

NEAR EAST UNIVERSITY GRADUATE SCHOOL OF SOCIAL SCIENCES ECONOMICS PROGRAM

THE EFFECT OF EXCHANGE RATE FLUCTUATIONS ON THE NIGERIAN ECONOMIC GROWTH

THOMAS ABUOBELEYE AKPANKE

MASTER'S THESIS

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MASTER'S THESIS

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> NICOSIA 2019

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DECLARATION

I Thomas Abuobeleye Akpanke, hereby declare that this dissertation entitled 'The Effect Of Exchange Rate Fluctuations On The Nigerian Economic Growth' has been prepared myself under the guidance and supervision of 'Asst. Prof. Dr. Behiye Tüzel Çavuşoğlu' in partial fulfilment of the Near East University, Graduate School of Social Sciences regulations and does not to the best of my knowledge breach and Law of Copyrights and has been tested for plagiarism and a copy of the result can be found in the Thesis.

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DEDICATION

This research Thesis is dedicated to the Almighty God for his bestowed strength during this time frame. This thesis is also dedicated to my parents Mr. and Mrs. Francis Akpanke. I dedicate it mostly to my mother Mrs. Jacqueline Akpanke for her love, care, support and understanding; I also dedicate it to my siblings Akpanke Francis, Priscilla Akpanke and Emmanuel Akpanke for all their support throughout my stay in school.

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ABSTRACT

THE EFFECT OF EXCHANGE RATE FLUCTUATIONS ON THE NIGERIAN ECONOMIC GROWTH

Our understanding of the relationship between Exchange rate and Economic growth has been put under test for several reasons. This Thesis aims at examining the effect of Exchange rate fluctuations on the Nigerian Economic Growth using yearly time series data from 1986-2016. The data used are secondary and were obtained from Central Bank of Nigeria statistical Bulletin. Before 1986, Nigeria Economy was operating under a fixed exchange rate regime which from 1986 till date is operating a flexible exchange rate regime. The method applied is the Ordinary Least Squares (OLS) to analyze the data. The result shows that Exchange rate and GDP growth has a negative relationship. A percentage change in GDP growth will decrease EXC by 0.324593. However, the probability value of GDP growth is not statistically significant at 5% thus; we accept the null hypothesis that Exchange rate does not have any vital impact on the Nigerian economic growth which affirms to the analysis advanced by Eme and Johnson (2012). Based on the theoretical exposition advanced in the literature and the results obtained in this study, the thesis recommends that strict foreign exchange control policies should be put in place in order to help in proper determination of the value of the exchange rate. This will thus; in the long run help to strengthen the value of the Naira and also the government has to induce the foreign exchange rate by decreeing positive economic reforms that will reduce the unfavorable effect of exchange rate fluctuation on the Nigerian economy with respect to trade flows and economic growth

Keywords: Economic growth, Exchange rate, fluctuations, Nigeria.

ÖΖ

DÖVİZ KURU DALGALANMALARININ NİJARYA'NIN

EKONOMİK BÜYÜMESİ ÜZERİNE ETKİSİ

Literatürde Döviz kuru ve Ekonomik büyüme arasındaki ilişki birçok nedenden dolayı test edilmiştir. Bu tez, 1986-2016 yılları arasında yıllık zaman serisi verilerini kullanarak döviz kuru dalgalanmalarının Nijerya'nın Ekonomik Büyümesi üzerindeki etkisini incelemeyi amaçlamaktadır. Kullanılan veriler ikincildir ve Nijerya Merkez Bankası istatistik bülteninden elde edilmiştir. 1986'dan önce Nijerya Ekonomisi sabit bir döviz kuru rejimi altında çalışıyordu fakat 1986'dan bugüne kadar esnek bir döviz kuru rejimi devreye girdi.

Bu tezde verileri analiz etmek için uygulanan yöntem Olağan En Küçük Kareler (OLS) yöntemidir. Tezde sonuç olarak, Döviz kuru ve GSYİH büyümesinin negatif bir ilişkide olduğu saptanmıştır. GSYİH büyümesindeki yüzde bir değişiklik döviz kurları'nı 0,324593 oranında azaltacaktır. Bununla birlikte, GSYİH büyümesinin olasılık değeri %5 ile istatistiksel olarak anlamlı değildir; Eme ve Johnson'ın (2012) ileri sürdüğü analizlere dayanan Nijerya'nın ekonomik büyüme üzerinde döviz kuru oranının hayati bir etkisi olmadığı varsayımını kabul ediyoruz. Literatürde ileri sürülen teorik anlatıma ve bu çalışmada elde edilen sonuçlara dayanarak, tez, döviz kurunun değerinin doğru bir şekilde belirlenmesine yardımcı olmak için sıkı döviz kontrol politikalarının uygulanmasını önermektedir. Bunu gerçekleştirirken; Uzun vadede, Naira'nın değerinin güçlendirilmesine yardım edilmesi ve hükümetin, döviz kuru dalgalanmasının Nijerya'nın ekonomisi üzerindeki ticari akışlar ve ekonomik büyüme açısından olumsuz etkilerini azaltabilecek olumlu ekonomik reformlar düzenleyerek döviz kurununu teşvik etmesi gerekmektedir.

Anahtar Kelimeler: Ekonomik büyüme, Döviz kuru dalgalanmaları, Nijerya.

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ABBREVIATIONS

- **OLS**: Ordinary Least Squares
- **GDP:** Gross Domestic Product
- **SAP:** Structural Adjustment Program
- SFEM: Second-tier foreign exchange market
- **AFEM:** Autonomous Foreign Exchange showcase
- **CBN:** Central Bank of Nigeria
- **CISS:** Comprehensive Import Supervision Scheme
- **DAS:** Dutch Auction System
- **FFEM:** First– Tier Foreign Exchange Market
- **IFEM:** Inter-Bank Foreign Exchange Market
- **AFEM:** Autonomous Foreign Exchange Market
- **SFEM:** Second-tier foreign exchange market
- **PPP:** Purchasing power parity
- **RESET:** Regression Equation Specification Error Test
- **OCA:** Optimum Currency Area

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Exchange rate can be characterized as the rate at which a currency is traded for another. It is essentially the price of one currency in reference to another (Jhingan, 2005). It chooses the overall expenses of household and international products, and furthermore the quality of external sector cooperation in the global exchange. Exchange rate organization and interest rate remain fundamental issues of talk in the Global store and furthermore in developing nations, with the more economies clutching exchange advancement as a basic for financial improvement (Obansa, et al, 2013). Unexpectedly, since the fall of Bretton-Woods framework in 1970s and the resulting introduction of floating exchange rates, the exchange rates have now and again turned out to be to a great degree unstable with no relating connect to changes in the macroeconomic basics. This has prompt to high interest in the exchange rate. Nigeria had kept up fixed exchange rate from 1960 till 1970s after the breakdown of Bretton Woods, after then the exchange rate had been floating particularly from the time of 1986 till date. Exchange rates have turned out to be unfavorable to Nigeria because of utilizing the floating foreign exchange determination framework. A privilege or legitimate swapping scale has been a standout amongst the most critical components for monetary development in the economies of most created countries, though reliable variances or uncivilized conversion scale has been a noteworthy deterrent to financial development of various African countries of which Nigeria is comprehensive.

In Nigeria, the exchange rate has modified among completely different time frame from regulated to deregulated regimes. Ewa, (2011) in agreement that the exchange rate of

the Nigerian monetary unit was moderately steady within the locality of 1973 and 1979 throughout the oil blast period and when agricultural products portrayed over 70% of the country's gross domestic product. In 1986, as soon as the federal government approved Structural Adjustment Program (SAP) the country moved from a peg organization to an adaptable conversion scale organization where swapping scale is left absolutely to be managed by market powers however rather the normal system is the directed float whereby fiscal specialists mediate discontinuously in the remote trade advertise so as to achieve some imperative destinations (Mordi, 2006). This inconsistency in techniques and nonappearance of soundness in swapping scale approaches gathered insecure nature of the naira rate (Gbosi, 2005).

Benson and Victor, (2012) and Aliyu, (2011) saw that paying little respect to various undertakings by the organization to keep up an unfaltering swapping scale, the naira has downgraded all through the 80's to date, which as of now it is $1= \frac{1}{10}$ Outside trade organization is delineated as a framework that incorporates the age and apportioning of remote trade assets so as to decrease destabilizing transient capital streams. Hence, with the ultimate objective to ensure that remote trade dissemination and utilization are in consonance with money related necessities and the outside trade spending plan, the Central Bank of Nigeria screens the utilization of rare outside trade assets.

Conversion scale organization approach in Nigeria has experienced four significant stages, which are; settled equality solely with the British pound sterling and the US dollar (1959-1985), choice of the second-level remote trade advertise (SFEM) 1986-1994, introduction of the free outside exchange independent outside trade market(AFEM) 1995-1999, introduction of the between bank outside trade showcase (IFEM) 2000-2010. The primary Ease of the Nigerian conversion scale approach began in 1959 with the foundation of the Central Bank of Nigeria (CBN). The Central Bank of Nigeria was explicitly set up to deal with the nation's cash with the objective of accomplishing sound and stable national money. The pegged conversion standard system was the principal swapping scale routine grasped in Nigeria. The Nigerian pound was settled by the 195 a Central Bank of Nigeria was in charge of purchasing and moving outside cash in Nigeria.

In 1962, the Exchange Control Act was established by the Central Bank of Nigeria; it vested the Minister of Finance with the expert to allow endorsements for outside trade exchanges, while the Central Bank of Nigeria took care of private segment exchanges through approved merchants, i.e., business banks.

There was an important change (the first) in 1962 that expelled the pegged from Nigerian pound and the pound sterling. The change, through the 1962 Demonstration, characterized the Nigerian pound in terms of gold, which implied that Nigeria could whenever choose whatever alterations should have been made in the official rate between her currency and different currencies including the pound sterling. This, clearly, should send solid signs to the worldwide network that Nigeria, as an independent country, was allowed to settle on choices all alone. The intelligence of the activity was later legitimized when in 1967 the pound sterling was cheapened with no impacts on the Nigerian pound.

