EXCHANGE RATE, TRADE FACILITATION AND INTERNATIONAL FLOW

IFEOMA MARIA IHEGBORO Ph.D, IJEOMA OJIAKOR Ph.D, VITALIS CHUKWUMA ONAH Ph.D

[1] Department of Banking and Finance,[2] Department of Accountancy[3] Department of Forensic Accounting and Audit, 1,2 University of Nigeria, Enugu Campus,3 Charisma University West Indies, Turks and Caicos Island Britain.

Corresponding author: Ifeoma Maria Ihegboro Ph.D

ABSTRACT

This study examined the relationship between exchange rate, trade facilitation and international flows. The study specifically examined the effect of the official exchange rate on operating cash flows of manufacturing firms in Nigeria, the effect of parallel market rate on operating cash flows of manufacturing firms in Nigeria and also the effect of swap exchange of coupon rate on operating cash flows of manufacturing firms in Nigeria. The researcher adopted an ex-post facto research design. The choice of the ex-post facto design is because the research relied on already recorded events, Time series data covering a period of 10 years for the sampled firms was estimated using descriptive statistics, unit root test and correlation analysis. The essence of descriptive statistics was to measures the variables using statistical tools as measures of central tendency, normality and central dispersion. The unit root test was used to measure the stationarity of the variables as well as to ascertain the regression model was used for analysis while correlation analysis was used to test the hypotheses of the study. The result of the analysis shows that the Official exchange rate has a significant effect on the operating cash flows of manufacturing firms in Nigeria. The parallel market rate has no significant effect on the operating cash flows of manufacturing firms in Nigeria. Swap exchange of coupon rate has a significant effect on the operating cash flows of manufacturing firms in Nigeria. Based on the finding, the study recommends among others that Government agencies should enact monetary and fiscal policies that will aid in reducing the extent of exchange rate fluctuation in Nigeria.

Keywords: cash flow, exchange rate, parallel market rate, swap exchange of coupon rate

1.0 INTRODUCTION

Trade facilitation looks at how procedures and controls governing the movement of goods across national borders can be improved to reduce associated cost burdens and maximise efficiency while safeguarding legitimate regulatory objectives. Business costs may be a direct function of collecting information and submitting declarations or an indirect consequence of border checks in the form of delays and associated time penalties, forgone business opportunities and reduced competitiveness (Achugamonu, 2017.

The exchange rate assumes an increasingly huge job in any economy as it straightforwardly influences local cost level, the profitability of exchanged products and enterprises, allocation

of assets and investment decisions (Owoeye and Ogunmakin, 2013). The liberalization of the exchange rate routine in 1986 has prompted the introduction of different procedures with the perspective of finding the most suitable technique for achieving an adequate exchange rate. Given the continuous changes of free-market activity influenced by various outer components, this new framework is responsible for money fluctuations (Kandilov, 2008). These fluctuations open organizations to remote exchange hazards.

In modern economies, the manufacturing sector is generally regarded as capable of accelerating the growth and development process. One major reason for this is the nature of activities in the sector which is believed to involve significant linkages across other sectors in terms of contribution to and from these sectors (Okigbo, 1993; Opaluwa, Umeh, and Ameh, 2010).

However, the manufacturing sector in Nigeria is still under-developed, with a very low level of capacity utilization and contribution to aggregate output in spite of the fact that it is considered the fastest-growing sector in Nigeria since 1973/1974 (Ojo, 1990; Obadan, 1994). A low level of development in the sector has often been attributed to increasing dependence on the external sector for the import of essential manufacturing inputs (Okigbo, 1993). Inability to source foreign exchange at affordable rates can impair the capacity to import, thereby impacting negatively manufacturing performance. The structural adjustment programme (SAP) which was adopted in 1986 to restructure the Nigerian economy led to an increase in agricultural output but also had a negative effect on the manufacturing sector (International Labour Organization, 1996).

SAP entailed the deregulation of prices (including exchange rate) which led to unstable and rising trends in the general price level. This unintended consequence of SAP led to de-industrialization and rising unemployment in the economy. It should be noted that after 28 years of exchange rate deregulation as entrenched in SAP, the industrialization process in Nigeria is still very slow while unemployment is on the increase. Iyoha (2003) noted that the decline in manufacturing contribution to GNP showed that SAP, indeed, impacted adversely on the operations of the manufacturing sector in Nigeria. The relative share of industrial output in GDP achieved a high level of 45.57 percent in 1980 and a low level of 26 percent in 1986. With the adoption of SAP, the manufacturing sector's relative share of national output declined even further, reaching a low level of 5.2 percent in 1989. Manufacturing capacity utilisation fell from about 73.3 percent in 1981 to 38.3 percent in 1985. This translates to a decline of about 45 percent. It further reduced from 38.1 per cent in 1992 to an all-time low of about 29.29 percent in 1995 and has not exceeded an annual average of 57 percent up to 2010 (CBN, 2015; Achugamonu, 2017) For an open economy that depends on importation to support domestic production, the exchange rate plays a critical role in its ability to attain optimal production capacity. Thus, exchange rate fluctuations/uncertainty which attended the introduction of exchange rate deregulation had serious implications for the macroeconomic stability of the country. For example, an over-valued exchange rate hurts the performance of export industries thereby reducing foreign exchange inflow, leading to unsustainable balance-of-payments deficits. On the other hand, excessive devaluation of the domestic currency or depreciation of the exchange rate increases the cost of imported production inputs thereby fuelling inflationary pressures. The Nigerian manufacturing sector imports most of its

industrial inputs thereby raising the cost of production. This discourages investment in the sector and in the process retards manufacturing sector output growth.

The effects of exchange rate fluctuations in developing countries like Nigeria has received considerable attention and generated much debate. The debate focuses on the degree of fluctuations in the exchange rate that had generated internal and external shocks in the Nigerian Economy. The exchange rate of a country plays a key role in international economic transactions because no nation can remain in autarky due to varying factor endowment.

