# Investigating the Interaction of Exchange Rate and Firm Cash Flow Sensitivity in Nigeria

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Abstract: This study investigated the Interaction of Exchange Rate and Firm Cash Flow Sensitivity in Nigeria using selected firms in Nigeria Stock Exchange NSE. The dependent variable was Cashflow and the independent variable Exchange Rates was indicated by (Fixed Exchange Rates FER and Flexible Exchange Rate FLR), and a Control Variable (Interest Rates ITR). A purposive sampling method selected five services firms out of a population of fourteen (14) services firms listed on the floor of the NSE (2014-2020). Secondary data was collected from the published annual reports of the firms and was analyzed with Descriptive Statistics, Pearson Correlation and Panel Regression. The overall result shows that the R-squared and R-squared adjusted value are 59% and 57% respectively; this indicating that the independent and the control variable jointly explain the variations in the pooled firms' Cashflow Sensitivity. The specific findings show positive and statistically significant interaction of Fixed Exchange Rates FER and Interest Rates ITR on Firm Cash Flow CFL; while Flexible Exchange Rate FLR is positive and non-significant on CFL sensitivity of the pooled firms in Nigeria. Governments are advised to be careful on their exchange rate decisions, because these drives any economy either upwards or downwards and thus influences firms cash flow. The study contributes with the Model applied and the rich empirical literature for academia. The implications of our findings are that firm managers should scrutinize their decisions on foreign currency exchange as this influences Cashflow which is one of the measures used by investors in valuing company financial status.

# Keywords: Exchange Rate, Fixed Rate, Flexible Rate, Interest Rate, Cashflow Sensitivity

# Introduction

### **Background to the Study**

Exchange rate is the rate at which one currency will be exchanged for another currency. The exchange rate is regarded as the value of one country's currency in relation to another currency, (O'Sullivan & Steven, 2003). Each country determines the exchange rate regime that will apply to its currency. It is a means through which a country determines its level of economic performance. It also provides access to a country's economic stability. Evidences have not shown any agreed rate of exchange among countries in the world, (Broz & Frieden. 2001), instead countries exchange rate regimes have always been motivated politically. This has mainly been on the interaction of demand and supply of currencies among countries. In reality, exchange rate fluctuates daily by the changes in market forces interaction of demand and supply of currencies from one nation to another. In other words demand and supply is the major causes of prices of currencies as opined by, (Ezenwakwelu, 2017). However, (Mohammed, 2016), argued that "the choice and management of exchange rate regime is essential". Thus, the stability of Counties exchange rate depends on the growth of the locally produced goods or industries in relation to international market. The fluctuation of foreign rate solely depicts on exported goods over imported goods, (Aliyu, 2011). The views of (Bakare, 2011), has been that whenever exchange rate is reformed, it affects "savings, investment; cause inflations or unemployment and poverty". Nigeria's economy because of high exchange rate influence has bedeviled her citizens with untold hardship and low level of per capital income, (Uniamikogbo & Ewanehi, 1998). Exchange rate has the capacity to affect firms' financial performance. According to International Financial Reporting Standards (IFRS), presentation of financial statements is compulsory to every registered firm. Then, within the financial statement reports, there is a mandatory inclusion of statement of Cash flows where cash issues are dealt with as required by the IFRS. Information about the cash flows is useful in providing users of financial statements with a basis to assess the ability of the entity to generate and use cash, IFRS. Further, alongside a statement of financial position, the statement of cash flows provides users with information on the changes in the net assets of the entity (Bhattacharyya 2011). According to (Söhnke, 2008 and Laura & Kelsey Wei 2003), exchange rate can influence cash flow of a firm.

The history of money and exchange goes back thousands of years. Many items have been used as means of exchange, commodity money, such as animals, barley, wine, oil, cowrie shells, beads, and precious metals and stones. History records show that the Island of Aegina (Greece) participated in the early days of coinage (silver coins since 670 B.C.) as the first money in Europe. These mediums of exchange came as, coins minted in Athens, Corinth, Euboea, Syracuse and in other Greek city-states and their colonies. The paper money appeared in paper currency form (banknotes) as early as the Ptolemaic Egypt (first century BC), and in Europe during the fourteenth century AD, and as coins much earlier, (Kallianiotis, 2013). From 1970, the regime of the currency rate changed across countries. Fatbardha , Eglantina , U `gur , Mirela and Marian, (2020), stated that the industrial revolution, the independence

of European nations, the economic boom, and the increase in trade of the late nineteenth and early twentieth century led to a need for a more formalized system of exchange, payments and settling international trade balances.