The second significant change happened in 1973 when the Nigerian cash was changed from the pound to the naira. This time, evidently overlooking charge knowledge of selfsufficiency, it was settled to the US dollar. In 1973 when the dollar was degraded, the estimation of the naira deteriorated. The deterioration endured because of the determination in the devaluation of the dollar. In this way, at the finish of 1973, the Nigeria government chose to suspend any immediate connection between the naira either the pound sterling or the US dollar. This drove in 1974/1975 arrangement of dynamic energy about the naira. This arrangement was colossally enhanced by the oil blast. The naira was pegged to a crate of the money related types of seven of Nigeria's genuine trading accomplices - United States and other countries; Exchange rate steadiness was the essential goal of the change. It was trusted that the naira would starting there be steady since a mishap in incentive because of the debasement of one money in the container would be repaid by the thankfulness or increment of another cash in the bin. The game plan was subsequently an instrument for hosing the impacts of outside conversion scale moves on local costs and equalization of installments. It is basic to understand that from around 1973 to late 1977, Nigeria assembled sizable remote stores emerging from the oil impact, which made it practical for the settled conversion scale approach to be controlled

by methods for save developments. Official hold exhaustion took care of private overabundance demand; in any case, there was a hesitance to downgrade when the save change turned out to be too low to help the fixed exchange rate. To check the situation, remote trade from the national bank was entirely apportioned and controlled through an import approving system. The issue was that when the level of reserves increased, the naira increased in value, yet it was not permitted to depreciate when the reserve level fell. This gave an idea that a ceaseless release on the official stores could continue the settled conversion scale routine. Along these lines, strict trade control measures were grasped. These included: the decline of consultancy and specialized charges dispatch table to remote counseling organizations from 60% to half; decrease of excursions for work from 15 to 14 days most extreme for each outing; decrease of fundamental travel recompenses to explorers and different voyagers, etc. These were joined by the arrangement of the Exchange Control (against damage) pronouncement of 1977, which set up councils to attempt remote trade guilty parties and the Comprehensive Import Supervision Scheme (CISS) in 1979 to guarantee a genuine check of costs, volume and nature of imported products worth over \$33,000. The plan was additionally ventured to check other outside trade bad behaviors, for example finished and under invoicing of imports, importation of out of date at and hardware at the costs of new ones, importation of outdated and spoiled sustenance things and lapsed medications, distortion of reports, remote trade claims for personalities not transported in or administrations not rendered, and overpricing of national government ventures with a viewpoint to keep the increases abroad in outside trade. Around 1980 to 1981, the level of trade control was diminished; for the most part because of advancement to be determined of installments achieved by positive improvements in the universal oil advertise. This arrangement inversion was additionally because of the trouble related with tight trade control bearings. The moderately more liberal arrangement of exchange controls in the early 1980's was for the most part gone for checking wild maltreatment and acts of neglect in foreign exchange transactions, for example, Over-invoicing of import charges, sneaking of monetary forms and merchandise across the borders, and false documentation import bills. The period going from 1982 and 1986 indicated the last period of the approach of trade controls in Nigeria somewhere in the range of 1959 and 1993. The stringent trade control measures as in earlier periods

were gone before by serious equalization of installments weights. Outside trade receipts on both oil and non-oil send out were reliably not as much as payment for imports. For example, somewhere in the range of 1981 and 1984, the total fares receipts were not exactly the absolute imports. This incited a slide in outside stores and thus to the amassing of outer obligations because of the inescapable dependence on momentary outside advances in financing exchange shortfalls.

Foreign exchange is the methods for installment for universal exchanges and it is comprised of convertible monetary standards that are commonly worthy for the repayment of worldwide exchange and other outer commitments. It is the target of each economy to have a steady rate of trade with its exchanging accomplices. In Nigeria, this objective was not come to regardless of the way that the nation set out on depreciation to advance fare subsequently, balances out the rate of trade. The administration even went moreover to set up the foreign exchange market (FEM) to balance out the swapping scale contingent upon the condition of parity of installments, the rate of expansion, Domestic liquidity and work. The inability to understand this target exposed the Nigerian economy to the test of an always fluctuating swapping scale till date. The outside trade market can be viewed as a medium or course of action of communication that exist between the dealers and purchasers of remote trade in an offer to arrange a together satisfactory cost for the settlement of worldwide exchanges (ile 1999: 325).

According to Afolabi in the year 1999, he characterized conversion scale as the cost of specific cash as far as the other. Generally, it is the order at which specific cash would trade for another. At the course of instruction of the Pre-Babangida organization years the Nigeria money was over the dollar and keeping pace with the pound. In any case the naira has deteriorated in an incentive, as it were, since 1986 with the presentation of the basic change program (SAP), over the course of the Babangida organization since the presentation of Structural Adjustment Program in 1986, trade the board has been at the focal point of macroeconomic arrangement. The overriding goal has been to have a reasonable and stable swapping scale consistence with the inside rate of naira and to diminish the economy's dependence on the outer division. Preceding 1986, one authority outside trade advertises existed in Nigeria and trade rates were formally settled by the

Central Bank of Nigeria. At that point in September 1986, the outside trade showcase was isolated into two: the primary level remote market and the second - level outside trade advertise (SFEM). The real part of the SFEM was that the costs of outside monetary standards as against the naira were resolved through aggressive offering with the costs settling at focuses. Where the accessible supply of the monetary forms is cleared the offering was as far as money. The United States dollar, against the naira and the rates for different monetary standards were correspondingly decided after the assurance of the dollar rate. (Essien 1990:129). With the establishment of SFEM the rate of naira degrading by the national bank gathered force, with the point of view of mixing the first and second level markets inside the briefest conceivable time, which was around one year. In July 1987, the first and second level outside trade advertises were consolidated and called the remote trade showcase (FEM). On March twentieth 1987 the national bank displayed the Dutch closeout framework which was proposed to inject increasingly alert in the offering sessions since dealers who offer over the minor rate would be made to buy at that rate the Dutch sale framework was depended upon to control the sharp deterioration of the naira.

In the year 1994, an ordinary merger of the official market and the parallel market happened. The parallel market step by step minimized the official market. The remote trade showcase was changed in 1995 with the presentation of the independent outside trade advertise (AFEM) for secretly sourced store at market decided trade rates (Central Bank of Nigeria Annual Report 2001).

Around 1995, the peregrine exchange market was partition into three tiers. The administrative fine-tuned through the handling of the market mechanism, and the parallel market. Still, there was more preponderant depreciation of the naira. There was withal an initiation of dual exchange rate regime in 1995 which was a coalescence of both the fine-tuned and the market determined rate. The dual exchange rate regime was controlled in 1997 with the official selling rate fine-tuned to about N22 to US\$1 for culled priority regime transactions. The firmness of the nominal exchange rate accomplished in 1995 and 1996 at the AFEM was commonly sustained in 1997.

The exchange rate of the Nigerian naira devalued in all segments of the peregrine exchange market due to the exordium of IFEM (Inter-Bank Peregrine Exchange Market). Which commenced operation on October 25.The exchange rate devalued to N97.42 toUS\$1.00 and devalued on the average by 7 percent to N101 to US\$1) in 2000. There was a phenomenal depreciation in early April 2001 with the naira sinking to N113 to US\$1.00 as against the official rate. This depreciate perpetuated as the naira sank again to about N126 to US\$1.00 around December 2002, and N136.5000 to US\$1.00 in December 2003 then to N132.85 in December 2004.the Central Bank of Nigeria was prosperous in keeping to its target on magnification of broad cash M2 in 2004.

1.2 Statement of the Problem

In an offer to stress the issue of fluctuating exchange rate on the Nigerian economy, we analyzed some of the quandaries mitigating the fluctuation of exchange rate on the Nigerian economy as optically discerned below. The exchange rate of the naira was moderately stable between 1975 and 1979 during the oil boom era. This was however the case before 1990 once agricultural products accounted for over 70% of the country's gross domestic product. However as a result of the development in the petroleum oil sector in 1970, the portion of agriculture in total export declined essentially while that of oil expanded. Furthermore, since Nigeria as a country is highly dependent on import of input and capital goods for its engenderment process, the sectors involved in the production of goods and services have become increasingly dependent on the external sector for import of non-labor input. This indeed has affected the local content of the country as resources lie untapped and attended to. Relentless import of raw materials and foreign goods has also led to the abandonment of the local industries, another problem worth mentioning here is that since this import of raw materials has turn to be a way of life for the economy, the government incline to get used to it and as a result, the effect of fluctuation in exchange rate on the economy has not received adequate attention from various administrations of government.

Instabilities of foreign exchange rate also pose numerous issues on international trade between economies. Thus as a result, exported goods from economies with unfavorable exchange rate will be of price advantage to the importing nation while imported goods from nations with formidable exchange rate tend to be of price disadvantage to exporting nations with detrimental exchange rate. This in essence will affect the balance of payment of the exporting nation contrarily if the import bills becomes higher than export receipts yet if a nation must attain economic development and growth, it needs a sensible level of import and incompetence to import therefore can affect negatively on a nation as well as its inability to export, little wonder Jhingan (1997), stressed that rate fluctuation cause uncertainty and impede on international trade. This vulnerabilities anyway in trade dealings post loads of problems, as an example, inflation, that confirm the inner balance of a nation, it likewise have an inclination to undermine the worldwide intensity of non-oil fare and create transcription and projection difficulties at each small and macro levels of the economy, some very little and medium scale enterprise are clogged out attributable to low dollar to Nigerian monetary unit rate of exchange, unemployment, parity of installment problems and increase within the level of financial condition. some of the measures embraced by the administration to assist reduce the never-ending devaluation of the Nigerian monetary unit incorporate the presentation of IFEM in 1999, the AFEM and therefore the re-presentation of the merchandising System in July 2002, with the destinations of realigning the rate of exchange of the Nigerian monetary unit, allotment external reserves, upgrading market straightforwardness and checking capital departure from the state. Below this framework, the Bank mediate double weekly and end-clients through approved merchants purchased exchange at their bid rates. The speed that cleared the market (marginal rate) was embraced because the ruling rate for the amount, up to the subsequent auction. Merchandising System non heritable an honest live of stability in rate similarly a discount within the arbitrage premium between the official and parallel market rates. totally different measures adopted to boost the operational productivity of the exchange market enclosed the unshackled access granted holders of standard housing accounts to their assets, whereas utilization of funds within the non-oil export housing accounts were allowable for qualified transactions. In spite of those measures, the worth of Nigerian monetary unit has continuing to fall down.

Since September 1986, at the point when the market decided Exchange rate system was displayed by methods for the second level remote trade advertise, the naira swapping scale has demonstrated the features of steady debasement and unsteadiness. This

precariousness continued with cheapening of the naira in the outside trade showcase has achieved diminishes in the lifestyle of the majority, surprising expense of creation which similarly prompts cost push expansion. It has furthermore tended to undermine the worldwide force of non-oil fares and make orchestrating and projections troublesome at both smaller scale and full scale dimensions of the economy. A tolerable number of little and medium scale adventures have been stifled out as a result of low dollar/naira Exchange rate in this way unique issues coming about in view of differences in return rates can moreover be distinguished.

This improvement of the swapping scale en route of debasement since 1986 has raised a lot of issues on the impact of Exchange rate approaches on the Nigerian economy. Numerous different elements have credited to the gliding Exchange rate framework, for example, frail generation base, unguided exchange progression arrangement, over dependence on the blemished market framework, import subordinate creation structure, loss of fiscal approach and all the more significantly, poor remote trade the board framework.

1.3 Objectives of the Study

In an exceedingly import dependent economy like Nigeria, the continuous naira exchange rate has turned out to be one of the most widely controversial issues in the country today. This is not stunning as this topic has had plenty of influence on the Gross Domestic Product (GDP). The Gross Domestic Product (GDP) here however is an indicator of economic growth in an economy. In essence, the major objective of this study includes:

- i. To inspect the effect of conversion scale change on the Nigerian financial development.
- ii. To take a gander at the idea of the relationship that exists between conversion scale variances and Nigerian financial development.
- iii. To help offer a few suggestions dependent on the discoveries of the investigation.
- iv. To decide whether the consistent variance of swapping scale of naira affect the way of life of the national, send out and to what degree.

 v. To look at the idea of the connection between the precarious conversion scale changes and monetary development in Nigeria, and to decide the organization of loan cost and swapping scale in Nigeria.

1.4 Statement of Hypothesis

The hypothesis guiding this study is of two types;

H0; null hypothesis

H1; alternative hypothesis

H0 is not significant, while H1 is significant.

H0: Exchange rate does not have any vital impact on Nigeria Economic growth.

H1: Exchange rate has a vital impact on Nigeria Economic growth.

1.5 Significance of the Study

The study acknowledges the qualities and inadequacies of exchange- rate policy and administration, differentiates those economic variables that are mostly affected by exchange- rate economic instability and provides the general population the extra attention to foreign trade and its economic impact. The different discoveries of this would empower the legislature and monetary approves to gadget, alter and embrace a better exchange transaction for the economy. In essence, the study will benefit the following;

- i. This study will benefit exchange rate policy makers in helping them to achieve the best policy necessary to move the economy towards growth.
- ii. The citizens will also benefit if the policies formulated as a result of the findings from this study pose a positive short- or long- term effect on the economy.
- iii. Again the federal government will indeed directly benefit because it will require them to assess the impact to which the exchange rate variation affects the country's macroeconomic variables.
- iv. The government will also determine from this study how the unstable exchange rate of the economy affects the demand for domestic products in contrast to foreign products.
- v. Future researchers will also benefit as this study will serve as a future guide.