Oladipupo & Onotaniyohuwo (2011) states that movements in the exchange rate have ripple effects on other economic variables such as interest rate, inflation rate, unemployment, money supply, etc. These facts underscore the importance of the exchange rate to the economic well-being of every country that opens its doors to international trade in goods and services. The importance of the exchange rate derives from the fact that it connects the price systems of two different countries making it possible for international trade to make direct comparisons of traded goods. In other words, it links domestic prices with international prices. Opaluwa, et al (2010) opines that following the fluctuations of the naira in 1986, a policy-induced by the structural adjustment programme (SAP), the subject of exchange rate fluctuation has become a topical issue in Nigeria. This is because it is the goal of every economy to have a stable rate of exchange with its trading partners. In Nigeria, this goal was not reached in spite of the fact that the country embarked on devaluation to promote export and stabilize the rate of exchange. The failure to realize this goal subjected the Nigerian manufacturing sector to the challenge of a constantly fluctuating exchange rate. Exchange rate policies in developing countries are often sensitive and controversial, mainly because of the kind of structural transformation required, such as reducing imports or expanding non-oil exports, invariably imply a depreciation of the nominal exchange rate. Such domestic adjustments, due to their short-run impact on prices and demand, are perceived as damaging to the economy.

Ironically, the distortions inherent in an overvalued exchange rate regime are hardly a subject of debate in developing economies that are dependent on imports for production and consumption (Dada & Oyeranti, 2012).

It is an avenue for increasing productivity in relation to import substitution and export expansion, creating foreign exchange earning capacity, raising employment, promoting the growth of investment at a faster rate than any other sector of the economy, as well as a wider and more efficient linkage among different sectors (Fakiyesi, 2005).

Despite various efforts by the government of Nigeria to maintain a stable exchange rate, the naira has continued to depreciate from N0.61 in 1981 to N2.02 in 1986, N7.901 in 1990, all against the one US dollar. The policy of guided or managed deregulation pegged the naira at N21.886 in 1994, N86.322 in 1999 and N135.50 in 2004.

Thereafter, the exchange rate appreciated N132.15 in 2005 and later N118.57 in 2008. Towards the end of the year, the naira depreciated to N150.0124 in 2009 and current on 2nd August 2013 the exchange rate of one US dollar to naira is N160.14756 (or N160.15). Against this backdrop, this research paper seeks to examine the effects of exchange rate fluctuations on the manufacturing sector in Nigeria over a period of 25 years (1986 – 2010).

Based on the above background, this study examined the effect of exchange rate fluctuations on the financial performance of manufacturing firms in Nigeria.

2.0 LITERATURE REVIEW

Ikechukwu (2016) contemplated exchange rate instability and firm performance in Nigeria: A Dynamic Panel Regression Approach. The examination investigated the effects of exchange rate unpredictability on firm performance in Nigeria, by examining cross-sectional information for the most dynamic 20 organizations recorded on the Nigerian Stock Exchange. The investigation created three powerful board models that represent heterogeneities among the organizations and it expanded ongoing examination by allowing international investors and corporations to put together their investment decisions with respect to the exchange rate volatilities between the Nigerian Naira and their nation of origin monetary standards. The strategy utilized in the investigation is the dynamic board information approach applying the Arrelano-Bond dynamic board information and Arellano-Bover summed up technique for minutes (GMM) estimators. The factors utilized in the examination to intermediary firm performance are the rate of profit for resources (RRA), resource turnover proportion (ATR), and portfolio action and flexibility (PAR) variable. While the RRA variable is obtained by essentially dividing the firm's profits by the complete resources of the business, the ATR variable and the PAR factors are obtained by dividing the firm's business income by the advantages utilized in the business and by dividing the rate change in deals by the rate change in total national output GDP. The exchange rate unpredictability variable is basically obtained by taking the square of the mean balanced relative change in the official exchange rate. The aftereffect of the paned information gauge demonstrated that there are no noteworthy distinction between the Arrelano-Bond dynamic board approach and Arellano-Bover summed up strategy for minutes (GMM) estimators.

Amenawo, Hodo and Emmanuel (2016) considered remote exchange fluctuations and business banks profitability in Nigeria. The target of the investigation was to examine the overall effect of currency fluctuation on business banks profitability. The examination utilized the reasonable board philosophy and information obtained from the 12 biggest banks in Nigeria. In other to get the independent effect of currency fluctuation on business banks profitability the examination additionally introduced four bank trademark factors (bank measure, bank divestment, nonperforming advances and capital ampleness proportion) into the model. The initial outcome without the bank trademark factors uncovered that the dollar and pounds applied a 6 percent and 11 percent negative effect on business banks profitability individually.

Owoeye and Ogunmakin (2013) considered exchange rate unpredictability and bank performance in Nigeria. The examination investigated the effect of insecure exchange rate on bank performance in Nigeria using two intermediaries for bank performance, specifically advance misfortune to add up to advances proportion and capital store proportion. The two models indicated demonstrate that the effect of exchange rate on bank performance is delicate to the kind of intermediary utilized for bank performance. Credit misfortune to add up to propel proportion demonstrates that fluctuating exchange rate may influence the capacity of moneylenders to oversee advances resulting in an abnormal state of awful advances while capital store proportion does not have a huge relationship with the exchange rate.

Arize, Osang and Slottje (2004) examined Exchange Rate Volatility and Foreign exchange: Evidence from Thirteen LDC's. The target of the examination was to investigate observationally the effect of genuine exchange rate instability on fares streams. They embraced co-integration using Johansen's multivariate methodology. They found a huge negative effect on fare requests in both the short-run and long run.