Further, Kallianiotis, (2013), observed that the fall of Bretton-Woods system in 1970s and the subsequent introduction of floating exchange rates, the exchange rates have in some cases become extremely volatile without any corresponding link to changes in other macroeconomic variables. Foreign exchange policies influence the economic activities and to a large extent, dictate the direction of the macro-economic variables in the country.

In Nigeria for instance, since the adoption of the Structural Adjustment Programme in 1986, Nigeria has adopted different types of exchange rate regimes, ranging from floating rate regimes to fixed/pegged regimes. Nigeria from 1960 and 1970s, tried fixed exchange rates FER.But, between 1970 and mid 1980 Nigeria exchange shifted from fixed exchange rate to a pegged arrangement and since the introduction of Structural Adjustment Programme in 1986 till date Nigeria has tried different rates and yet the exchange rate did not maintain both internal and external balance.

In our search, prior empirical studies have shown the effect of exchange rates on exports, trade, investment, capital market, inflation, and employment growth in developing and developed countries such as in (Schnabl 2008; Jamil et al. 2012; Rjoub 2012; Allen et al. 2016; Alagidede and Ibrahim 2017; Dal Bianco and Loan 2017; Latief and Lefen 2018; Vo and Zhang 2019; Hatmanu et al. 2020; Ioan et al. 2020). But, after considering some of these literatures, we found out that there is not much evidence in the past studies on exchange rate interactions on cash flows of firms these past years. In Nigeria and elsewhere, several exchange methods on the studies have been on the relationship with exports, trade, investment, capital market, inflation, and employment growth. In our adept search we found (Söhnke, 2008), who studied Cash Flows and found insignificant and also Laura and Kelsey Wei, (2003) who studied foreign exchange exposure and short-term cash flow sensitivity. But in Nigeria, no work of such nature was found. With these strong arguments, we establish the urgent need to carry out this study in Nigeria. We tend to find out how firm cash flows have been reacting to the different Exchange Rates ER, how sensitive has Cashflow been on various kinds of exchange rates adopted and its impact on firm Cashflow.

To achieve this we apply two variables (fixed exchange rate FER and flexible exchange rate FLR) as proxies of exchange rate and one control variable (Interest Rates) and we apply Cash flow as dependent variable in this study.

The main objective of this study is to find out the interaction between exchange rate and firm cash flow sensitivity in Nigeria. Other specific objectives are to determine the interaction of Flexible exchange; Fixed exchange rate and Interest rates with firm Cash flow sensitivity. Our research questions are to know if: flexible; fixed; Interest Rate has any significant relationship with firm cash flow sensitivity in Nigeria?

We hypnotized as follows that: fixed exchange rate; flexible exchange rate, Interest rate have no-significant relationship with firm cash flow sensitivity in Nigeria

# **Review of Related Literature**

# **Conceptual Framework**

### **Exchange Rate**

Exchange rate has been defined as the price of one currency in terms of another. It can be expressed in one of two ways: as units of domestic currency per unit of foreign currency. However, since transactions are often carried out in national currencies, the former is generally applied for exchange (Mordi, 2016). Exchange rate fluctuates based on market interactions. For instance, if the domestic products (exports) of a country exceed the imports, there is every likely hood that the domestic currency will appreciate over foreign currency because of the demand and supply interactions. At the same time if the imports exceeds the exports, there will be the opposite. Obadan, (2016), pointed out nominal exchange rate and real exchange rate. According to Obadan, "nominal exchange rate (NER) is a monetary concept which measures the relative price of two moneys or currencies". But the real exchange rate (RER) as the name implies, is a real concept that measures the relative price of two goods-tradable goods (exports and imports) in relation to non-tradable goods (goods and services produced and consumed locally). Thus, the exchange rate right for maintaining relative stability is required for both internal (export) and external (import) balance, and such will induce growth in an economy. But, failure to properly manage the exchange rate induces distortions in consumption and production patterns. Excessive volatility in exchange rate creates uncertainty and risks for economic agents with destabilizing effects on the macro economy. It is viewed that policymakers focus on the pervasive effects of imbalance exchange rate on the economy and macroeconomic policy objectives of price stability, economic growth, employment and external viability (Mordi, 2016). Several factors have been indicated to affect ER. These factors includes Balance of payments; Interest rate level; Inflation factor; Fiscal and monetary policy; Venture capital; Government market intervention and Economic strength of a country.