1.6 Scope and Limitation of Study

This study will cover the time frame over the year 1986-2016; a sample size of 31 years which will be satisfactory for time series analysis. The prime of this time frame is considerable informed by the availability of data, and furthermore due to the fact that the Nigerian economy has experienced different types of exchange rate regimes over the given time frame. The data gathered are secondary data which is derived from Central Bank of Nigeria (CBN).

1.7 Definition of Terms

- i. Exchange rate: This can be the currency in price terms of another country currency.
- ii. Autonomous Foreign Exchange showcase (AFEM): This is a sort of market where banks are permitted to source and deal their outside trade and utilized at market decided rates.
- iii. **Cost of Current factor:** It is utilized to gauge the rate of Gross Domestic Product (GDP).
- iv. **Dual exchange rate:** This circumstance happens in which two trade rates are in presence in a specific economy.
- v. Dutch Auction System (DAS): This is a technique for deciding the exchange rate through sale, where the bidders pay as indicated by their offer rates.
- vi. First– Tier Foreign Exchange Market (FFEM): This has to do the government and its organizations buy outside cash at authoritatively decided rate of trade.
- vii. Inter-Bank Foreign Exchange Market (IFEM): It was about the consideration to extend the outside trade showcase through dynamic cooperation of other player's model, bank and oil organizations, and non-bank money related establishments. This is where banks can pitch remote trade to each other and to different clients at their own trade rates.
- viii. Second-tier foreign exchange market (SFEM): It involves the nonadministrative bodies buying and moving outside trade at a market decided Exchange rate.

ix. Foreign exchange: Foreign exchange is a payment arrangement for foreign transactions; it comprises of financial assets from other countries that are also free to negotiate financial transactions.

CHAPTER TWO

LITERATURE REVIEW

2.1 **Theoretical Framework**

Exchange rate can be defined as the rate at wherewith one particular country's money is traded for the money of another country (Dornbusch, 2004). Mankiw, (1997) characterize it as the cost at which trade between two nations occur. Nigeria monetary related approach expert is glimpsed with the issues of having a consistent and useful exchange rate which is in accordance with other macroeconomic basics. This is on account of exchange rate instability can have genuine unfavorable outcomes on speculations, costs and worldwide exchange choices. A realistic exchange rate is one that mirrors the quality of remote trade inflow and outflow, the supply of stores and also guaranteeing balance in a critical position of installments that is reliable with the cost and value levels of exchanging accomplices.

Existing writing has two basic viewpoints on the transmission framework on the impact of conversion scale on monetary exercises. From the standard viewpoint, the conversion scale works through the total interest channel. It has transformed into a dispute that the crumbling of the swapping scale licenses overall force of nearby items which improves the present record equalization of the nation. The difference in worldwide force of nearby items empowers augment in fare which thus expands the total interest in the economy. Edwards (1989) announced that if there is any misalignment in conversion scale in type of cash depreciation, it will disable tradable exercises and accordingly bringing down net fare and the total interest in the economy. He contends that when there's a genuine deterioration, it creates unfavorable impacts which results in generally speaking monetary withdrawal. Compression exists through some basic procedure as depicted beneath:

Initial, an ostensible devaluation of money will cause an ascent in the general value level coming about to low total interest. This thusly causes monetary compression. Exchange rate advancements and swapping scale defenselessness are basic determinants of overall exchanges. In Nigeria, these variances as indicated by Akpokodje and Omojimite (2010) have been influenced by changing example of worldwide exchange, institutional changes in the economy and auxiliary changes underway. Advancing, Ogunleye (2010) recognized that the genuine Exchange rate in the Nigerian economy has been essentially affected by outside stuns coming about because of the ideas of world cost of horticultural wares and oil cost, both noteworthy wellsprings of Nigerian fare and remote trade income; fighting that when the economy relies upon rural fares, genuine swapping scale unpredictability was less perceptible given the way that these items were liable to low instability and that there were many exchanging accomplices' monetary forms engaged with the estimation of the nation's genuine conversion scale. To him, this negligibly influenced the genuine Exchange rate fluctuating by just 0.14 % between the time of 1970 and 1977. The expanded reliance of the nation on oil brought about serious exchange stuns from worldwide oil value stocks fluctuating in the naira conversion scale by 10% between the periods of 1978-1985 (Lama et al, 2010). And according to Iyoha and Oriakhi (2002), developments in real exchange rate amid this period were nominal stocks coming about because of fiscal deficits. Working together, Aliyu (2009) noticed that the oil bonus brought about unnecessary monetary consumption in goal-oriented advancement ventures; and when the fortune finished, the administration depended on financing its uses through cash creation. This expansionary money related financial approach as per Lu and Zhang (2003) applied upward weight on inflation, exasperating sharp developments in genuine real exchange rate movements.

From 1986, Oyejide et al (1996) sets the gathering of the auxiliary change program (SAP) transformed into a contributory factor in trim the components of genuine swapping scale in Nigeria. One of the cardinal reasons for this methodology was drifting ostensible conversion standard strategy. As the naira was allowed to float, the ostensible swapping scale development ended up being progressively explained, adding to more grounded improvements in conversion scale amid this period.

Somewhere in the range of 1986 and 1992, Alama et al (2010) saw that the mean yearly charge in genuine swapping scale in the nation expanded to 25% lessening to 4.5% somewhere in the range of 2000 and 2006. Great terms of exchange, less financial strength, powerful money related strategy actuated by increasingly free and straightforward national bank and all around oversaw ostensible swapping scale arrangement added to this decrease in outside conversion scale instability.

Disregarding the way that there are a couple of speculations on the relationship between conversion scale variances and monetary development, from four view point theoretically are appropriate to our examination. All the four speculations huge in our examination are immediately discussed here;

2.1.1 Optimal Currency Area (OCA) Theory

The most earlier and driving hypothetical choice of foundation in swapping scale organizations lays on Optimal Currency Area (OCA) hypothesis, made by Mundell (1961) and McKinnon (1963). This hypothesis is stressed over change of the business cycle and trade. It relies upon thoughts of the symmetry of stuns, the dimension of responsiveness, and work advertise versatility. As demonstrated by the hypothesis, a settled conversion scale organization can extend trade and yield advancement by diminishing swapping scale defenselessness and along these lines the expense of supporting, and moreover invigorate speculation by cutting down money premium from financing costs. Regardless, it can moreover diminish exchange and yield development by stopping, conceding or directing the crucial relative value modification process.

Present day conversion standard hypotheses are focused on the money related and the advantage market or portfolio balance ways to deal with the parity of installments (BOP), and perspectives the swapping scale, generally, as a simply budgetary wonder. A conventional conversion scale hypothesis, on the opposite side, is fixated on exchange streams and add to the clarification of swapping scale development over the long haul. With fiscal streams at present overshadowing exchange stream, the intrigue has moved to current swapping scale speculations, yet conventional hypotheses stay vital over the long haul (Salvatore, 2011).

In 1961 Canadian financial analyst Robert Mundell uncovered his hypothesis of the optimal currency area (OCA) with stationary desires. He illustrated the components fundamental for a district to qualify as an ideal money territory and gain from a typical cash. In this underlying model, the essential distinction is that if topsy-turvy stuns undermine a nation's economy inside the OCA, a framework with gliding trade rates is viewed as progressively appropriate so as to think the negative impacts of such stuns inside the specific nation encountering them.

According to Mundell, there are four (4) main criteria for an optimal currency area:

- Increased work portability all through the territory. Simplicity of work quality incorporates the capacity to travel by means of improved visas, an absence of social obstructions that repress free development, for example, unique dialects, and institutional approaches, for example, the exchange of government advantages or benefits.
- Capital portability and wage adaptability and cost. On the off chance that budgetary assets can stream effortlessly between zones that exchange every now and again with one another, this portability can encourage by and large exchange and lift economies. This additionally permits the market powers of interest and supply to appropriate cash where it is required and keep up a decent monetary framework.
- A money hazard sharing framework crosswise over nations. A hazard sharing framework in a cash association requests the dispersion of cash to locales that encounter financial troubles, regardless of whether because of the appropriation of the initial two characteristics or on the grounds that these regions are less created. The criteria are questionable in light of the fact that it is politically hard to move in individual nations; all things considered nations with surpluses are reluctant to surrender their income. The European sovereign obligation emergency of 2009-2015 is viewed as proof of the disappointment of the European Economic and Monetary Union (EMU) to fulfill these criteria as unique EMU strategy initiated a no-ransom provision which before long wound up apparent as unsustainable.

 Similar business cycles. All members inside the zone must have comparable business cycles with the goal that monetary blasts are been shared, and the OCA's national bank can balance and diffuse financial subsidence by advancing development and containing expansion.

Mundell proceeded to revise this hypothesis of the ideal money territory to command that a closer arrangement of universal hazard partaking in the zone was not just important to the accomplishment of the OCA, yet significant. Around 1973 "Exceptional Arguments for Common Currencies," Mundell directs that nations in surplus must moderate market stuns through monetary and institutional reconciliation by means of "save pooling" or income sharing. Along these lines, a skimming swapping scale that focuses on monetary stun in the nation from which it begins isn't viewed as fitting criteria for an OCA. Rather, in light of the fact that the money is shared and the general economy of the district would pick up from engrossing monetary stun in general, setting the weight of subsidence and devaluation in one nation or locale alone is unsustainable.

2.1.2. Purchasing Power Parity

The hypothesis of buying power equality (PPP) demonstrates the association among costs and conversion scale. Regardless of the way that the beginning stages of the PPP thought is detectable to the Salamanca School, harking back to the sixteenth century Spain, its cutting edge use as a hypothesis of swapping scale assurance began with crafted by Gustav Cassel (1918), who prescribed PPP as a technique for changing pre–World War I trade rates equalities for countries set out to return to the best quality level framework after the contentions was finished up. Some adjustment was vital on the grounds that countries that left the best quality level in 1914 saw broadly extraordinary rates of expansion amid and after the war. Generally speaking of conversion scale assurance, the most direct and compelling sort of PPP (for example outright PPP) relies upon an overall multi-extraordinary arrival of the law of one cost. Outright PPP consider that the swapping scale ought to change in accordance with equivalent the costs of national bushels of merchandise and ventures between two countries as a result of market powers driven by exchange.

Purchasing Power Parity exchange rates enable costing however to reject benefits or more all don't think about the distinctive nature of merchandise among Nations. For instance, expect that two nations fabricate indistinguishable amount of products from one another in every one of two opposite years. Since market trade rates vacillate generously, when the Gross Domestic Product of one nation estimated in its own cash is changed over to the next nation's money utilizing market trade rates, one nation may be gathered to have higher genuine Gross Domestic Product than the other nation in one year however bring down in the other; both of these inductions would decrease to mirror the conviction of their overall dimensions of generation. Be that as it may, on the off chance that one nation's Gross Domestic Product is changed over into the other nation's cash utilizing Purchasing Power Parity trade rates rather than watched advertise trade rates, the false induction won't happen. Basically Gross Domestic Product Purchasing Power Parity controls for the diverse expenses of living and value levels, typically with respect to the United States dollar, along these lines empowering an increasingly precise delineation of a given country's dimension of generation.