Kandilov (2008) completed an examination on the effects of Exchange Rate Volatility on Agricultural Trade. His goal was to dissect Exchange Rate Volatility on farming exchange among the G-10 to a wide example of created and developing nations. He received the GARCH Process as a structure while using ordinary least squares as an explanatory procedure and discovered an expansive negative effect on the rural exchange between individuals from G-10.

Brzozowski (2006), examined Exchange Rate Volatility and Foreign Direct Investment in Nigeria. His goal was to dissect theoretically and experimentally the effect of reducing exchange rate uncertainty because of European Monetary union accession on the FDI inflow. He utilized the unit root test and ordinary least square and found a negative influence of exchange rate unpredictability on the investment decision.

Charles (2012), assessed the effect of exchange rate on obligation, obligation administrations and open obligation the board in Thailand, using a straightforward differentiation system. His findings uncover that exchange rate unpredictability influences obligation administrations since a lot of obligation administrations were spared when the exchange rate was balanced. Be that as it may, the examination neglected to demonstrate the effect of either the open obligation or obligation benefits on the exchange rate itself. All the more in this way, since the examination centre around Thailand economy, the findings may not be completely relevant to Nigeria.

Anidiobu and Okolie (2016) completed an investigation on the responsiveness of remote exchange rates to the outside obligations in Nigeria. The targets of the examination were to examine whether remote exchange rate responded emphatically to outside obligation and investigate whether remote exchange rate responded altogether to outside obligation. The analyst utilized ex – post facto as a research plan since it fit the targets of the examination. The examination discovered that the remote exchange rate responded emphatically to the outside obligation in Nigeria within the investigation time frame and that the remote exchange rate responded non-fundamentally to the remote obligation in Nigeria during the time of the study. The examination prescribed that in request to accomplish the objective of a reasonable exchange rate in Nigeria, outside borrowing ought to be adapted towards increased production in the non-oil areas, for example, farming and strong minerals, fewer imports and increased fares. This is intended to strengthen the estimation of the naira in relation to other significant international monetary forms like the US dollar, euro, and so on. Government must receive a financial modification program that can improve its income base by intensifying gainful fare exercises in the non-oil division. This will cause an ideal exchange balance, strengthen and balance out the exchange rate for the naira. Approach creators ought to guarantee that obtained assets are sent to cardinal divisions of the economy, for example, farming and manufacturing. Stepping up these exercises could prompt the ideal harnessing of profitable assets to help the economic improvement of the nation. In request to

utilize outside obligation to augment the beneficial capability of our nation, and indeed other very indebted jurisdictions, financial judiciousness and extraordinary awareness of other's expectations in managing open assets ought to be the moral standard of these nations administration.

Dohring (2008) examined exchange rate introduction as far as transaction chance (the danger of variations of the estimation of submitted future money streams), translation hazard (the danger of variations of the estimation of advantages and liabilities denominated in outside currency) and more extensive economic hazard (which considers the effect of exchange rate variations on intensity). The paper contends that residential currency invoicing and hedging with exchange rate subsidiaries permit a genuinely direct administration of transaction and translation chance and talks about under which conditions their utilization is ideal. The real oddity of this paper is a review of genuine hedging strategies and methods of vast corporations from a euro-territory point of view. The paper finds that euro area exporters have instruments close by to restrain the unfavourable effect of euro appreciation and that they make adequate utilization of them.

He, Fayman and Casey (2014) examined the effect outside currency fluctuations have on banks profitability using 22 huge U.S business banks. Their outcome is likewise seen that expansive U.S. banks were presented to outside exchange chance and that particular bank performance was identified with the estimation of the dollar in respect to advertise bins of other monetary forms. The centrality of this outcome lies in the way that the increasing worldwide business environment does not disconnect U.S banks from the prevailing dimensions of worldwide economic exercises.

Chamberlain, Howe and Popper (1996) utilized both day by day and monthly information to examine the exchange rate affectability of U.S bank holding organizations and of the Japanese bank. Their examination likewise investigated U.S. banking firms. Their examination likewise investigates how much U.S exchange rate affectability can be explained by accounting proportions of outside exercises. The aftereffect of the everyday information saw that the stock returns of 33% of the thirty vast banks examined had all the earmarks of being delicate to exchange rate development. In contrast to the outcome obtained for the U.S banks, the consequence of the Japanese banks demonstrated that only a couple of banks were touchy to exchange rate development. The creators trusted that the huge variation in the outcome obtained for the Japanese banks was because of contrasts in the structure of proprietorship, insecurities and subordinates laws, in supervision, in the degree of outside possession, or in hedging strategies.

Otuori (2013) looked to investigate the determinant elements of exchange rates and their effects on the performance of business banks in Kenya using an essential wellspring of information with a graphic plan. The aftereffects of this examination uncovered that interest rate and outside obligation had positive and critical effects on performance while inflation rate and outer obligation had negative and huge effects on performance. Among the recommendations produced using this examination is that Government should address the issue of burgeoning outside obligations as higher outer obligations hurt the performance of business banks in Kenya. The investigation further prescribed that the Government should set

up more measures to increase the nation's fares as this will go a long route in improving the performance of business banks in Kenya.

Correspondingly, Ahmed (2015) investigated the effect of remote exchange introduction on business bank performance in Kenya using expressive information and essential wellsprings of investigation. The investigation found that (1) interest rates had an insignificant constructive outcome on business bank performance (2) remote exchange presentation has a negative effect on the performance of recorded business banks in Kenya and (3) inflation had a negative effect on bank performance. The examination suggested that controllers who include the Central Bank of Kenya ought to deal with the interest rates in the nation in such a way, that the nation would understand a steady exchange rate and decrease banks' introduction to the caprices of exchange rate presentation.