# **Cash Flow**

Cash flows are the inflows and outflow of cash and cash equivalents. Cash includes cash in hand and bank deposit. Thus statement of cash flow provides information about the inflow and outflow of cash and cash equivalent. Cash flow of an organization are those pool of funds that an organization or firm commits its fixed assets, inventories, account receivables and marketable securities, that lead in corporate profit, (Efobi (2015). IFRS, International Accounting Standards, IAS and Nigeria General Accepted Accounting Practice NG-GAAP stipulated that cash flow must be presented according to the activities which gave rise to them, such as: operating, investing and financial activities to explicit the cash flows. It then provides information over a firm's flows over a given

period, giving more insight into the liquidity, viability and financial adaptability of any firm. Statement of cash flows in firms are expected to report the effect of exchange rate changes on cash as a separate part of the reconciliation of the change in cash during the period, (IAS, 21)

# **Fixed Exchange Rate**

Collins English dictionary defined fixed exchange rate as "a country's exchange rate regime under which government or central bank ties the official exchange rate to another country's currency. It sated further that this can help create stability in developing countries with weak financial institutions, but can lead to financial crises in the long run.

Dauladi, Akowolafe, Babalola, and Akpan, (2015) defined it as "a regime applied by any government or central bank that ties the country's official currency exchange rate to another country's currency or the gold". The main objective of this rate is to assist to sustain currency value within a narrow band. It is also called pegged exchange and can be applied to regulate currency. On the other hand, this rate can hinder the application of demand and supply in domestic products (export) and import to achieve stability in exchange rate, because it is fixed. Kanu and Nwadiubu, (2020) said that the reference value of FER rises or falls and this follows the value of any currencies pegged, will also rise and fall in relation to other currencies and commodities with which the pegged currency can be traded. It has also been viewed to control inflation, (Essien, Uyaebo, & Omotosho, 2017). Further, Fatbardha, Eglantina, U<sup>\*</sup>gur, Mirela and Marian (2020) show evidence that there is a strong tendency among states to choose fixed exchange rates and ultimately, the interpretation of fixed exchange rates as a monetary policy rule remains unconvincing. The argument is that "political-support-maximizing governments choice of fixed exchange rates is to benefit domestic interest groups", (Essien et al., 2020).

# **Flexible Exchange Rate**

According to Adams, (2006) "the emerging market financial crises later in introduced the virtues of flexible exchange rate regimes for large emerging markets, which increasingly was integrated into the global financial system, This is a system which somehow obeys the simple law of demand and supply. If the demand for export is more, the home currency will rise above foreign, but if the demand for import exceeds the export, then the balance of payments takes effects as well. In the terms of exchange rate regime in which a currency's value is allowed to fluctuate in response to foreign exchange market event". The definitions show that show that countries operating possibly in the framework of a flexible exchange rate system can easily absorb shocks from open capital markets than economies with fixed rate. This can be possible because flexible exchange rate on its flexibility has the advantage that gives way to a country to pursue an independent monetary policy instead of a monetary policy that cannot be adjusted because it has been set or anchored on a particular event. Thus flexible exchange rates can adjust to shocks, and can align to the force of external sector and the domestic economy.

#### **Interest Rates as a Control Variable**

The selection of interest rates as a control variable is to find out on how interest rate as significant factor explains the behavior of cash flow. In Nigeria, interest rate is considered as a major factor in monetary policy, because the Central Bank uses it to regulate the flow of money in terms of borrowing to regulate the economy. If the borrowing interest rate is high there will be more borrowing, but higher interest rate reduces demand for money in terms of borrowing. Thus the higher cost of borrowing can reduces the availability of money. Firms can be affected in terms of availability of sources of money if the cost of interest rate is very high. The same issues apply in foreign interest rate. According to Orjima and Emerenin, (2015), interest rate has fundamental implications for the economy. Furman and Stiglitz, (1998) found that both the magnitude and duration of interest rate rises coincide with exchange rate depreciation. On the other hand, Goldfajn and Baig (1998) found no evidence for the weakening impact of higher interest rates on exchange rates. Kraay, (1999) found association between raising interest rates and the outcome of the speculative attack. Cho and West (2003) found that an exogenous increase in interest rates caused exchange rate appreciation in Korea and the Philippines, depreciation in Thailand. Kim and Ratti (2006) provided evidence that sharp increase in the interest rate result in business failures that further deepen exchange rate crisis. Chen (2006) shows that nominal interest rates increase leads to a higher probability of switching to a regime with more volatile exchange rate.

#### **Theoretical Framework**

The Balance of Payment Model Theory BOP, developed since 1930, when the collapsed of the liberal international economic order based on the gold-standard system was accompanied by the Keynesian revolution in economic theory. Harry, (1977) explains in this theory that exchange rate is determined by the capital flow arising from international trade in goods, services and financial assets in such a manner that the balance of payment equality is maintained at all times. This theory supports the balance of payment equality as a condition of equilibrium in the foreign exchange market. BOP theory states that from an initial position of balance of payment equilibrium, given prices, foreign income and interest rates brings back the balance of payment to its initial equilibrium, there is the need for higher interest rate that will generate an offsetting rate.