2.1.3. The Monetary Model of Exchange Rates

This hypothesis suggests that trade rates are settled amid the way toward changing the stock or total interest and supply of cash in each nation. As indicated by the fiscal methodology, the ostensible interest for cash is reliable over the long haul and furthermore emphatically identified with the dimension of ostensible national salary yet conversely identified with financing cost. The country's cash supply is equivalent to its money related base occasions the multiplier factor. The country's money related base is equivalent to the residential credit built up by its financial experts in addition to its universal hold. Except if satisfied locally, an abundance supply of cash in the country results in a surge of stores, or an equalization of installment shortage under settled trade rates and a deterioration of the country's money (with no universal stream of stores) under the adaptable conversion standard. The contrary gets put with an abundance interest for money in the country.

2.1.4. The Portfolio Balance Approach

The portfolio balance approach moreover called the benefit showcase approach differs from the fiscal methodology in that neighborhood and outside securities are thought to be defective substitutes, and by hypothesizing that the swapping scale is resolved during the time spent adjusting the stock or all out interest and supply of monetary resources (of which cash is just a single) in every nation. Thusly portfolio balance approach can be seen as a progressively practical and agreeable rendition of the financial methodology. In the portfolio balance model, individual and firms hold their monetary riches in a blend of neighborhood cash, nearby bond, and an outside bond named in remote money.

The portfolio balance approach is an augmentation of the financial model of trade rates concentrating on the effect of securities. As per this methodology, any adjustment in the financial states of a Nation will directly affect the interest and supply for the residential and the outside bond. This move inside the interest/supply for securities can progressively impact the swapping scale between the local and remote economies. The key favorable position of the portfolio approach when contrasted with conventional methodologies is that the budgetary resources will in general change significantly quicker to new financial conditions than tradable products. In any case, upheld experimental evidence, the portfolio balance approach is certainly not an exact indicator of trade rates.

The Assumptions of Portfolio Balance Approach

The portfolio balance approach is based on numerous assumptions:

- 1. The PPP (purchasing power parity) does not hold.
- 2. There is no perfect substitute for bonds.
- 3. The interest parity that is uncovered does not hold.

4. It assumes superb mobility of capital in the absence of capital controls and comparable hindrances to investment.

5. It assumes a high completion and limited transaction costs inside the money markets.

6. There are three (3) assets that is accessible for investment for every single household which are; foreign bonds, domestic bonds and money.

7. Expectation of the exchange rate is unchanged.

Portfolio Balance Approach vital Points

i. It offers a more simple and real framework.

- ii. Based on empirical confirmation, this approach has not shown an exact predictor of exchange rates.
- iii. It stresses on the significance of multinational financial markets (particularly has to do with bond markets).
- iv. It assumes that arbitrage exists between 2 (two) economies.

2.2 Conceptual Framework

2.2.1 An Overview of Naira Exchange Rate Management

Before presenting Structural Adjustment Program (SAP) in 1986, the naira swapping scale was settled. It was pegged at first to the British pound sterling and along these lines to the United States dollar as a feature of worldwide conversion scale the executives under the Bretton woods framework. Around 1973, the stay monetary forms, the dollar and sterling debilitated significantly, continued shortcoming brought into sharp center the situation, characteristic in the strategy for deciding the swapping scale of the Nigerian money. The exchange rate from 1986 was changing when a dollar was 3.75 and till date worst because of wrong political leaders that change a lot in the system making the exchange rate fluctuating badly which currently it is a dollar to N360 naira.

The issue with Exchange Rate organization course of action in Nigeria can be pursued back to 1960 when the Nation ended up being politically free, in spite of the way that the Central Bank of Nigeria and Federal Ministry of Finance appeared two years sooner (Ogiogio, 1996). Conversion scale Management can be followed to two divisions/stages; pre-Structural Adjustment Era of 1960-1985 and post-Structural Adjustment period 1986 till date. The above parallel portrayals occasioned an immovably recorded gathering of around five phases, to be explicit:

Phase I: Fixed parity between the Nigerian pound and the British pound (1960-1967): There was a settled balance of a planned association between the Nigerian pound (N£) and the British pound sterling (B£) until the point that the British pound was downgraded in 1967.

Phase II: Fixed parity between the Nigerian pound and the American dollar (1967-1974): This time, there was a settled correspondence with the USD, in light of the International monetary Crisis of the middle Nineteen Seventies, which obligated the United States Richard Milhous Nixon to degrade the dollar, Nigeria by then abandoned the U.S. dollar and re-kept its cash at standard with British pound. Amid this period of Nigeria's exchange rate procedure it complete up obvious that there have been detriments in pegging the naira to singular cash that aggravated its forsaking.

Phase III: Independent exchange rate policy (1974-1976):

Expelling the peg strategy of naira to solitary money of US dollar in 1974-1976, CBN picked to an independent Exchange Rate Administration approach that pegged the naira to either the US dollar or British Pound Sterling whichever cash was more grounded in the outside exchange publicize (see Ogiogio, 1996).

Phase IV: Pegging the naira to an import-weighted basket of currencies (1976-1985):

Here, import-weighted holder attempt was done in the locale of 1976 and 1985. Because of oil effect of mid 1970s, naira was deliberately minimized, and, to guarantee tenacity and common sense of the naira, it was pegged to a holder of financial gauges which incorporates the seven fiscal types of Nigeria's authentic exchanging associates; the American dollar (USD), the British pound sterling (GBP), the German check, the French franc (CFA), the Dutch guilder, the Swiss franc (SWF), and the Japanese yen (JPY). The 1981-1985 worldwide money related crisis instigated separation of Exchange Rate while naira was awfully over-regarded against the US dollar and gave Federal Government of Nigeria two choices; one is to proceed with the overstated naira because of settled transformation scale while the second decision is to get a handle on the IMF-World Bank imported Structural Adjustment Program which adored market powers (free hands of Demand and Supply). The Federal Government of Nigeria (FGN) picks the second option and exhibited the Second-level Foreign Exchange Market (SFEM) which later changed to outside exchange feature (FEM) in September 1986 in the midst of IBB schedule.

Phase V: Market determined exchange rate policy (1986 – Date):

The Nigerian fifth exchange rate administration started during post-Structural Adjustment Program era up to date. The first market, SFEM was built up with prompt impact in September 26, 1986. The Nigerian forex showcase was changed by presenting an Autonomous Foreign Exchange Market (AFEM) and the Inter-bank Foreign Exchange Market (IFEM) in 1995 and 1999 independently. The AFEM changed into a step by step, two-way quote IFEM, October 25, 1999. From 16 July 2002, CBN has replaced IFEM with the Dutch Auction System (DAS) which has been in assignment till date.

2.2.2 Exchange Rates Policy

The swapping scale of an economy impacts total interest through its effect on fare and import expenses, and course of action makers may abuse this affiliation. Deliberately changing trade rates to affect the large scale monetary budgetary condition may be seen as a sort of cash related technique. Changes in trades' rates at first work there course into an economy by methods for their effect on expenses. For example, if £1 exchanges for \$1.50 on the outside trade showcase, a UK thing offering for £10 in the UK will offer for \$15 in New York. In case the conversion standard by and by recognizes, with the objective that £1 buys \$1.60, the UK thing in New York will presently offer for \$16. Expecting that ask for in New York is cost inelastic, this is elevating news for UK exporters since salary in USDs will rise. Regardless, if ask for is flexible in New York, the effect of the valuation for sterling would be destructive to UK exporters. In case the UK furthermore imports stock from the USA, the rising in the swapping scale would suggest that a \$10 US thing is at present more affordable in London, tumbling from £6.67p to £6.25p. Traders do reasonably well from the vitality about the pound, in that the expense of imported rough materials or finished items falls.

Thus, at whatever point the conversion scale changes there will be a twofold effect, on both import and fare costs. Changes in import and fare costs will provoke changes in import and fare volumes, causing changes in import spending and fare pay.
• How exchange rates are manipulated: Trade rates can be controlled by acquiring or moving monetary forms on the outside trade showcase. To raise the estimation of the pound the Bank of Britain buys pounds, and to cut down the regard, it offers pounds. Rates can in like manner be controlled through financing costs, which impact the interest and supply of Sterling by methods for their effect on inflows of hot money. Modifying trade rates is normally seen as a kind of money related arrangement.

• Effect in exchange rate: Accepting the economy has a yield hole, a decrease in the swapping scale will diminish send out expenses, and, expecting request is flexible, trade income will increment.



Figure 1.1 illustration of an effect in exchange rate

A fall in the swapping scale will in like manner raise import costs, and accepting versatility of interest, import spending will drop. The joined effect is an expansion in total interest and an enhancement in the UK parity of installments.

• **Cost push inflation:** A decrease in the conversion scale is inflationary for a second reason - the expense of imported rough materials adds to creation expenses and makes cost-push swelling.



Figure 1.2 illustration of cost push inflation

Flexible exchange rate policy

The principle justification behind the choice of flexible exchange rates is that the independence in financial policy they allow once capital skillfulness is high in line with Dornbusch, et al. (1990), during this approach, flexibility in exchange rates as expressed allows a nation to choose its long run rate of inflation and, it liberates financial policy which will be gone for domestic adjustment. Besides, exchange rate flexibility would facilitate the response of policy to external shocks by initiating an automatic alteration of the domestic economy to changes within the balance of payments. In line with Dornbusch and Giovannini (1990) argued that an economy adjusts to changes in cash aggregates underneath flexible exchange rate regimes, except for financial policy, a versatile exchange administration would mollify the constraints on accessible approach instruments. Limitations forced by charge per unit fixity on financial and financial policies will impede the authorities' capability to impact domestic economic conditions moving the

larger a part of the amendment procedure on the real economy. During this manner, one would expect, ceteris paribus, the next instability of development underneath a system of mounted charge per units in relevance a flexible exchange rate arrangement.

Obaseki and Bello (1996) is of the view that a flexible exchange rate mechanism was adopted to rectify an apparent overvaluation of the Naira, fortify the external sector, guarantee intensity of the economy and above all secure a sensible exchange rate. At the end of the day, the development from fixed regime to an flexible regime was to invigorate development and keep up a solid outside equalization, which is what is by and large alluded to as macroeconomic solidness.

Breger, et al. (2000) held that following monetary emergency in ongoing decade, numerous nations change starting with one conversion scale routine then onto the next (for the most part unbending one to progressively adaptable one) and this has fueled the old discussion on the decisions and determinants of swapping scale routines as financial experts started contending on what proper trade routine for an economy is a nation receives, in the course of recent years, business analysts have created different proposals on the fittingness of trade routine.

• The Policy of Fixed Exchange Rate

The contrary, under settled conversion scale organizations, cash related methodology will be diverted, not completely or totally, to seek after outer parity. Likewise, inside seeing high capital transportability and perfect substitution among nearby and outside assets, financial approach ends up being completely given to the obstruction of the swapping scale equality. Without a doubt, when the apparent transformation standard is soundly settled, advance charge uniformity predicts the fairness of family and remote financing costs, balanced for peril premium and trade costs. Any extra money creation will push private financing costs downwards and trigger a proportional proportion of capital flood. Thusly, in a little country, budgetary methodology ends up inefficient in offsetting the economy when the change scale is pegged and capital is exceptionally adaptable, according to Obstfeld, 1994.

In Eichengreen (1998) view, settling the conversion standard infers three essential measurements, firstly, that the family country imports monetary aggravations occurring in the base country aside from if devaluation is finished. Furthermore settling conversion scale likewise obliges financial arrangement that is subordinated to the swapping scale strategy leaving a room that depends on the measure of outside trade saves accessible to money related specialists. The space for monetary approach can liberally decrease. Thirdly, the tradeoff between the development ace of last withdraw work and the rebellion of the swapping scale equity at times makes money related experts interventions inefficient inside observing bank experiences, these focuses may make the obstacle of pegged rates unwanted to two or three nations at some time period. What's more, pegged trade rates would almost certainly increment development instability in an inadequately adaptable economy on the grounds that the loss of programmed alteration and the decrease in fiscal arrangement self-sufficiency when capital markets are very coordinated are not adequately made up for (Goldstein, 2002).