Taiwo and Adesola (2013) investigated the relationship between outside exchange fluctuation and banks profitability. The creators caught profitability in two regards, right off the bat as, the proportion of absolute credit misfortune to add up to advances, and secondly as, the proportion of bank cash-flow to store. Their outcome was huge in two regards, (a) the inclination of banks to amass over the top terrible advances by reason of fluctuation in the exchange rate (b) bank capital dimension may be truly undermined due to deteriorating exchange rate. From the opinion of the creators, it could be reasoned that banks will undoubtedly encounter a decline in profit given uncontained fluctuations in the exchange rate.

Ngerebo (2012) looked for observationally to investigate the outside exchange fluctuations on the intermediation of banks in Nigeria using information from 1970 t0 2004. The investigation saw that the business bank intermediation index (CBII) had a positive relationship with remote exchange fluctuation. The examination from the investigation uncovered an R2 of 27.8 percent suggesting that the logical variable utilized in the model was not sufficiently adequate to explain deviations on outside exchange fluctuations. The investigation had the shortcoming of using only business bank intermediation index to explain deviation in outside exchange fluctuation.

Isaac (2015) endeavoured to examine the effect of exchange rate hazard on banks profitability in Nigeria using information from 1997 - 2014. The creator considered what seems to resemble the effect of macroeconomic factors on bank profitability, plus, the creator utilized only one bank (First Bank Nig Plc) to draw inference for his investigation. The creator had concluded that exchange rate changes significantly affected banks performance. It ought to be expressed here that using only one bank to reach such a hurried inference is excessively prohibitive and misleading. It would have been progressively proper if the creator had contemplated a cross-section of banks in Nigeria to ascertain their dimension of hazard presentation to currency emergency. This is a major hole in the creators' in this examination intends to fill.

Wong, Wong and Leung (2008) examined the remote exchange introduction of Chinese banks. Using the Capital Market Approach and value information of 14 recorded Chinese banks, this experimental investigation finds that there is a positive relationship between bank estimate and remote exchange introduction, which may reflect bigger outside exchange

operations and trading positions of bigger Chinese banks, and their critical indirect remote exchange presentation arising from effects of the renminbi exchange-rate fluctuations on their clients. Experimental proof additionally proposes that the normal outside exchange exposures of state claimed and joint-stock business banks in China are higher than those of banks in Hong Kong, notwithstanding that their participation in international banking businesses is as yet constrained contrasted and their Hong Kong partners. It was additionally discovered that negative remote exchange introduction was predominant for bigger Chinese banks, suggesting that an appreciation of the renminbi will in general lessen their value esteems, and was therefore prone to hamper the banking area's performance.

Owoeye and Ogunmakin (2013) examined exchange rate instability and bank performance in Nigeria. This examination investigated the effect of shaky exchange rate on bank performance in Nigeria using two intermediaries for bank performance, in particular, credit misfortune to add up to advances proportion and capital store proportion. Government consumption, interest rate, genuine total national output were added to the exchange rate as independent factors. The two models determined demonstrate that the effect of exchange rate on bank performance is touchy to the kind of intermediary utilized for bank performance. Advance misfortune to add up to propel proportion demonstrates that fluctuating exchange rate may influence the capacity of moneylenders to oversee advances resulting in an abnormal state of awful advances while capital store proportion does not have a huge relationship with the exchange rate. A central recommendation of this investigation is that a steady exchange rate is expected to improve the capacity of the banking division to channel credit to the economy.

Adetayo (2013) examined the board of outside exchange hazards in a chosen business bank, in a chosen business bank, in Nigeria. The examination looked to determine how the hazard involved in remote exchange can be effectively overseen, by determining the following explicit goals: to determine the different exchange dangers which the treasurer of the chosen bank is presented to in its outside exchange transaction; to investigate how these dangers can be effectively overseen and to distinguish hazard and introduction the board procedures required for treasury the executives. The chosen firm utilized for this examination was a Commercial Bank of International Standard, situated in Lagos, the business focal point of Nigeria. The examination misused both the essential and secondary wellsprings of information. The essential source included an organized questionnaire, to inspire pertinent responses from the respondents. A non-parametric measure dependent on chi-square insights was utilized to test the hypothesis and determine if there is any association between remote exchange trading and hazard the board issues. Spot transaction system was established to be effective in minimizing remote exchange chances.

Gachua (2011) examined the effect of outside exchange introduction on a firm's financial performance: an instance of recorded organizations in Kenya. This examination built up a model of outside exchange presentation reliant on three factors, the firm's imports, send out and their effect on profits formulating the issue explanation of the effects that variations in the exchange rate has in the financial performance of the chosen recorded organizations in the Nairobi Stock Exchange for the period covering years 2001 to 2010. The investigation was to find out whether remote exchange presentation is minimized where firms have had the capacity to coordinate their outside currency incomes and costs leaving them with minimal

net introduction. The exploration configuration was distinct which involved the utilization of both subjective and quantitative information. The example measure constituted of 38 firms with the exception of financial and investment yet the aftereffects of 32 firms were broken down after eliminating spoilt and inconsistent questionnaires. The exploration used questionnaires for information collection comprising organized questions. In analyzing the responses, the Microsoft Excel Spreadsheet device was utilized to compute distinct insights and the Statistical Package for Social Sciences (SPSS) was likewise utilized. This generated illustrative insights, for example, rates, recurrence distribution, proportions of focal inclination and graphical expressions. From the findings, the examination found that recorded firms utilized the income articulation and the proprietor's value record to record outside exchange contrasts.