#### **Empirical Studies**

Laura and Kelsey, (2003) investigated U. S. firms exchange rate and short term cash flow and discovered that they have a relationship to companies' short-term leverage, internal funds availability, firm size, costs of low investment and specialized product. Almost a similar study carried out by, Söhnke, (2008) on foreign exchange rate exposure, with inclusion of hedging and cash flows; found

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that multinational firm has a significant relationship with foreign exchange rate exposure FERE and further findings show that FERE has non-significant relationship with cash flow. Ryan, Boris and Aaron (2020) investigated "corporate investment and the exchange rate..." and they collected data from eighteen (18) major world economies. One of the study result show that exchange rate depreciation motivate firms that have high leverage to boast their cash holdings.

Sulaiman, Ezie and Nal, (2020) reviewed the impact of exchange rates on manufacturing performance in Nigeria from (1986-2014). Analysis applied ordinary least square (OLS) and one of the results show that exchange rates impact on firm outputs. Even though this study was not solely on cash flow, yet it shows that exchange rates impact Nigeria firms. Opaluwa, Umeh and Ameh (2010) carried out a similar research on exchange rate fluctuations, using the same sector in Nigeria from (1986 – 2005). After the analysis, the regression, they found that exchange rate is negative and significant on manufacturing firms. Tams-Alasia, Olokoyo, Okoye and Ejemeyovwi, (2018) also stated that exchange rate deregulation from (1980-2016) is positive and non-significant on the same sector in Nigeria. Again, Onwuka, (2021) found that exchange rate volatility has a negative and significant relationship with firm performance from the same sector in Nigeria from (1981-2020). Another research from Ezenwakwelu, Okolie, Attah, Lawal and Akoh (2019), on exchange rate management from the same industry from (2015–2017), indicates that exchange rate fluctuations is negative and significant; while flexible exchange rate is not significant on performance. Ezie, Sulaiman & Abdelrasaq (2016) also found that exchange rate is not significant on performance. Ezie, Sulaiman & Abdelrasaq (2016) also found that exchange rate is not significant manufacturing sector from (1986-2014); while, Falaye, et al (2019) shows that exchange rate if currency is devalued using Nigerian manufacturing sector from (1986-2014); while, Falaye, et al (2019) shows that exchange rate industry in Nigeria from (1986-2010). The analysis used (OLS) multiple regression and the findings show that exchange rate depreciation is not significant and exchange rate appreciation had a significant relationship with domestic output in Nigeria.

Udoye, (2019) checked the real exchange rate in Nigeria from (1970-2006). Analysis applied Augmented Dickey-Fuller (ADF) unit roots, Engle-Granger co-integration and Auto-regressive Distributed Lag Model (ARDL-ECM) and the result shows that the major determinants of RER in Nigeria are gross domestic product growth rate and trade openness. Waziri, Nor, Mukhtar and Mukhtar (2017) investigated how exchange rate affects the export of agricultural raw materials and economic growth in Nigeria from (1981-2013) using Autoregressive Distributed Lag Model (ARDL). They found that it is not positive; while exchange rate is. On the other hand, Adeniran et al. (2014) also carried out a study on exchange rate and economic growth from (1986-2013) using Nigeria economy. Analysis applied (OLS) regression on the data. Finding indicated that it has a positive and insignificant effect on Nigeria's economic growth. Finally, Courage Mlambo, (2020) examined the exchange rate and manufacturing performance in SACU states, from (1995–2016). After the analysis, one of the findings shows that exchange rate has a negative relationship with manufacturing performance in contrast with the prior findings from the similar sector in Nigeria that show positive relationship in almost all the empirical results.

# **Research Methods**

# Research Design, Population and Sample Size and Sampling

The study population comprised all the fourteen (14) services firms listed on the floor of the Nigerian Stock Exchange in 2014 to 31st December 2020.

The Sample size utilized Purposive sampling methods to selected five firms that has complete financial statements as found in Nigeria Stock Exchange NSE Fact Book from 2014-2020 31<sup>st</sup> December 2020, for 7 years.

#### Variable Definitions

The dependent variable, CFL = Cashflow as in Söhnke (2008); Laura and Kelsey (2003), is Flow From Operations in thousands, which is the net operating cash flow reported in the cash flow statement.