2.2.3 Calculating Exchange Rate Depreciation/Appreciation

- 1. During 2015, the Naira went from \$0.0108017 to \$0.0123265. By what proportion did the Naira overvalues/devalues against the United States dollars?
- 2. By how much has the US dollar depreciated/appreciated against the Naira

Solution:

 $\frac{0.0123265 - 0.0108017}{0.0108017} = 14.12\% \text{ appreciation of naira}$

 $\frac{0.0108017 - 0.0123265}{0.0123265} = -12.37\% \text{ depreciation of the dollar}$

3. Suppose the dollar overvalues 400% against the Nigerian Naira. How much has the Naira depreciated against the dollars.

Formula: Amount of Euro Appreciation (depreciation) =
New dollar value of euro – old dollar value of euro
old dollar value of euro

 $\frac{e1-e0}{e0}$

Amount of dollar depreciation (Appreciation)

<u>New euro value of dollar – old euro value of dollar</u> Old euro value of dollar

 $\frac{e0-e1}{e1}$

Solution

$$e^{1-e^{0}} = 400\% = 400/100 = 4$$

 $e^{1-e^{0}} = 4 = e^{1-e^{0}} = 4e^{0}$

$$e1 = 5e0$$

$$\frac{e0-e1}{e1} = \frac{e0-5e0}{5e0}$$

e0

= $\frac{-4e0}{5e0}$ = -0.80 = 80% depreciation of the Naira.

4. On July 5, 2018, the Naira fell 17% against the dollars, by how much has the US dollars appreciated against the Naira?

$$\frac{e1-e0}{5e0} = -17\% = \frac{-17}{100} = -0.17$$
$$\frac{e1-e0}{e0} = -0.17 = e1-e0 = -0.17e0$$

e1= 0.83eo

$$\frac{e0-e1}{e1} = \frac{e0-0.83e0}{0.83e0} = \frac{0.17}{0.83}$$

= 0.2048= 20.48% Appreciation of the dollars.

2.2.4 Concept of Exchange Rate Volatility

Mundell (1968) has wonderfully set out the consequences of money related streams and monetary markets mix. He showed that, with expanding capital flexibility, monetary approach is compelled and from time to time inefficient under settled exchange rates. The supply of cash, which is endogenous, adjusts to the economy. This surmises an extended affectability of the economy and improvement to disrupting impacts.

Eichengreen and Hausmann (1999) and Kamil (2006) set that outside presentation may in like manner be cleared up by if creating nations can't acquire from remote money related markets in their own cash, paying little heed to the term of the obligation. All long run borrowings (local or remote) must be made in outside money. Thusly, outside introduction and swapping scale routines are detached. In the event that the primary reasons for outside presentation are other than the outer obtaining in remote cash at that point, a progressively adaptable conversion standard will present some swapping scale hazard driving financial operators to fence their remote money positions. This cuts down the weakness of local firms and banks to conversion scale changes and world financial markets disrupting impacts in this way provoking a lower flimsiness being developed rates. Asides from dangers identified with outer introduction, settled trade rates routines as often as possible go under theoretical assaults.

Require Yeyati and Sturzenegger (2002) accomplished the end that conversion standard adaptability diminishes development unpredictability in creating nations though settled and middle of the road routines perform superior to skims in industrialized countries. Bergwal (2002) reenacted the Swedish GDP steadiness more than 1974-1994 with various theories about the conversion scale routine. He inferred that the Gross Domestic Product would have been more marginally stable under adaptable trade rates than under the real customizable peg which thus would have unmistakably commanded an unavoidably pegged conversion standard.

2.2.5 Determinants of Exchange Rate Regimes

In the studies done by Meon et al, 2002, expected that the observational discoveries on the determinants of swapping scale routines are disputable and various. The purpose

behind the distinctions among the discoveries depends for the most part on the nation tests mulled over, time spans, routine characterizations utilized in the examinations, estimation strategies and suspicions of econometric models.

Gosh et al, (1995) demand that if a flexible exchange rate plan can decrease development unpredictability, for what reason complete a few nations have response to different types of fixed exchange rate frameworks which, as previously mentioned will restrict financial self-governance impressively, Credibility in exchange rates, fiscal and money related approaches serves now and again as a defense to the decision of a settled Exchange rate administration. Nominal exchange rate fixity empowers a nation to import the money related approach validity of the base nation. This gain of validity will manage financial operator's desires and increment money related strategy efficiency, along these lines permitting the smoothing of monetary cycles. Through validity and order consequences for financial and monetary arrangements, settled trade rates help make a residential monetary condition great to speculation and exchange (see, Gosh, et al., 1995) prompting a moderately supported and stable development. Thus, fixed exchange rate administrations decrease the dangers of hazards originating from degenerate financial and money related approaches observed in many developing countries, for example, those in Latin America in the 1980's. The current experimental writing on terms of trade shocks has a tendency to support the previously mentioned hypothetical expectations.

Edwards and Levy Yeyati (2003) discover proof that nations with flexible exchange rate regimes change generally better to terms of exchange stuns than those running unbending frameworks of trade rates.

Broda and Tille (2003) break down 75 creating nations over a practically comparable period. Their outcomes propose that terms of fluctuations add to 21.3% temporarily and to 30% over the long haul to genuine GDP development inconstancy in settled trade rates nations. These commitments tumble to just 2.4% and 9.6% in nations with adaptable trade rates. Edwards and Levy Yeyati further demonstrated that this intensification of the effect of terms of exchange stuns on development instability increments with the unbending nature of ostensible trade rates in both created and rising economies (Edwards and Levy Yeyati, 2003).

2.2.6 Central Bank Intervention and Exchange Rate Fluctuations

In considering how intercession may be suitable, it is important to conceptualize the swapping scale as an advantage cost. Starting here of view, the present conversion scale depends upon present and anticipated future nuts and bolts. A strand of research has likewise featured the defenselessness of conversion standard developments, in any event in the short-run, to non-principal factors, for example, group conduct, data falls, and hypothesis (Frankel and Froot, 1990; Allen and Taylor, 1992).

In this explicit situation, mediation may impact the spot conversion standard either through its impact on current fundamentals, suppositions with respect to future nuts and bolts, or wants not established on basics. The composing has focused discuss these effects through four wide instruments: the financial channel, the portfolio balance channel, the flagging channel and the small scale structure or request stream channel.

With regards to oversaw coasting routines, the helpfulness of intercession depends on regardless of whether trade rates can be impacted autonomously of the financial strategy position since just for this situation will mediation comprise a truly discrete arrangement instrument. Thusly, a great part of the concentration in the writing has been on whether intercessions that are sanitized (for example not sponsored by movements in money related strategy) have any vital impact. While the standard course reading refinement among cleaned and unsterilized intercession depends on an amount measure (the effect on base cash), by and by the important condition is regardless of whether loan costs are influenced. Since both the interest for and supply of base cash adjusts essentially day by day on account of self-governing variables, keeping up transient loan fees does not generally necessitate that the whole amount of mediation be counterbalanced inside the household currency advertise.

Concerning the portfolio balance channel, one would not envision the impacts to be exceptionally solid in cutting edge nations on the grounds that run of the mill intercession exchanges are microscopic with respect to the load of remarkable resources. Likewise, the level of substitution among residential and outside money securities will in general be very high (Dominguez and Frankel, 1993).

Galati and Melick (2002) contended that the portfolio channel might be increasingly pertinent for developing markets since they are bound to have expansive hold portfolios in respect to nearby outside trade advertise turnover or the supply of neighborhood securities exceptional. In addition, given that the level of substitutability between developing business sector cash obligation and remote money obligation is commonly littler – as reflected in higher hazard head on the previous – the portfolio balance impact may likewise be more grounded in these nations. As far as the impact of intercession, the confirmation is all the more obvious with respect to the unpredictability than the dimension of the swapping scale. Among those that found an important effect on the dimension, Domac and Mendoza (2002) deduced with regards to Mexico and Turkey that national bank outside trade deals (yet not buys) were usually viable in affecting the swapping scale in every nation. Specifically, a net closeout of US\$100 million valued the swapping scale by 0.08% by and large in Mexico and 0.2% in Turkey. In their investigation of the Chilean information, Tapia and Tokman (2004) found that albeit genuine intercession seemed to have a little and for the most part inconsequential impact on contemporaneous swapping scale developments, open declarations of potential mediations effect sly affected the sum and pattern of the conversion standard.

2.2.7 Monetary Policy and Macro-Economic Stabilization

Fiscal approach alludes to the blend of measures intended to control the esteem, in an economy with supply and cost of money, to coordinate with the dimension of financial exercises. It can in like manner be depicted as the demonstration of controlling the course and development of money related approach and credit offices in compatibility of stable cost and financial development in an economy Central Bank of Nigeria (1992).

In current economies, the national bank is the specialist with the order of controlling money related arrangement; through financial approach apparatuses, to accomplishing wanted macroeconomic destinations which incorporates; the accomplishment of value steadiness concerning both household and outside costs. In a similar vein utilizes swelling rate to screen development in the household cost while swapping scale approach are utilized as device in guaranteeing outside steadiness in this manner improving fare execution in the economy as indicated by Neaime (2008). In augmentation, conversion

scale strategy impacts on the result of adjustment measures and obligation organization methodologies as indicated by Busari and Olayiwola (1999) individually in creating nations which incorporates Nigeria.

Emeka (2005) opined that the quest for value soundness constantly suggests the circuitous quest for different destinations, for example, monetary development, which can just occur under state of value security and allocative efficiency of the money related markets, since expansion is commonly considered as simply a fiscal wonder, with critical expense to the economy. The essential objective of fiscal strategy to him is to ensure that cash supply is at a dimension that is steady with the development rate.

2.2.8 Foreign Exchange Rate Management and Transmission Mechanism

Fiscal transmission is a mind boggling and fascinating subject in light of the fact that there are not one, but rather numerous channels through which money related arrangement works. The introduction portrays schematically an assorted point of view of cash related game plan transmission, perceiving the genuine channels that have been perceived in the composition. The procedure begins with the transmission of open market exercises to advertise loan fees, either through the stores showcase or through the free market activity for cash all the more extensively. Starting there, transmission may continue through any of a few channels. The loan fee channel is the essential instrument at work in normal macroeconomic models. The crucial idea is immediate: given some level of cost stickiness, an expansion in ostensible loan costs, for instance, converts into an expansion in the genuine rate of intrigue and the client cost of capital. These progressions progressively lead to a deferment in utilization or a markdown in speculation spending. This is actually the system typified in standard determinations of the -IS bendirrespective of either of the —Old Keynesian choice, or the forward looking conditions at the core of the - New Keynesian full scale models made by Woodford and Rotemberg(1997) and Galí, Clarida and Gertler (1999), among others. Be that as it may, as Bernanke and Gertler (1995) have sharp out, the macroeconomic reaction to approach incited loan fee changes is impressively bigger than that suggested by traditional assessments of the premium versatility of utilization and speculation. This perception

uncovers that components other than the thin loan fee channel may moreover be grinding away in the transmission of money related arrangement.