Adam (2012) examined exchange rate options for South Sudan. The examination looks at the qualities and shortcomings of fixed exchange rate routines, including the exceptional instances of a currency-board and full dollarization, with a floating routine. It contends that the exchange rate routine as of now sits awkwardly between two routines. The first is a fixed exchange rate tied down by a lot of 'currency board' rules. In spite of the fact that extensively effective in a macroeconomic sense, this routine has been tormented by very major issues of lease seeking and corruption pretty much since its inception in July 2011. As weights on the equalization of instalments increase, this course of action gives off an impression of being giving route to a less vigorous 'conventional' fixed exchange rate routine that depends for its strength on a dimension of financial control that is becoming increasingly hard for the specialists to convey and all things considered the parallel market premium is beginning to increase. The seriousness of the impending economic emergency for South Sudan makes it likely this fixed routine would disintegrate, inflation would spike and, with some probability, the economy would return to accepted dollarization.

Elhiraika and Ismail (2006) took a gander at financial part strategy and neediness reduction in Sudan. They examine the structure and performance of the financial segment in Sudan and its job in neediness alleviation. The Sudanese financial segment is to a great extent simple and dominated by banks that are incredibly little, by and large undercapitalized and concentrated in enormous urban areas. Regardless of the full adoption of Islamic techniques for finance, these banks are not set up to advance lending for destitution reduction, while state-claimed improvement banks are a disappointment as far as effort and feasibility. Financial segment changes ought to be broadened and extended to cultivate both financial and genuine development and an extreme change in perspective is basic for developing an expert poor financial structure involving both Islamic and conventional microfinance programs. A double banking framework would upgrade the procedure of financial improvement and access to credit through increased competition and more extensive options for customers. It is critical to link microfinance projects to financial institutions involved in destitution reduction, for example, Zakat and Awqaf assets in a request to increase the proficiency of asset mobilization and use.

Ebaidalla (2014) examined genuine exchange rate misalignment and economic performance in Sudan. The examination investigates the conduct of harmony exchange rate and genuine exchange rate misalignment in Sudan over the period 1979– 2009. In addition, the effect of genuine exchange rate misalignment on economic performance is examined. The

experimental outcomes demonstrate that the balance exchange rate is fundamentally influenced by economic strategy factors, for example, exchange receptiveness, government consumption and taxes. The outcomes likewise uncover that the Sudanese economy showed an exchange rate overvaluation over the period under consideration.

3.0 METHODOLOGY

The researcher adopted an ex-post facto research design. The choice of the ex-post facto design is because the research relied on already recorded events.

The multiple regression analysis was used to carry out this study. The impact exhibited by the independent variables included in the study upon exchange rate, trade facilitation and international flows was measured through regression coefficient.

The study also involved a test of significance of the parameter estimates by using t- statistics at a 5% level. This will enable us to compare the probability of computed t-statistics at various situations of empirical analysis with the critical value at 5% to establish significance.

The main aim of this study is to evaluate the relationship between exchange rate, trade facilitation and international flows. The model is specified of the functional form:

OCF = f (FOEXR, FPEXT, SWEXCR)

Where:

OCF   =   Operating cash flows

FOEXR   =   Official exchange rate

FPEXR   =   Parallel market rate

SWEXCR   =   Swap exchange of coupon rate

In a linear regression form, it will become:

$OCF = \beta_0 + \beta_1 FOEXR + \beta_2 FPEXT + \beta_3 SWEXCR + \mu$ ………………… (2)

β_0 = Constant Term

β_1 = Coefficient of Official exchange rate

β_2 = Coefficient of Parallel market rate

β_3 = Coefficient of Swap exchange of coupon rate

μ = Error Term

4.0 RESULTS AND DISCUSSION

Table. 1 Descriptive Statistics

	FOEXR	FPEXR	SWEXCR	LOCF
Skewness	1.055831	-1.019807	-0.101261	-0.567521
Kurtosis	2.593796	3.807215	1.566268	2.054191
Jarque-Bera	19.26717	20.04841	8.735841	9.095314
Probability	0.000065	0.000044	0.012678	0.010592
Observations	100	100	100	100

Source: Author's Computation from Eviews 10.0

Table 1 contains the description of the variables using the normality test which comprises Skewness, Kurtosis and Jarque – Bera Statistics. The table showed that the log of the exchange rate is positively skewed while the logs of the inflation rate, interest rate and operating cash flows are all negatively skewed relative to normal.

The table also showed that the logs of the exchange rate, interest rate and operating cash flows are platykurtic as their kurtosis values are less than three (3) while the log of the inflation rate is leptokurtic because its kurtosis value is greater than three.

It was also shown from table 4.2.1 that all the variables are normally distributed as the probability values of their Jarque-Bera Statistics are less than 0.05.

4.1 Unit Root Test

This test tries to examine the property of the variables. It is used to check for the presence of a unit root i.e. whether the variables are stationary. This test is carried out using the Augmented Dickey-Fuller (ADF) test. The ADF is carried out using E-views software package and the results from the test are tabulated below:

Table 4.2.2 Pooled Unit Root Test for Nigeria Breweries Plc, Jos International Breweries Plc, Guinness Nigeria Plc, Champion Breweries Plc, Cadbury Nigeria Plc, Nestle Nigeria Plc, Unilever Nigeria Plc, Dangote Cement, WAPCO Cement and Cement Company of the North

Table 2. Regression Model

Variable	LLC		ADF – FISHER		PP – FISHER	
	Test Stat.	Order of integration	Test Stat.	Order of integration	Test Stat.	Order of integration
FOEXR	-2.79 (0.0026 <0.05)	I(I)	28.89 (0.0013 <0.05)	I(I)	35.97 (0.0001 <0.05)	I(I)
FPEXR	-3.51 (0.0002	I(0)	-	-	23.19 (0.0101	I(0)

	<0.05)				<0.05)	
SWEXCR	-13.13 (0.0000 <0.05)	I(0)	27.53 (0.0021 <0.05)	I(0)	-	-
LOCF	-18.36 (0.0000 <0.05)	I(I)	37.53(0. 0093<0. 05)	I(I)	17.72 (0.0064 <0.05)	I(I)

Source: Author's Compilation from Eviews 10

LLC = Levin, Lin and Chu Test

IPS = Im, Pesaran and Shin W – Stat

ADF FISHER = Augmented Dickey Fuller Fisher Chi-Square Test

PP FISHER = Philip Peron Fisher Chi – Square Test

Table. 2 showed that the logs of exchange rate and operating cash flows are integrated of order one while the logs of inflation rate and interest rate are integrated of order zero or stationary at level.