Exchange Rate as in Ryan, Boris and Aaron, (2020) are indicated as:

FER = Fixed Exchange Rate as in Fatbardha et al., (2020); and

FLR = Flexible Exchange Rates as in Latief, Rashid, and Lin Lefen, (2018); Vo, Duc Hong, and Zhaoyong, (2019); and the Control Variable,

ITR = Interest Rates as in, Taha et al., (2016) and Hatmanu, et al., (2020), is defined as the forward exchange rate that equal the spot currency exchange rate multiplied by the interest rate of the home country, then divided by the foreign currency interest rate.

# Model Specification

We control for heterogeneity among firms interest rates and we adapt as applied by Baltagi, (2008).

Our regression equation for panel time series is employed to estimate the effect of exchange rate on Cashflow sensitivity:

 $Yit = \alpha i + \delta Xit + \beta Volit + \varepsilon it i \dots 1$ 

Model modified as

 $CFLit = \beta_0 + \beta_1 FER_{it} + \beta_2 FLR_{it} + \beta_3 ITR_{it} + \mu_{it} \dots 2$ 

Where we define working variables as follows:

CFLit = Cash Flow;  $\beta_0$  = Constant term (intercept) of the study model;  $\beta_1$ -  $\beta_3$  = Explanatory variables Coefficients of Exchange Rates;  $\mu_{it}$  = Component of unobserved error term of the firms, i in period *t*; FER<sub>it</sub> = Fixed Exchange Rate, *i* in period *t*; FLR<sub>it</sub> = Flexible Exchange Rate, *i* in period *t*; ITR<sub>it</sub> = Interest Rates, *i* in period t; while t= 7 years, (2014-2020).

# **Analyses Methods**

The analyses methods apply Descriptive Statistics, Pearson Correlation and Panel RegressionData Presentation, Analysis, Interpretation, Discussions and Summary of FindingsTable1:Descriptive Statistics.

	CFL	FER	FLR	ITR
Mean	3.90900	1.27050	6.86100	19.6220
Maximum	16.7900	2.57000	7.74000	32.1900
Minimum	-13.0500	0.41000	5.51000	7.56000
Std. Dev.	7.78474	0.70223	0.62157	7.21862
Jarque-Bera	1.34600	1.44864	1.37613	1.20312
Probability	0.51016	0.48464	0.50253	0.54794
Observations	35	35	35	35

# Note: CFL= Cashflow, FER=Fixed Exchange Rate, FLR=Flexible Exchange Rate, ITR=Interest Rate Source: Author's computation, (2022)

The result shows a positive mean for CFL (3.90900); FEL (1.27050), FLR (6.86100) and the control variable ITR (19.6220). There is a very large difference between the maximum and minimum values of cash flow of the pooled firms with evidence of equal performing firms.

FER is greater than FLR; while the Control Variable ITR has more value than the two put together.

Jarque-Bera (JB) indicates there is no outlier that is capable or likely to distort the conclusion and is therefore reliable for drawing generalization.

#### Pearson Correlation Table

**Table: 2Pearson Correlation Result** 

	CFL	FER	FLR	ITR
CFL	1.00000	0.14342	0.29145	0.62834
FER	0.14342	1.00000	0.03844	0.14438
FLR	0.29145	0.03844	1.00000	0.01260
ITR	0.62834	0.14438	0.01260	1.00000

Note: CFL= Cashflow, FER=Fixed Exchange Rate, FLR=Flexible Exchange Rate, ITR=Interest Rate

# Source: Author's computation, (2022)

The above Pearson correlation values did not indicate or observe any problem of Multicollinearity in both for criterion and explanatory variables did not exceeds 80% as the norm stated by Feldman, (1985).

**Regression Table Table 3:** 

#### **Regression Result**

Dependent Variable: CFL Method: Panel Least Squares Sample: 2014-2020

Variables	Coeff.	Std. Error	t-Statistic	Probability
C FER FLR ITR	7.930437 0.721880 0.780012 0.671597	15.89801 2.004188 2.240724 0.194844	0.498832 0.360185 0.348107 3.446844	0.6247 0.0034 0.1110 0.0033
R-squared Adjusted R-sqd F-statistic Prob(F-statistic)	0.58861 0.57272 5.09598 0.01150	Mean dependent var S.D. dependent var Durbin-Watson stat		3.90900 7.78474 2.11406

#### (a) 1% .....; (a) 5% Significant Level

# Note: CFL= Cashflow, FER=Fixed Exchange Rate, FLR=Flexible Exchange Rate, ITR=Interest Rate

#### Source: Author's computation, (2022)

The model show R-squared and R-squared (adjusted) values: (0.58861) and (0.57272). The two values indicate that the two independent and the control variables jointly explain about 58% and 57% of the variation in the pooled firms Cashflow sensitivity for the selected periods. The F-statistics (5.095272) and its p-value (0.01150) show that the Panel OLS regression model is generally significant and well specified, at 5% levels.