One such elective way is the riches channel, based on the life-cycle model of utilization created by Ando and Modigliani (1963), in which family unit's riches is a key determinant of utilization spending. The connection to fiscal strategy comes by means of the connection between loan fees and quality costs: an arrangement prompted financing cost increment lessens the value of seemingly perpetual resources (stocks, securities, and land), contracting family unit's assets and prompting a fall in utilization.

2.2.9 Exchange Rate Regimes and Fluctuations

The spotlight will be focused on the adaptable swapping scale routines and the settled conversion standard routines. A primary method of reasoning behind the decision of adaptable trade rates is the self-governance in money related arrangement they permit when capital portability is high. Adaptability in return rates, as expressed by Dornbusch et al. (1990), enables a nation to pick its long haul swelling rate and, it liberates money related approach that can be gone for residential adjustment. Besides, conversion standard adaptability would facilitate the response of strategy to outer stuns by starting a programmed modification of the local economy to changes in a critical position of installments.

At the inverse, under settled conversion scale routines, money related arrangement will be occupied, incompletely or absolutely, to seek after outside parity. Also, within the sight of high capital portability and ideal substitutability among household and outside resources (Obstfeld, 1994), financial arrangement turns out to be completely dedicated to the protection of the swapping scale equality. In reality, when the ostensible conversion standard is solidly settled, loan cost parity predicts the balance of residential and remote financing costs, balanced for hazard premium and exchange costs. Each and every extra cash formation will move residential financing costs lower and trigger an identical measure of capital surge.

In this manner, in a little nation, money related strategy winds up wasteful in balancing out the economy when the swapping scale is pegged and capital is exceptionally versatile. The genuine impacts of money related arrangement originate from ostensible rigidities and global capital portability (Dornbusch and Giovanni, 1990). Whenever costs and ostensible wages are unbending changes in cash supply alter genuine cash adjusts which thus initiate changes in genuine consumption. Financing costs changes result in capital developments that complement the advancement of the swapping scale thus, tend to fortify money related approach consequences for the economy (Mundell, 1963).

As per Dornbusch and Giovanni (in the same place), the economy acclimates to changes in cash totals under adaptable conversion scale routines. Aside from fiscal approach, an adaptable trade routine would diminish the limitations on accessible strategy instruments. Requirements forced by conversion standard fixity on financial and monetary strategies can obstruct the experts' capacity to impact residential monetary conditions moving the greater part of the alteration procedure on the genuine economy. In this manner, one would expect, ceteris paribus, a higher unpredictability of development under an arrangement of settled trade rates in respect to an adaptable conversion standard plan.

In any case, a few provisos merit referencing. The money related structure, for example, an expansion focusing on methodology can lessen the points of interest inferred by trade rates adaptability. Trade rates adaptability and moreover the prudence in strategy making it brings will hurt development dependability if the administration can't seek after reliable approaches. Dread of gliding featured by Calvo and Reinhart (2002) and a high go through of swapping scale developments to household costs in little nations will in general decrease or upset the focal points given by an adaptable conversion scale course of action. It ought to likewise be seen that the planning and the coordination of financial strategies (to be specific money related and monetary arrangements) are critical to ensure the accomplishment of monetary strategy.

2.3 Empirical Review

Past analysis on the impact of conversion scale vacillation on monetary development has accomplished separating results. For example, completely different affirmations exhibit that real swapping scales modification will influence development results. Some extraordinary faculty of thought area unit of the points read that no noteworthy relationship exists between swapping scale and monetary development.

Harris (2002) victimization the quality Least square system unconcealed that conversion scale, once befittingly overseen impact effectiveness and development in each the short and end of the day, the result's smart with the aggressiveness theory, that recommends that swapping scale degrading facilitate productivity and development within the short run. Examination created by Aghin et al (2006) discovered that the impact of conversion scale instability, that is that the consequence of however well the economy is overseen on real action, is near to nothing and it's inapplicable. This is often in resonation with the revelations of Dubas and Lee (2005), that each found a solid association between conversion scale soundness and development. Participation of the (South) eastern and Central European countries within the European financial Union would by all odds influence these countries' development rates supported the result recommended. In comparable, Hossain (2002) agreed that conversion scale helps the esteem structures of two particular economies by ensuring the probability for overall trade and it furthermore impacts on the measure of imports and fares, just as the nation's equalization of installments position.

At the point when the examinations of past investigations are considered, no outcomes have all the earmarks of being sensibly strong to changes in country inclusion, test period, estimation technique and conversion standard organization arrangement. In this way, Von Hagen and Zhou (2005) was of the view that there is a negative relationship with the likelihood of receiving an adaptable routine as clarified by Rizzo (2002) who set that the measure of an economy (Gross Domestic Product) is observed to be emphatically connected with gliding routines in practically all investigations, yet not in every case altogether. Monetary development (GDP per capita) is observed to be altogether connected with drifting routines by four examinations (Edwards, 1996,) fundamentally connected with settled routines by three investigations (Rizzo, 1998) and not essentially connected with a specific routine by another two examinations (Poirson, 2001).

Adeniran (2012) considered the impact of conversion standard variance on the Nigerian monetary development using yearly data for the season of 1980 to 2010. Using Ordinary

minimum square (OLS) strategy, the examination revealed that conversion scale has constructive outcome on monetary development in Nigeria. Asher (2012) investigated the effect of swapping scale variance on the Nigerian monetary development utilizing yearly information for the season of 1980 to 2010. Utilizing Ordinary slightest Square (OLS) technique, the examination revealed that conversion standard decidedly influences the Gross residential item.

Due to the association between remote trade and the Nigerian monetary development as investigated by Fapetu 2013, using yearly information for the time frame of 1960 to 2012. Using Ordinary minimum Square (OLS) methodology, the result revealed that conversion standard cleared up and spoke to around 99% varieties in monetary development.

Sunday (2011) considered the effects of conversion standard development in monetary development in Nigeria using the yearly data for the season of 1986 to 2010. Using General minimum Square methodology, the result revealed that conversion standard is emphatically related with monetary development in Nigeria.

Kamin, (2011) inspected the causes and ramifications of the adjustments in the remote conversion scale on the execution of Nigerian economy. They utilized auxiliary information from the database of CBN. The examination utilized Ordinary Least Square strategy for numerous relapse investigations to control the time arrangement information into Econometric model of development. The investigation disclosures recommend that swelling has contrarily influences the Nigerian economy.

Rano-Aliyu (2009), passed on out an examination in Nigeria, and he found that the valuation for the swapping scale practice emphatically impacts on genuine monetary development in Nigeria. Along these lines the energy about the conversion standard will make a beeline for lost intensity, since the Nigerian economy fundamentally does not have the ability to proper increases through aggressiveness; it is in this way more fulfilling when the money acknowledges than when it deteriorates. This is a direct result of the way that thankfulness will hose swelling, increment residential venture, investment funds and upgrade the way of life.

Aliyu (2011) recognized that the valuation for swapping scale realizes dilated imports and shriveled fares whereas deterioration would grow send and enfeeble import. Likewise, deterioration of conversion normal is certain to build a modification from remote merchandise unit product. Later on, it prompts preoccupation of remuneration from delivery in nations to causing out nations through a move as so much as exchange, and this may generally have an effect on the commerce and delivery in nations' money development.

Asher (2012) inspected the impact of conversion normal vacillation on the Nigerian money development within the time of 1980 to 2010. The result demonstrates that real conversion scale absolutely affects the money development. In an acceptable report, Akpan (2008) skink down outside trade showcase and money development in a very rising oil primarily based economy from 1970 to 2003 in Nigeria. He saw that there's a positive relationship existing between conversion scale and money development. Obansa et al (2013) likewise explored the relationship existing between conversion standard and financial development in Nigeria between the years 1970 to 2010. The outcome indicated that swapping scale strongly affects Nigeria financial development. They set up that conversion scale advancement regarded the Nigerian economy as it advances monetary improvement.

The impact of conversion scale unpredictability on macroeconomic execution in Nigeria from the year 1986 – 2010 suggested by Azeez et al, 2012, uncovered that swapping scale is decidedly identified with Gross Domestic Product (GDP).

Adebiyi and Dauda (2009) with the utilization of blunder revision display debated despite what might be expected, that exchange progression advanced development in the Nigerian mechanical part and helped balanced out the swapping scale showcase between the year 1970 and 2006. To them, there was a huge and positive connection between genuine fare and list of mechanical generation. A one percent ascend in genuine fare expands the record of mechanical creation by 12.2 percent. By thinking, it implies that the approach of deregulation affected decidedly on fare through swapping scale deterioration. In any case, past examinations have also uncovered that the rate of trade has no huge impact on financial development execution.

For instance, Bosworth, Collins, and Yuchin (1995) exhibited proof that in a huge example of mechanical and creating nations, that genuine conversion standard unpredictability hinder monetary development and diminish efficiency and development. Ubok-udom (1999) broke down the issues encompassing the execution of the Structural Adjustment Program (SAP) in Nigeria, and drew up reasoning that the particular highlight of Nigerian economy restrains the productivity of cash deterioration in assembling alluring impacts. From the investigation of the connection between conversion standard variety and development of the local yield in Nigeria from the time of 1971 to 1995; he articulated development of residential yield as a direct capacity of the varieties in normal ostensible swapping scale. Likewise he made utilization of sham factors to catch the times of cash devaluation. The exact outcome uncovered that all coefficients of the major logical factors have a negative sign.

David, Umeh and Ameh (2010) additionally analyzed the impact of swapping scale variances on the Nigerian assembling industry. They used various relapse econometric devices that exhibited a negative association between conversion customary unpredictability and grouping division execution. The blended or uncertainty of the outcomes just as the accentuation set on the effect of conversion scale vacillation on monetary development as appeared different government strategies in Nigeria is the inspiration for this examination.

CHAPTER THREE

METHODOLOGY

3.1 The Model

According to Yomere and Aghonifoh (1999), a model is a rearranged perspective of reality intended to empower the researcher portray the substance and between relationship inside the framework or incident it portray. The underlying assumptions for the modified Ofurum and Tobira (2011) model to be used in this study are as follows:

- i. It is unbiased. Thus its average or expected value is equivalent to its true value.
- ii. It is a linear function of a random variable.
- iii. It has minimum variance; In essence, it is an efficient estimator, given an unbiased estimator with the least variance (See Onwumere, 2009).

The model to be adopted is multiple regression analysis, employing (OLS) ordinary least square technique. The technique is adopted because of the following reasons;

- i. It is BLUE (Best linear unbiased estimator).
- ii. The computational procedure of OLS is fairly uncomplicated as contrasted with diverse econometric techniques.
- iii. OLS is an essential component of most other econometric techniques (Kontsoyiannis 1997).

We will apply the EVIEWS as an economic electronic model to compute our regression results.

Effect of exchange rate fluctuation on the Nigerian economic growth as analyzed by Adeniran et al 2012, yearly information was utilized within the years 1980 to 2010. Utilizing Ordinary least square (OLS) method, the examination shows exchange rate has a

positive effect on Nigeria economic growth. There made used of variables like Exchange rate, interest rate, Gross domestic product (GDP), inflation rate, and net export. In my research, I will make use of same variables excluding net export and rather including imports and exports.

3.2 Model Specification

• Exchange rate: This the rate at which a country's currency trades with the money of different nations. Literature appears to propose that living the exchange rate at aggressive levels and maintaining a strategic distance from extreme instability are essential for development however the statistical evidence isn't overpowering. Be that as it may, this reality, all by itself, passes on an imperative message. A steady and competitive real exchange rate ought to be thought of as an encouraging condition for monetary development (Onwumere, 2009). Keeping it at competitive levels and maintaining a strategic distance from unreasonable unpredictability encourage endeavors to exploit monetary development improving essentials: human capital, reserve funds and speculation, and the institutional ability to absorb and create authoritative and innovative information. Subsequently, receiving works of Aguirrea and Calderon (2006) and Herve, Shen and Amed (2010), the annualized exchange rate will be embraced as a proportion of exchange rate. Exchange rate therefore is given as a dependent variable in the course of this study because it is used as an indicator to determine the exchange rate in the country.