Table 3. Regression Analysis Table

Dependent Variable: LOCF				
Method: Panel EGLS (Two-way random effects)				
Date: 07/29/21 Time: 05:49				
Sample: 2011 2020				
Periods included: 10				
Cross-sections included: 10				
Total panel (balanced) observations: 100				
Swamy and Arora estimator of component variances				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	19.76589	8.691931	2.274050	0.0252
FOEXR	-0.007816	0.900327	-0.008681	0.0031
FPEXR	-0.773908	0.810179	-0.955231	0.0019
SWEXCR	-1.742565	1.821139	-0.956855	0.3410
	Effects Specification			
			S.D.	Rho
Cross-section random			3.212321	0.8566
Period random			0.639674	0.0340
Idiosyncratic random			1.148251	0.1094
	Weighted Statistics			
R-squared	0.895802	Mean dependent var		1.451568
Adjusted R-squared	0.774954	S.D. dependent var		1.139761
S.E. of regression	1.148251	Sum squared resid		126.5741

F-statistic	4.513792	Durbin-Watson stat		1.788467
Prob(F-statistic)	0.003745			
		Unweighted Statistics		
R-squared	0.007664	Mean dependent var		13.17395
Sum squared resid	1079.836	Durbin-Watson stat		0.113447

Table 3 above shows that the R2 is 0.895802 which is about 90%. The R2 is used to explain the goodness of fit. Therefore, since it is about 90%, it implies that about 90% change in the dependent variable being operating cash flows is explained by the independent variables and the higher the R2 the better fit the independent variables. Since the F – statistics is 4.513792 which is greater than 2.5 and the probability value is 0.003745 is less than 0.05. This shows that the model is significant and has high goodness of fit. It equally showed that there is no presence of autocorrelation in the model as the Durbin – Watson statistics being 1.788467 was approximately equal to two (2).

Table 4. Panel EGLS Model

Dependent Variable: LOCF				
Method: Panel EGLS (Two-way random effects)				
Date: 07/29/21 Time: 05:49				
Sample: 2011 2020				
Periods included: 10				
Cross-sections included: 10				
Total panel (balanced) observations: 100				
Swamy and Arora estimator of component variances				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	19.76589	8.691931	2.274050	0.0252
FOEXR	-0.007816	0.900327	-0.008681	0.0031
FPEXR	-0.773908	0.810179	-0.955231	0.0019
SWEXCR	-1.742565	1.821139	-0.956855	0.3410
	Effects Specification			
			S.D.	Rho
Cross-section random			3.212321	0.8566
Period random			0.639674	0.0340
Idiosyncratic random			1.148251	0.1094
	Weighted Statistics			
R-squared	0.895802	Mean dependent var		1.451568
Adjusted R-squared	0.774954	S.D. dependent var		1.139761
S.E. of regression	1.148251	Sum squared resid		126.5741
F-statistic	4.513792	Durbin-Watson stat		1.788467
Prob(F-statistic)	0.003745			
	Unweighted Statistics			

R-squared	0.007664	Mean dependent var	13.17395
Sum squared resid	1079.836	Durbin-Watson stat	0.113447

Source: Author's Computation from E-View 10.0

Given the decision criteria to reject HO if the t-statistics is >2.5 and the probability of the t-statistics is < 0.05. But if the t-statistics is less than 2.5 and the probability value is equally less than 0.05, Ho is still rejected. Table 4.4.1 shows the t-statistics of log of exchange rate as -0.008681 < 2.5 with a probability of the t-statistics of 0.0031 < 0.05. We reject the null hypothesis (H0) and conclude that Official exchange rate has a significant effect on the operating cash flows of manufacturing firms in Nigeria.

Table 5. Panel EGLS Model

Dependent Variable: LOCF				
Method: Panel EGLS (Two-way random effects)				
Date: 07/29/21 Time: 05:49				
Sample: 2011 2020				
Periods included: 10				
Cross-sections included: 10				
Total panel (balanced) observations: 100				
Swamy and Arora estimator of component variances				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	19.76589	8.691931	2.274050	0.0252
FOEXR	-0.007816	0.900327	-0.008681	0.0031
FPEXR	-0.773908	0.810179	-0.955231	0.0019
SWEXCR	-1.742565	1.821139	-0.956855	0.3410
	Effects Specification			
			S.D.	Rho
Cross-section random			3.212321	0.8566
Period random			0.639674	0.0340
Idiosyncratic random			1.148251	0.1094
	Weighted Statistics			
R-squared	0.895802	Mean dependent var	1.451568	
Adjusted R-squared	0.774954	S.D. dependent var	1.139761	
S.E. of regression	1.148251	Sum squared resid	126.5741	
F-statistic	4.513792	Durbin-Watson stat	1.788467	
Prob(F-statistic)	0.003745			
	Unweighted Statistics			
R-squared	0.007664	Mean dependent var	13.17395	
Sum squared resid	1079.836	Durbin-Watson stat	0.113447	

Source: Author's Computation from E-View 10.0

Given the decision criteria to reject HO if the t-statistics is >2.5 and the probability of the t-statistics is < 0.05. But if the t-statistics is less than 2.5 and the probability value is equally less than 0.05, Ho is still rejected. Table 4.4.1 shows the t-statistics of log of exchange rate as -0.956855 < 2.5 with a probability of the t-statistics of 0.3410 > 0.05. We accept the null hypothesis (H0) and conclude that the Parallel market rate has no significant effect on the operating cash flows of manufacturing firms in Nigeria.