Testing of Hypothesis and Discussions of Findings

# H<sub>01</sub> fixed exchange has no-significant relationship with firm cash flow sensitivity in Nigeria

FER: Coefficient = 0.721880, Std. Error=2.004188; t-Statistic=0.360185, Probability = 0.0034

The coefficient of FER is positive and the probability value is less than 5% significance level. By this we state that there is a positive and statistically significant relationship between FER and CFL sensitivity. This findings did not agree with (Sonke, 2008), who found that fixed exchange rate is positive; while it disagrees with (Courage, 2020 and Tams-Alasia et al., 2018), who found insignificant interaction.

### H<sub>02</sub> flexible exchange rate has no-significant relationship with firm cash flow sensitivity in Nigeria

FLR: Coefficient =0.780012, Std. Error=2.240724, t-Statistic=0.348107, Probability= 0.1110

The model coefficient value indicates that FLR is positive and the value of probability is greater than 5% (0.005) significance level. Based on this, the study states that FLR has a positive and a statistically insignificant interaction with CFL sensitivity of the pooled firms in Nigeria.

This findings on FLR with coefficient being positive agrees with the findings of (Onwuka, 2021), who found exchange rate volatility to be positive; while our result disagrees with the result of (Ezenwakwelu et al., 2019), who found negative.

# $\mathbf{H}_{03:}$ Interest rate has no-significant relationship with firm cash flow sensitivity in Nigeria

ITR: Coefficient = 0.671597, Std. Error = 0.194844, t-Statistic = 3.446844, Probability = 0.0033

The model values above indicate that the Control Variable ITR has a positive coefficient value and a probability value that is less than 1% significance level. By this the study states that the control variable ITR has positive and significant relationship with CFL sensitivity of the pooled firms in Nigeria for the period in consideration.

The finding on the control variable interest rate contradicts some findings in our empirical literatures such as: (Taha & Kadir, 2016; Furman and Stiglitz (1998; Goldfajn & Baig, 1998), but agrees with the findings of (Kraay, 1999; Cho & West, 2003; Kim & Ratti, 2006; Chen, 2006)..

The overall significant of the applied variables agrees with the following works who found significant relationship: (Laura & Kesley, 2003; Sonke, 2008; Ryan et al., 2020; Sulaiman, et al., 2020; Waziri, et al., 2020).

# Summary of Finding, Conclusions, Recommendations, Contributions and Implications

#### Summary of Findings

Summary of the results show that the R-squared and R-squared adjusted value are 59% and 57%, respectively; indicating that the variables applied in this research jointly explain the Cashflow of the pooled firms for the selected period in Nigeria.

The specific findings show that: FER and ITR have positive and statistically significant relationship with CFL sensitivity; while FLR has positive but non-significant relationship with CFL sensitivity of the pooled firms in Nigeria.

#### Conclusions

Finally, we found that FER and ITR have both positive and statistically significant relationship with Cashflow sensitivity; while FLR has positive and non-significant relationship with Cashflow sensitivity of the pooled firms Nigeria. The exchange rate is seen as a measure that influences Cashflow of firms especially in Nigeria where foreign currency value keeps appreciating as the home currency keeps devaluating on a very fast mode. Besides, Cashflow is important measurements used by investors in valuing a company.

#### Recommendations

Governments are advised to be careful on the type of exchange rate decisions they make because it drives the economy either upwards or downwards.

# **Contributions to Knowledge**

The study contributes with the Model applied and the reach empirical literature for academia.

#### **Implication of the Study Finding**

Implication of the findings is that firm managers are to properly scrutinize their decisions on foreign currency issue as this tends to influence Cashflow measures used by investors in valuing a company financial status.

# **Suggestions for Further Study**

We suggest that further study should be carried out selecting other sectors instead of Communication service industry.

#### References

- Akinola, O., & Lawal, Q.A. (2012). Impact of exchange rate on industrial production in Nigeria (1986–2010). *International Business* and Management, 10(1), 104–110.
- Alagidede, Paul, and Muazu Ibrahim. 2017. On the causes and effects of exchange rate volatility on economic growth: Evidence from Ghana. *Journal of African Business 18: 169–93. [CrossRef]*
- Allen, David E., Michael McAleer, Shelton Peiris, and Abhay K. Singh. 2016. Nonlinear time series and neural-network models of exchange rates between the US dollar and major currencies. Risks 4: 7. [CrossRef]
- Arsyad, M. I., & Djoko, S. R. (2019). The effect of NPL, CAR, NIM, LDR, and DER on the bank's performance on return on asset: Case study on conventional banking listed on the IDX for the period 2013–2017. [Undergraduate Thesis, Fakultas Ekonomika dan Bisnis Universitas Diponegoro].