• Interest rate: Every single other factor being proportional, a high interest rate in a country over values the estimation of that country cash with respect to countries that offers a low interest rates. Be that as it may, such basic straight-line computations barely exist in foreign exchange. In spite of the fact that interest rate can be an essential factor affecting money esteem and exchange rates, the last assurance of a cash's exchange rate with different monetary forms is the consequence of various interconnected components that mirror the generally budgetary state of a nation in regard to different countries. For the most part, high interest rates increment the estimation of a country's money. A Higher interest rate will in general attract investors, expanding the interest for and estimation of the residential country's cash. Then again, bring down interest rate will in general be ugly for investors and diminishing the money's relative esteem. The interest

rate in the course of this study is given as an explanatory variable also known as an independent variable.

• Inflation rate: A higher expansion rate in the Nigeria contrasted with different nations will in general decrease the estimation of naira since: High swelling in Nigeria implies that Nigeria merchandise increment in cost faster than other nation products. In this way Nigeria products turn out to be less focused. Interest for Nigeria fares will fall, and in this manner there will be less interest for the naira. Additionally, Nigeria purchasers will think that it's progressively appealing to purchase other nation imports. Accordingly they will supply naira to have the capacity to purchase the outside money and the cash imports. This expansion in the supply of naira diminishes the estimation of Nigerian naira. Hence, over the long haul, changes in relative swelling rates should prompt an adjustment in the trade rates. In our model the swelling rate is additionally given as one of the informative variable.

• **Gross domestic product:** Gross domestic product (GDP) is the aggregate estimation of goods and services produced in a nation over a predefined period. It breaks even with the aggregate income of everybody in the economy, and the aggregate use on the economy's yield of goods and services (Mankiw, 1994). Gross domestic product is a gauge of economic performance since it quantifies something individuals care about their livelihoods. So also, an economy with a huge yield of products and ventures can more readily fulfill the requests of family units, firms and the administration. This is an explanatory variable showing the gross domestic product due to the exchange rate.

• **Imports:** An import of a good happens when there is a difference in possession from a non-occupant to an inhabitant; this does not really infer that the positive qualities being referred to physically crosses the outskirts. Importation of products and ventures is a noteworthy wellspring of exhaustion of a nation's remote monetary standards thus affects swapping scale. It is simply the opposite of exports of goods and this shows the amount of imports due to the exchange rate fluctuations and this is given as an explanatory variable.

• **Exports:** An export of a good happens at the point when there is a difference in possession from an inhabitant to an alien; this does not really imply that the positive qualities being referred to physically crosses the outskirts. Fare of merchandise is a

noteworthy wellspring of remote trade to any nation. It decides the volume of outside trade accessible to that nation consequently a noteworthy determinant of swapping scale. It is additionally observed as another informative variable.

3.3 Structural Representation of the Model

This could be symbolically expressed as:

EXC= F (IRATE, INF, GDP, IMP, EXP)

Where;

EXC= Exchange Rate

IRATE= Interest Rate

INF= Inflation Rate

GDP= Gross Domestic Product

IMP= Imports

EXP= Exports

3.4 Mathematical Representation of the Model

This can be mathematically written as:

 $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + U_t$

EXC= β_0 + β_1 IRATE+ β_2 INF+ β_3 GDP+ β_4 IMP+ β_5 EXP+Ut

 β_0 = Constant term

 β_1 = Coefficient of Interest Rate

 β_2 = Coefficient of Inflation Rate

 β_3 = Coefficient of Gross Domestic Product

 β_4 = Coefficient of Import

 β_5 = Coefficient of Export

Ut= Stochastic Error Term

3.5 Method of Evaluation

The estimated parameters will be estimated using the following criteria;

- i. The adjusted R²
- ii. T test
- iii. F test
- iv. Unit Root Test
- v. Autocorrelation
- vi. Heteroskedasticity
- vii. Ramsey Reset Test
- viii. Cusum Test

Ι. The adjusted R²: This is likewise coefficient of numerous conclusions. It quantifies the level of the all-out variety of the reliant variable (EXC) clarified by the relapse plane, that is by changes in logical factors, (IRATE, INF, GDP, IMP, EXP). The estimation of R² is somewhere in the range of 0 and 1. The higher the R² the better the integrity of attack of the relapse plane to the example perceptions, and the closer the R² to zero more awful the fit (Gujarati 2004). R-squared characteristics stretch out from 0 to 1 and are typically communicated as rates from 0% to 100%. R-squared of 100% methods all improvements of a security (subordinate variable) are completely clarified by developments in the list (free factor). A high R-squared, some place in the scope of 85% and 100%, demonstrates the stock or save's execution moves respectably as per the list. A reserve with a low Rsquared, at 70% or less, shows the security does not by and large pursue the developments of the file. A higher R-squared regard will demonstrate a progressively important beta figure. For example, if a stock or store has R-squared estimation of close 100%, yet has a superior underneath 1, it is no doubt offering higher hazard balanced returns.

II. **The T-Test:** This test is completed, to check for the individual hugeness of the factors to know whether we acknowledge or dismiss Ho (invalid theory). The choice

standard is if T determined is more prominent than T arranged (Tcal>Ttab), we dismiss invalid theory and if else we acknowledge. The t-test is any quantifiable theory or factual speculation test in which the test estimation or measurement pursues a Student's tcirculation under the invalid theory. A t-test is most normally associated when the test estimation would seek after a common spread if the estimation of a scaling term in the test estimation were known. Exactly when the scaling term is dark and is superseded by a check reliant on the data, the test estimations (under explicit conditions) pursue a Student's t dispersion. The t-test can be used, for example, to choose whether two courses of action of data or information are essentially not equivalent to each other.

III. **The F- Test:** This test is utilized to check for the general hugeness of the relapse plane (show). The test is done to discover whether the joint impact of the logical factors on the needy variable is factually huge. The theory is tried as; Ho: $\beta 1 = \beta 2 = ... = \beta k = 0$

H1: $\beta 1 \neq \beta 2 \neq \dots \neq \beta k \neq 0$

On the off chance that f – determined is more prominent than F – classified (fcal >ftab) with the picked dimension of centrality with K-1 and N-K level of opportunity, we dismiss the invalid theory, that is, we acknowledge that the relapse display is huge. Yet, in the event that fcal<ftab, we acknowledge invalid theory, that is we acknowledge that the relapse demonstrate isn't hugeness with K-1 and N – K level of opportunity. F-test is any quantifiable test in which the test estimation has an F-dissemination under the invalid theory. It is routinely used when taking a gander at truthful models that have been fitted to an instructive list, with the ultimate objective to separate the model that best fits the masses from which the data were inspected. Right "F-tests" mainly rise when the models have been fitted to the data using minimum squares. The name was composed by George W. Snedecor, to pay tribute to Sir Ronald A. Fisher. Fisher at first developed the estimation as the difference proportion during the 1920s.

IV. **Unit Root test:** In the unit root test the invalid theory clears up that there is a unit root unit in the model. Right when there is a unit root, it construes that the courses of action are not stationary. So as to dismiss or don't dismiss the invalid, we need to take a gander at the p-esteem. On the off chance that the p-esteem is more noteworthy than 5%

(the benchmark for this situation), we don't dismiss the invalid. Furthermore, on the off chance that we neglect to dismiss the invalid, we are presuming that the arrangement has unit root in this way there are not stationary at the dimension the test was perform. Then again, if the p-esteem is under 5%, we dismiss the invalid which affirms that there is a unit root (the arrangement are not stationary). When we dismiss the invalid, we are stating that the arrangements are stationary. Another method for taking a gander at the unit root separated from concentrating on the p-esteem is the T-test. On the off chance that the T-esteem is less that the basic qualities (for example 1%, 5%, and 10%), we state that the arrangement has no unit root and it isn't stationary therefore we don't dismiss the invalid theory. Assume that the p-esteem is more noteworthy than 5% which infers that the invalid speculation isn't dismissed hence adjusting to the way that the arrangement has unit root (that the arrangement isn't stationary), yet the T-esteem is more prominent than the basic qualities at 1%, 5%, and 10% then this implies we ought to incorporate either the catch or the pattern or them two together.

What Does It Imply When We Say Series Are Stationary?

Series will be stationary if the mean and the variance does not change over time. If any of them change, then we have a unit root in the series.

Note: We want the series to be stationary because if we have unit root on the series and go on to apply test on it, we will have false and incorrect results which will not be desirable in the model.

V. **Autocorrelation:** Autocorrelation is a numerical portrayal of the level of comparability between a specific time arrangement and a slacked adaptation of itself over progressive time interims. It is equivalent to figuring the connection between two diverse time arrangement, then again, actually a specific time arrangement is really utilized twice: once in its unique frame and once slacked at least one time span. We will utilize the Lm test to know whether there is autocorrelation. Autocorrelation, generally called sequential relationship, is the connection of a banner with a conceded copy of itself as a segment of delay. Coolly, it is the closeness between perceptions as an element of the time slack between them. The examination of autocorrelation is a numerical contraption for finding

rehashing designs, for instance, the nearness of an intermittent flag darkened by commotion, or recognizing the missing principal recurrence in a flag suggested by its consonant frequencies. It is generally utilized in flag preparing for breaking down capacities or arrangement of qualities, for example, time area signals.

VI. **Heteroskedasticity:** This test would be applied to check whether the error term, μ in the regression model have a common or constant variance. The heteroskedasticity test (with no cross terms) will be adopted. We will test for Breusch pagan, Arch and also White heteroskedasticity, where

H0: homoscedasticity

H1: heteroskedasticity.

The existence of heteroskedasticity is a noteworthy worry in the utilization of relapse examination, including the examination of difference, as it can negate factual trial of essentialness that acknowledge that the demonstrating mistakes are uncorrelated and uniform—in this manner that their fluctuations don't move with the effects being shown. For instance, while the common minimum squares estimator is as yet unprejudiced within the sight of heteroskedasticity, it is wasteful in light of the fact that the genuine change and covariance are thought little of. Similarly, in testing for complexities between subpeoples using a territory test, some standard tests acknowledge that differences inside gatherings are identical, since heteroskedasticity concerns desires for the second snapshot of the blunders; its essence is noted as misspecification of the second request. In this way heteroskedasticity is the nonappearance of homoscedasticity.

VII. **Ramsey RESET Test:** In statistics, (RESET) test, the Ramsey Regression Equation Specification Error Test is a general detail test for the straight relapse show. All the more expressly, it tests whether non-direct mixes of the fitted characteristics enable clear to up the response variable. The intuition behind the test is that if non-coordinate blends of the illustrative elements have any power in clearing up the response variable, the model is erroneously demonstrated as in the information delivering strategy likely could be higher approximated by a polynomial or another non-straight viable sort. This test was created by James B. Ramsey as a component of his PhD. proposition at the

University of Wisconsin– Madison in 1968, and later distributed inside the Journal of Royal Statistical Society in 1969. Ramsey RESET test tells you whether you have model misspecification problem. That is if the model you are running is the actual generating process. In The RESET test, it focuses on the p-value of the fitted square and analysis it. Ho: Y=0, H1: Y≠0 where Y= γ . If the fitted value square is > greater than 5%, we don't dismiss the invalid and in this way we reason that there is no misspecification issue.