Table 6. Panel EGLS Model

Dependent Variable: LOCF				
Method: Panel EGLS (Two-way random effects)				
Date: 07/29/21 Time: 05:49				
Sample: 2011 2020				
Periods included: 10				
Cross-sections included: 10				
Total panel (balanced) observations: 100				
Swamy and Arora estimator of component variances				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	19.76589	8.691931	2.274050	0.0252
FOEXR	-0.007816	0.900327	-0.008681	0.0031
FPEXR	-0.773908	0.810179	-0.955231	0.0019
SWEXCR	-1.742565	1.821139	-0.956855	0.3410
	Effects Specification			
			S.D.	Rho
Cross-section random			3.212321	0.8566
Period random			0.639674	0.0340
Idiosyncratic random			1.148251	0.1094
	Weighted Statistics			
R-squared	0.895802	Mean dependent var		1.451568
Adjusted R-squared	0.774954	S.D. dependent var		1.139761
S.E. of regression	1.148251	Sum squared resid		126.5741
F-statistic	4.513792	Durbin-Watson stat		1.788467
Prob(F-statistic)	0.003745			
	Unweighted Statistics			
R-squared	0.007664	Mean dependent var		13.17395
Sum squared resid	1079.836	Durbin-Watson stat		0.113447

Source: Author's Computation from E-View 10.0

Given the decision criteria to reject HO if the t-statistics is >2.5 and the probability of the t-statistics is < 0.05. But if the t-statistics is less than 2.5 and the probability value is equally

less than 0.05, Ho is still rejected. Table 4.4.1 shows the t-statistics of log of exchange rate as -0.955231 < 2.5 with a probability of the t-statistics of 0.0019 < 0.05. We reject the null hypothesis (H0) and conclude that the Swap exchange coupon rate has a significant effect on the operating cash flows of manufacturing firms in Nigeria.

5.0 CONCLUSION AND RECOMMENDATION

The study concluded that the log of the exchange rate is positively skewed while the logs of the inflation rate, interest rate and operating cash flows are all negatively skewed relative to normal and the logs of the exchange rate, interest rate and operating cash flows are platykurtic while the log of the inflation rate is leptokurtic. The study also concluded that the logs of exchange rate and operating cash flows are integrated of order one while the logs of the inflation rate and interest rate are integrated of order zero or stationary at the level and that exchange rate fluctuation and inflation rate have a significant effect on the operating cash flows of manufacturing firms in Nigeria while interest rate fluctuation has no significant effect on the operating cash flows of manufacturing firms in Nigeria.

The study recommends that Government agencies should enact monetary and fiscal policies that will aid in reducing the extent of exchange rate fluctuation in Nigeria.

Secondly, in order to have a more improved organizational financial performance in Nigeria, the Nigerian authorities should adopt economic policies that will stabilize the Naira exchange rate as the study found out that Exchange rate fluctuation has a significant effect on the return on assets of manufacturing firms in Nigeria.

Thirdly, the authorities responsible for managing Nigeria's external debt should adequately keep track of the debt payment obligations and the debt should not be allowed to pass a maximum limit so as to avoid debt overhang thereby further promoting the extent of exchange rate fluctuations in Nigeria.

REFERENCES

Adam, H. (2012). Exchange rate options for South Sudan, Unpublished Working paper, World Bank Group

Ade, C. (2012). The Impact of External Debt on Economic Growth: A Comparative Study of Nigeria and South Africa. Journal of Sustainable Development in Africa.10(3), 55 – 59.

Adetayo, J. O. (2013). Management of Foreign Exchange Risks in A Selected

Commercial Bank, in Nigeria, Journal of Social Sciences, 8(3), 207-213.

Adetiloye, K. A. (2010). Exchange Rates and the Consumer Price Index in Nigeria:

A Causality Approach. Journal of Emerging Trends in Economics and Management Sciences, 1(2), 114 -120.

Agba, V. A. (2011) "Principle of Macroeconomics". Lagos: Concept Publication Ltd.

Ahmed, L (2015) The Effect of Foreign Exchange Exposure on the Financial

Performance of Commercial Banks in Kenya. International Journal of Scientific and Research Publications, 5(11), 115-120

Akinifesi, E. O. (2009) "Inflation in Nigeria: Causes, Consequences and Control" CBN Bullion, Silver Jubilee ed 12 (9)42-44

Alege, P.O. &Osabuohien, E.S (2015). Trade-Exchange Rate Nexus in Sub-

Saharan African Countries: Evidence from Panel Co-integration Analysis. Foreign Trade Review, 50 (3),151-167.

Amenawo, O., Hodo, B. R. and Emmanuel, S. A. (2016). Foreign exchange fluctuations and commercial banks profitability in Nigeria, Research Journal of Finance and Accounting, 7(18), 16 – 21.

Anidiobu, G. A. and Okolie, P. I. P. (2016)Responsiveness of Foreign Exchange to foreign debt: Evidence from Nigeria International Journal of Arts, Humanities and Social Sciences, 1(3), 11-20.

Arize, A.C, Sang T. & Slottie D.J. (2010). Exchange Rate Volatility and Foreign Trade: Evidence from Thirteen LDCS, Journal of Business and Economic Statistics. 18(1): 10-17.

Atique, R. &Malik,K. (2012). Impact of Domestic and External Debts on Economic Growth of Pakistan, World Applied Science Journal. 20(1):120-129.

Audu, N. P. (2013). Exchange Rate Fluctuation and Inflation Targeting in an Open Economy: Econometric Approach. European Journal of Accounting Auditing and Finance Research, 1(3), 24-42.

Ayadi, I. F. (2008). Impact of the Huge External Debt on Economic Growth of the Nigerian and South African economies. Journal of Social Sciences, 21 (11), 34 – 38.