- Ayanda A. M., Christopher E. I., & Mudashiru M. A. (2013). Determinants of banks' profitability in developing economy: Evidence from the Nigerian banking industry. Interdisciplinary *Journal of Contemporary Research in Business*, 4(9), 155–181.
- Bernardin, D. E. Y. (2016). The effect of CAR and LDR to Return on Assets. Jurnal Ecodemica: *Jurnal Ekonomi, Manajemen*, dan Bisnis, 4(2), 232–241.
- Broz, J. Lawrence; Frieden, Jeffry A. (2001). <u>"The Political Economy of International Monetary Relations"</u>. Annual Review of Political Science. 4 (1): 317–343. <u>doi:10.1146/annurev.polisci.4.1.317</u>. <u>ISSN 1094-2939</u>.
- Chen, S. S. (2006). Revisiting the interest rate exchange rate nexus: A Markov switching approach. Journal of Development Economics, 79(1), 208-224.
- Cho, D. & West, K. D. (2003). Interest rates and exchange rates in the Korean, Philippine ans Thai exchange rate crises.
- Courage Mlambo, (2020) Exchange rate and manufacturing sector performance in SACU states. Business & Management Volume 7, 2020 Issue 1| citation <u>https://doi.org/10.1080/23311975.2020.1787735</u>
- Dauladi, J.D., Akowolafe, K.J., Babalola, O., & Akpan, E.A. (2015). Exchange rate volatility Dynamics and Control. 12(2-3), 231-254.
- Dal Bianco, S., and Nguyen Cong To Loan. (2017). FDI inflows, price and exchange rate volatility: New empirical evidence from Latin America. International Journal of Financial Studies 5: 6. [CrossRef]
- Erlat, Guzin; Arslaner, Ferhat (1997). <u>"Measuring Annual Real Exchange Rate Series for Turkey"</u>. Yapi Kredi Economic Review. **2** (8): 35–61.
- Essien, S. N., Uyaebo, S. O., & Omotosho, B.S. (2017). Exchange rate misalignment under different exchange rate in Nigeria. *CBN Journal of Applied Statistics*, 8 (1), 1-21
- Ezenwakwelu C. A, Okolie, P. I, Attah, E.Y, Lawal, K. O. & Akoh O. (2019). Exchange rate management and performance of Nigerian manufacturing firms. *Academy of Entrepreneurship Journal*, 25(4), 15-29.
- Ezie, O., Sulaiman, A. S. & Abdelrasaq, N.(2016). Effect of Exchange Rates on Manufacturing Sector Growth in Nigeria: 1986-2014. International Journal of Management and Social Sciences1, (2) 96-108
- Falaye, A.J., Eseyin, O., Otekunrin, A., Asamu, F. Ogunlade, P., Egbide, B., Rasak, B., Niyi-Oyebanji M., Eluyela, D. (2019). Impact of exchange rate on the manufacturing sector in Nigeria. *International Journal of Mechanical Engineering and Technology* 10(2), 68–83.
- Fatbardha M., Eglantina H., U<sup>\*</sup>gur E., Mirela P. & Marian C. V. (2020) The political choice and collapse of fixed exchange rates carsten hefeker. *Journal of Institutional and Theoretical Economics (JITE) / Zeitschrift für die gesamte Staatswissenschaft Vol. 152, No. 2 (June 1996), pp. 360-379 (20 pages).*
- Goldfajn, I. & Baig, T. (1998). Monetary policy in the aftermath of currency crises: the case of Asia. IM F Working Paper, No. 98/170, Washington: International Monetary Fund.
- Hatmanu, M., Cristina C., S. & Mihaela I. (2020). The impact of interest rate, exchange rate and european business climate on economic growth in Romania: An ARDL Approach with Structural Breaks. Sustainability 12: 2798. [CrossRef]
- Ikpe, M. E. & Inam, U. S. (2020). Exchange rate determinants and the performance of Nigeria's economy. *African Research Journal* of Economics, Business and Management, 1(1),27-35.
- Jamil, Muhammad, Erich W. Streissler, and Robert M. Kunst. 2012. Exchange rate volatility and its impact on industrial production, before and after the introduction of common currency in Europe. International Journal of Economics and Financial Issues 2: 85–109.
- Kanu S. I., and Nwadiubu, A. (2020) Exchange rate volatility and international trade in Nigeria. *International Journal of Management Science and Business Administration* 6 (5), 56-72
- Kallianiotis J.N. (2013) History of exchange rate. in: exchange rates and international financial economics. *Palgrave Macmillan, New York*. <u>https://doi.org/10.1057/9781137318886\_1</u>
- Kim, J. K. & ratti, R. A. (2006). Economic activity, foreign exchnage rate, and the interest rate during the Asian crisis. *Journal of PolicyModeling*, 28, 387-402.
- Latief, Rashid, and Lin Lefen. 2018. The effect of exchange rate volatility on international trade and foreign direct investment (FDI) in developing countries along "one belt and one road". International Journal of Financial Studies 6: 86. [CrossRef]
- Laura T. Starks and Kelsey Wei, (2003) foreign exchange exposure and short-term cash flow sensitivity *April 2003SSRN Electronic* Journal DOI:10.2139/ssrn.405521
- & Fagite Olufayo M.B., B. А (2014). Exchange rate volatility and Sectoral Export of Nigeria. non-oil Case of oil and Sectors. Journals of *Economics* and Sustainable Development 5: 66
- Onwuka, C. E. (2021). Exchange rate volatility and the performance of manufacturing sector in Nigeria: An econometric analysis (November 24, 2021). Available at SSRN: <u>https://ssrn.com/abstract=3970479</u> or <u>http://dx.doi.org/10.2139/ssrn.3970479</u>

