1.358261	0.9939
Weighted Statistics				
R-squared	0.524539	Mean dependent var		0.193060
Adjusted R-squared	0.421030	S.D. dependent var		1.372773
S.E. of regression	1.358261	Sum squared resid		512.8747
F-statistic	6.993494	Durbin-Watson stat		1.630194
Prob(F-statistic)	0.008646			
Unweighted Statistics				
R-squared	0.524397	Mean dependent var		0.198912
Sum squared resid	515.9402	Durbin-Watson stat		1.623478

Source: Authors Computation, 2020 (Eviews-10)

Hypothesis One

From the random effect regression result in Table 4, it was observed that the calculated t-value for Interest rates and ROA of listed manufacturing firms in Nigeria is 2.644522 and with an associated p-value of 0.0086. Since the p-value is less than 0.05 ($0.0086 < 0.05$), it thus falls in the rejection region and hence, we reject the first null hypothesis (H_{01}). The conclusion here is that Interest rates has a significant impact on ROA of listed manufacturing firms in Nigeria.

Using the f-statistic, the study sought to investigate the random effect regression model whether it was valid or not. The F statistics was used to determine the model validity. The study found out that the model was valid $F(1, 280) = 6.993494$, PV of 0.008646. Therefore, this implies that the model has overall statistical significance. The study also sought to determine the model's goodness of fit statistics. The coefficient of determination as measured by the (R-square) (0.5245) shows that interest rates explain 52.45% of the total variation in ROA. This implies that the stochastic disturbance error term (ϵ) covers 47.55%. Durbin-watson was used to test for the presence of serial correlation or autocorrelation among the error terms. The model also indicates that there is no autocorrelation among the variables as indicated by Durbin Watson (DW) statistic of 1.630194 (as the acceptable Durbin – Watson range is between 1.50 and 2.40). This shows that the estimates are unbiased and can be relied upon for quality and sound investment and managerial decisions.

Hypothesis Two:

Table 5 indicated that interest rate has no significant influence on ROE as captured by the t-value of -0.025811 and its associated PV of 0.9794 which was found to be greater than 0.05. Therefore, the study accepts the second null hypothesis (H_{02}) and concludes that Interest rate has no significant impact on ROE of listed manufacturing firms in Nigeria. The F-statistic which captures the overall significance of the model showed that the model is fit in prediction. This was captured by the F-statistic value of 2.689881, with an associated p-value of: 0.000024. The coefficient of determination (R-square), which was used to measure the goodness of fit of the estimated model, indicates that the model is reasonably fit in prediction. It showed that 53.08 percent changes in ROE was due to INR, while 46.92 percent unaccounted variations was captured by the error term. The model also indicates that there is no autocorrelation among the variables as indicated by Durbin Watson (DW) statistic of 1.512. This shows that the estimates are unbiased and can be relied upon also for policy decisions.

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Test of Hypothesis Two:

H0₂: Interest rate has no significant impact on ROE of listed manufacturing firms in Nigeria

Table 5: Fixed Effect Model

Dependent Variable: ROE

Method: Panel Least Squares

Date: 09/11/20 Time: 15:48

Sample: 2009 2018

Periods included: 10

Cross-sections included: 28

Total panel (balanced) observations: 280

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INR	-0.001265	0.049002	-0.025811	0.9794
C	0.306254	0.836915	0.365932	0.7147

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.530809	Mean dependent var	0.284676
Adjusted R-squared	0.445002	S.D. dependent var	0.715984
S.E. of regression	0.662043	Akaike info criterion	2.110833
Sum squared resid	110.0135	Schwarz criterion	2.487293
Log likelihood	-266.5166	Hannan-Quinn criter.	2.261832
F-statistic	2.689881	Durbin-Watson stat	1.512347
Prob(F-statistic)	0.000024		

Source: Authors Computation, 2020 (Eviews-10)

Discussion of Findings

Findings from the study revealed that Interest rates has a significant impact on ROA of listed manufacturing firms in Nigeria. The implication of this result is that interest rate has contributed significantly to the growth of ROA of listed manufacturing firms in Nigeria. This is similar to the findings of Owoputi, Kayode, and Adeyefa (2014) who found that Interest rate was significant for ROA of banks in Nigeria. Our findings is further corroborated by the results of Zulfiqar and Ud Din (2015) whose study showed that interest rate had a significant and positive impact on ROA of textile industry in Pakistan. However, it is contrary to the findings of Hasan, Islam and Wahid (2018) and Egbunike and Okerekeoti (2018) whose studies showed that interest rate had no significant impact on ROA of non-life insurance companies and quoted manufacturing firms respectively.

However, the study revealed that Interest rate has no significant impact on ROE of listed manufacturing firms in Nigeria. This showed that high cost of borrowing due to wide interest rates spread had been the main challenge to manufacturing sector growth in Nigeria from independence till date. The results also showed that insignificant relationship (between interest rate and ROE) which is attributed to the high level of interest rate inhibits investors access to credit and consequently making them to be caught in a development trap. Osamwonyi and Michael (2014) reported a similar result in that they found a significant negative effect of interest rate on ROE of banks in Nigeria. However, this is contrary to the findings of Zulfiqar and Ud Din (2015) which showed that interest rate had a significant and positive impact on ROE of textile industry in Pakistan.

CONCLUSION AND RECOMMENDATIONS

This study examined the impact of interest rates on the performances of the Nigerian manufacturing sector. Findings from the study shows that rising interest rate in Nigeria has made significant contribution to returns on assets

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without any significant impact on return of equity of listed manufacturing firms in Nigeria. This implies that the rising interest rate in Nigeria impedes the financial growth of the Nigerian manufacturing firms. Therefore, the study recommends that more needs to be done by the CBN and its partners to accurately manage the interest rates in such a way as to enhance financial growth of companies without engendering inflation in the Nigerian economy. In addition, the study also makes the following recommendations:

- i. managers should effectively consider interest rates in making borrowing decisions, as this may affect their financial performance in terms of returns of assets;
- ii. government should endeavor to decrease the interest rates as no country flourishes with high level of lending interest rates because it discourages investments in firms.
- iii. The central bank of Nigeria should put in place monetary policies that would facilitate the financial performance of listed manufacturing companies in Nigeria and ensure proper regulation of the banking industry so as to provide adequate credit facilities for the manufacturing firms.

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