Bamidele, T. B. & Joseph, A.I (2013). Financial Crisis and External Debt Management in Nigeria, International Journal of Business and Behavioural Sciences, 3(4): 16-24.

Benstein, D. (2010). Asset Quality and Scale of Economies in Banking. Journal of Economics and Business, 48, (2), 157-166.

Brzozowski, R. (2006). Exchange Rate Volatility and Foreign Direct Investment in Nigeria, Journal of Economics and International Finance, 6(8), 17 – 19.

Chamberlain, S., Howe, J.S. & Popper, H. (1997). The Exchange Rate Exposure of U.S. and Japanese Banking Institutions, Journal of Banking and Finance, 21, (6) 871-892.

Charles, A. (2012). Effect of Exchange Rate on Debt, Debt Services and Public Debt Management in Thailand, International Finance Journal, 12 (9) 54-58.

Dakwat, S. (2010) "Effects of Inflation on Structural Adjustment Programme" Onitsha: African Fep Publications.

Dohring, B (2008). Hedging and invoicing strategies to reduce exchange rate exposure: a euro-area perspectives. European economy, economic papers, 12 (29), 45 – 49.

Ebaidalla D. (2014). Real exchange rate misalignment and economic performance in Sudan. Journal of Finance, 2(1), 166-185

Eduardo, M. (2009).Money and Banking: A Policy Oriented Approach. New York: M&F Company.

Elhiraika, J. and Ismail, A. (2006). Financial sector policy and poverty reduction in Sudan. Journal of Finance, 2(1), 176-182

Gachua, N.F. (2011). The effect of foreign exchange exposure on a Firm's financial performance. Unpublished MBA project, KCA University.

Genye, C. (2012). Principles of International Finance.Forthright Educational Publishers, Lagos.

He, Ling T., A. Fayman and K. M Casey (2014) Bank Profitability: The Impact of Foreign Currency Fluctuations. Journal of Applied Business and Economics, 16(2), 14 – 19.

Ikechukwu, K. (2016). Exchange Rate Volatility and Firm Performance in Nigeria: A Dynamic Panel Regression Approach, The Journal of Developing Areas, 50 (6), 12 – 23.

Inyiama, O. I. and Ekwe, M. C. (2014). Exchange Rate and Inflationary Rate: Do They Interact? Evidence from Nigeria, Journal of Economics and Finance, 6 (3), 7 – 9.

Isaac, L (2015). Assessing the Impact of Exchange Rate Risk on Banks Performance in Nigeria. Journal of Economics and Sustainable Development. 6(6), 1-14

Iyoha, M. (2012) "Budget of Economic Growth and Development". Bullion Publication of CBN, 26 (2) 30-35

Jongbo, O. C. (2014). The Impact of Real Exchange Rate Fluctuation on Industrial Output in Nigeria. Journal of Policy and Development Studies, 9(1), 268 – 278.

Kandilov. I. T. (2008). Exchange Rate Volatility on Agricultural Trade. Journal of Finance, 12 (9), 29 – 33.

Krugman, P. (2007). Economics and Politics, Iranian Economic Review, 14(24), 71 – 96.

Lipsey, J. (2012) "Principles of Economics, 9th Edition" New York: Oxford University Press Inc.

Martins L, (2011), "Causes Of inflation in Nigeria" Onitsha: African Fep Publishers.

McPherson, M. F. & Rakovski, T. (2000). Exchange Rates and Economic Growth in Kenya: An Econometric Analysis. African Economic Policy Journal, 5 (6), 21 – 28.

Ngerebo, T A (2012).The impact of foreign exchange fluctuation on then intermediation of banks in Nigeria (1970 – 2004). African Journal of Business Management, 6(11), 72 – 79.

Nwude, E (2013) "the impact of inflation on stock market investment and performance" Enugu: ABIC Books and Equipment.

Odekunle, J. (2012). Exchange Rate Regimes and Inflations in Sub Saharan Africa. Journal of Economics and International Finance, 6(8), 173 – 189

Ojo, J.A. T. and Alege, P. O. (2014). Global Financial and Macroeconomic Fluctuations: Implications for African Economic Development. African Economic and Business Review, 8 (2), 23 – 29.

Okwo, I. M. and Ugwunta, D. O. (2012) Impact of Firm's Input Costs on Firm Profitability: Evaluation of the Nigerian Brewery Industry, Research Journal of Finance and Accounting, 3 (6), 12 – 17.

Osinubi, T.S. and Olaleru, O.E. (2011).Budget Deficits, External Debt and Economic Growth in Nigeria. Applied Econometrics and International Development. 6(3), 12 – 19.

Otuori, O. H. (2013). Influence of exchange rate determinants on the performance of commercial banks in Kenya. European Journal of Management Sciences and Economics, 1(2), 86-98.

Owoeye, A. and Ogunmakin, H. (2013).Exchange rate volatility and bank performance in Nigeria. Journal of Finance, 5(3), 206-221

Owolabi U, Arulogun O, (2009) "The effectiveness of inflation control on economic growth in Nigeria". Ibadan: Muyiwa Publications.

Pandey, I.M. (2010).Financial Management. New Delhi: Vikas Publishing House PVT. LTD

Piana V, (2011) "Inflation, causes and the role of government in controlling it". New York: McGraw Hill Inc

Saheed, A and Ayodeji, U. (2012).Money, Banking, International Trade and Public Finance. Delhi: Vrinda Publishers Ltd.

Sanusi, J.O., (2012). The evolution of monetary management in Nigeria and its impact on economic development. CBN Bull., 26(1): 1-19.

Taiwo, O. and Adesola, O. A. (2013). Exchange rate volatility and bank performance in Nigeria. Asian Economic and Financial Review, 3(2):178-185.

Van, H (2008), "Price dispersion and inflation" Evidence from isreal, Journal of political Economy 6 (13)24-28