Opaluwa David, J C Umeh & Ameh Abu (2010) The effect of exchange rate fluctuations on the Nigerian manufacturing sector

O'Sullivan, Arthur; Steven M. Sheffrin (2003). <u>Economics: Principles in action</u>. Upper Saddle River, New Jersey 07458: Prentice Hall. p. 458. <u>ISBN 0-13-063085-3</u>.

- Oyovwi, O. D & Ukavwe A. (2013). Exchange Rate volatility: Effect on trade variations in Nigeria. *Mediterranean Journal of Social Science*. 4(6)
- Ryan Banerjee, Boris Hofmann & Aaron Mehrotra. (2020). Corporate investment and the exchange rate: The financial channel © Bank for International Settlements 2020. ISSN 1020-0959 (print) ISSN 1682-7678 (online), BIS website <u>www.bis.org</u>
- Schnabl, Gunther. 2008. Exchange rate volatility and growth in small open economies at the EMU periphery. Economic Systems 32: 70–91. [CrossRef]
- Söhnke M. (2008).What lies beneath: foreign exchange rate exposure, hedging and cash flows Bartram, Online at https://mpra.ub.uni-muenchen.de/6661/ MPRA Paper No. 6661, posted 09 Jan 2008 00:46
- Sulaiman A. S, Ezie O. and Nal Abdelrasaq (2020). Effect of exchange rates on manufacturing sector growth in Nigeria FUW-International Journal of Management and Social Sciences, (FUW-IJMSS), Vol. 1, No. 2 & 3, July 2016, Pp. 96-108 Available Online: www. fuwijmss.edu.ng.org ISSN: 2384-6224
- Sunday N. E., Stephen O. U. Uyaebo and Babatunde S. O. (2017). Exchange rate misalignment under different exchange rate regimes in Nigeria. CBN Journal of Applied Statistics Vol. 8 No. 1 (June, 2017). Working paper, No.12729, NBER program
- Taha Bahadır Saraç & Kadir Karagöz, (2016) Impact of Short-term Interest Rate on Exchange Rate: The Case of Turkey. Istanbul Conference of Economics and Finance, ICEF 2015, 22-23 October 2015, Istanbul, Turkey
- Tams-Alasia O, Olokoyo F. O., Okoye L. U. and Ejemeyovwi J. (2018). Exchange rate deregulation on manufacturing sector performance in Nigeria International *Journal of Environment*, *Agriculture and Biotechnology (IJEAB) Vol-3*, *Issue-3*, *May-June-2018 http://dx.doi.org/10.22161/ijeab/3.3.36 ISSN: 2456-1878 www.ijeab.com Page | 994*
- Timothy D. Adams. (2006). Remarks by Treasury Under Secretary for International Affairs at the American Enterprise Institute, February 2, 2006. "Working with the IMF to Strengthen Exchange Rate Surveillance." <u>http://www.treas.gov/press/releases/js4002.htm</u>

Udoye, R. A (2019). The determinants of exchange rate in Nigeria. Department of Economics, University Of Nigeria, Nsukka.

Vo, Duc Hong, and Zhaoyong Zhang. 2019. Exchange rate volatility and disaggregated manufacturing exports: Evidence from an emerging country. Journal of Risk and Financial Management 12: 12. [CrossRef]