VIII. **CUSUM Test:** The CUSUM (aggregate whole control diagram) test can be comprehended as a consecutive investigation strategy; it is generally utilized for checking change discovery. It is utilized to check the steadiness of the long-run coefficient of the evaluated factors in the model; the aggregate total (CUSUM) tests are utilized, as proposed by Brown, Durbin, and Evans (1975).The CUSUM are plotted against the plotted lines at 5% level of significance. If the plot of the CUSUM lies inside the critical bounds at 5% level of significance, this indicates that the regression model is stable.

3.6 Data Required and Sources

The data used are yearly data from various publications of Central Bank of Nigeria statistical bulletin and it spans the period of 31 years from 1986 to 2016. There are secondary data which are the time series data. These are supplemented with data and also obtained from the financial economics review and text book published to ensure that proper adequate data is presented in the course of our regression analysis.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Presentation of Regression Results

An economic research work of this nature would not be fully complete if the results of the regression, properly subjected to critical economic, statistical and econometric. Diagnosis are not presented. Hence this chapter is going to achieve that after which the earlier stated hypothesis of the study was examined against the empirical findings. After the application of the ordinary least squares (OLS) estimation methods on the model, the following results shown in the table 4.1 were obtained.

Table 1.1 Regression analysis

Dependent Variable: EXC____\$_ Method: Least Squares Date: 12/19/18 Time: 16:40 Sample (adjusted): 1987 2016 Included observations: 30 after adjustments HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 4.0000)

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-------------|--------------|----------|
| C | 4.730955 | 12.02162 | 0.393537 | 0.6975 |
| LAGEXC | 1.037637 | 0.083612 | 12.41015 | 0.0000 |
| IRATE | 0.618062 | 0.983788 | 0.628247 | 0.5360 |
| INF | -0.230753 | 0.213513 | -1.080744 | 0.2910 |
| GDP_GROWTH | -0.324593 | 0.272076 | -1.193021 | 0.2450 |
| IMPBILLIONS_ | 4.75E-07 | 1.08E-07 | 4.401869 | 0.0002 |
| EXPBILLIONS_ | -1.06E-06 | 6.09E-07 | -1.736204 | 0.0959 |
| R-squared | 0.960442 | Mean depe | ndent var | 91.68719 |
| Adjusted R-squared | 0.950123 | S.D. depen | dent var | 69.55800 |
| S.E. of regression | 15.53451 | Akaike info | criterion | 8.524968 |
| Sum squared resid | 5550.380 | Schwarz cr | iterion | 8.851914 |
| Log likelihood | -120.8745 | Hannan-Qu | iinn criter. | 8.629561 |

The intercept is 4.730955 which imply that if all the explanatory variables assume the value of zero, EXC will be 4.730955.

The coefficient added during the transformation in Eviews (LAGEXC) which is 1.037637 explains that it is positively related to the exchange rate and that this year exchange rate depends on last year exchange rate and it is also statistically significant since p=0.0000 < 0.05 at 5% level of significance.

The coefficient of interest rate (IRATE) is 0.618062 and P=0.5360, this implies that interest rate is positively related to Exchange rate. A percentage change in interest rate will change the Exchange rate by 0.618062 and the probability value of 0.5360 which is greater than 0.05 shows that it is not statistically significant.

The coefficient of inflation rate (INF) is -0.230753 and P=0.2910. This implies that inflation rate is negatively related to the dependent variable (EXC), a percentage change in inflation rate will decrease Exchange rate by 0.230753 and it has no significant impact since P=0.2910 > 0.05 at 5% level of significant.

The coefficient of gross domestic product growth (GDP GROWTH) is -0.324593 which implies a percentage change in GDP GROWTH will decrease Exchange rate by 0.324593 and the probability p=0.2450 > 0.05 which means it is not statistically significant at 5% level of significance.

The coefficient of Import is 4.75E-07 which means that a unit change in IMP will change the Exchange rate by about 4.75E-07 and the probability value is P=0.0002 which is less than 0.05 at 5 percent level of significance imply that it is statistically significant.

The coefficient of exports is -1.06E-06 and the P value= 0.0959. This indicate that exports is negatively related to EXC, a unit change in exports will decrease EXC by -1.06E-06 and it also has no significant impact on exchange rate since probability value is greater than 0.05 at 5 percent level of significance.

4.2 Evaluation of Result

4.2.1 Evaluation Based On Economic "Apriori" Criteria

Table 1.2 Evaluation of Economic criteria

| Variables | Expected sign | Observed sign | Conclusion |
|------------|---------------|---------------|--------------|
| LAG(EXC) | Positive | Positive | Conforms |
| IRATE | Positive | Positive | Conforms |
| INF | Positive | Negative | Not Conforms |
| GDP GROWTH | Positive | Negative | Not Conforms |
| IMPORT | Positive | Positive | Conforms |
| EXPORT | Positive | Negative | Not Conforms |

This result shows that LAG (EXC), IRATE, and IMPORT conforms to the "a-priori" expectation, which in essence implies that increases in the above listed variables over the years will increase Exchange Rate (EXC).

4.2.2 Evaluation Based On Statistical Criteria

- I. Coefficient of determination (R²): In our model, R²= 0.960442 implies that approximately 96.04% of the variation in the dependent variable EXC is caused by variation in the explanatory variables included in the model.
- II. T test: This test is carried out to check for the individual significance of the variables to know if we accept or reject Ho (null hypothesis). The decision rule is if T_{cal}>T_{tab}, reject null hypothesis and if otherwise we accept. Using 95% confidence interval.

Level of significance= α =0.05 at 5%. Degree of freedom= n-k Where; n=sample size k= number of parameter. 30-6=24 Table 1.3 Evaluation of T test

| Variables | t-value | t-tab | Decision | Conclusion |
|---------------|-----------|-------|------------------|-------------------------------|
| LAG(EXC) | 12.41015 | 2.064 | Reject Ho | Statistically significant |
| IRATE | 0.628247 | 2.064 | Do not reject Ho | Statistically not significant |
| INF | -1.080744 | 2.064 | Do not reject Ho | Statistically not significant |
| GDP GROWTH | -1.193021 | 2.064 | Do not reject Ho | Statistically not significant |
| IMPORT | 4.401869 | 2.064 | Reject Ho | Statistically significant |
| EXPORT | -1.736204 | 2.064 | Do not reject Ho | Statistically not significant |

From the above table, it is seen that it correspond to the initial regression table where only LAG (EXC) and IMP are statistically significant. This was also shown above in the t-test table.

III. F-statistics: This is used to test for simultaneous significance of all the estimated parameters. Thus, the hypothesis is stated as;

H₀: $\beta_1 = \beta_2 = \beta_3 \dots = \beta_k = 0$ H₁: $\beta_1 \neq \beta_2 \neq \beta_3 \dots \neq \beta_k \neq 0$ Level of significance = 5% Degree of freedom: $\frac{k-1}{n-k}$ k-1=6-1=5 n-k=30-6=24

Decision rule is reject null hypothesis if f_{cal} > f_{tab} and otherwise.

Table 1.4 Evaluation of F test

| F calculated | F table | Decision | Conclusion |
|--------------|---------|-----------|---------------------------|
| 93.07164 | 2.62 | Reject Ho | Statistically significant |

Since f-statistics (93.07164) is greater than f-critical value (2.62), we therefore reject Ho and conclude that at 5% level of significance, the overall regression is statistically significant and desirable. Using from the above regression result also, the probability (F-statistics) 0.000000<0.05 which shows it is significant at 5% level of significance.

4.2.3 Evaluation Based On Econometric Criteria

A. Unit root test: In this test, the null hypothesis clarifies that there is a unit root unit in the model. Fundamentally this suggests the arrangement is not stationary when there is a presence of unit root at any dimension. On the off chance that the pesteem is more noteworthy than 5%, we don't dismiss the null, and on the off chance that we neglect to dismiss the null, we reason that the arrangement has unit root and accordingly there are not stationary at the dimension the test was perform. On the other hand, if the p-value is less than 5%, we reject the null which means the series are stationary.

Table 1.5 Unit Root test

Null Hypothesis: D(EXC____\$_) has a unit root Exogenous: Constant Lag Length: 0 (Automatic - based on SIC, maxlag=3)

| | | t-Statistic | Prob.* |
|-----------------------|--------------------|-------------|--------|
| Augmented Dickey-Ful | ler test statistic | -3.482403 | 0.0159 |
| Test critical values: | 1% level | -3.679322 | |
| 5% le | 5% level | -2.967767 | |
| | 10% level | -2.622989 | |

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation Dependent Variable: D(EXC____\$_,2) Method: Least Squares Date: 12/27/18 Time: 17:28 Sample (adjusted): 1988 2016 Included observations: 29 after adjustments

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--|---|---|---|--|
| D(EXC\$_(-1)) C | -0.787391 7.200382 | 0.226106 3.682616 | -3.482403 1.955236 | 0.0017 0.0610 |
| R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob(F-statistic) | 0.309942 0.284384 18.13290 8877.652 -124.1472 12.12713 0.001709 | Mean depende S.D. dependen Akaike info crite Schwarz criterie Hannan-Quinn Durbin-Watson | nt var t var erion on criter. stat | 2.007441 21.43518 8.699805 8.794101 8.729337 1.752196 |

Using test type of Augmented Dickey-Fuller at 1st differential, making use of Schwarz info criterion, we made use of maximum lags of 3. The probability of 0.0159<0.05 so we reject the null hypothesis which means that the series are stationary at 1st differential. In the model, all the variables were tested and seen to be stationary at 1st differential following same criterion as stated above.

B. Serial correlation Im test: We will use the Lm test to know if there is autocorrelation.

$$u_t = p_1^{ut-1} + p_2^{ut-2} + \dots p_q^{ut-q} + V_t$$

The null hypothesis is; Ho=p1=....pq=0

Alternative hypothesis is $H1 \neq p_1 \neq \dots p_q \neq 0$

Table 1.6 Serial LM correlation test

Breusch-Godfrey Serial Correlation LM Test:

| F-statistic | 0.909815 | Prob. F(2,21) | 0.4179 |
|---------------|----------|---------------------|--------|
| Obs*R-squared | 2.392189 | Prob. Chi-Square(2) | 0.3024 |

Test Equation: Dependent Variable: RESID Method: Least Squares Date: 12/28/18 Time: 15:58 Sample: 1987 2016 Included observations: 30 Presample missing value lagged residuals set to zero.

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|------------------|-------------|-----------|
| С | -6.567617 | 16.81651 | -0.390546 | 0.7001 |
| LAGEXC | 0.020924 | 0.084975 | 0.246242 | 0.8079 |
| IRATE | 0.356671 | 0.963550 | 0.370163 | 0.7150 |
| INF | -0.015710 | 0.184013 | -0.085377 | 0.9328 |
| GDP_GROWTH | -0.074328 | 0.468586 | -0.158623 | 0.8755 |
| IMPBILLIONS_ | -1.47E-08 | 2.21E-07 | -0.066378 | 0.9477 |
| EXPBILLIONS_ | 1.09E-07 | 9.50E-07 | 0.114662 | 0.9098 |
| RESID(-1) | -0.198488 | 0.222955 | -0.890260 | 0.3834 |
| RESID(-2) | -0.271559 | 0.239494 | -1.133887 | 0.2696 |
| R-squared | 0.079740 | Mean depende | ent var | -2.11E-14 |
| Adjusted R-squared | -0.270836 | S.D. dependen | t var | 13.83446 |
| S.E. of regression | 15.59578 | Akaike info crit | erion | 8.575203 |
| Sum squared resid | 5107.795 | Schwarz criteri | on | 8.995562 |
| Log likelihood | -119.6280 | Hannan-Quinn | criter. | 8.709679 |
| F-statistic | 0.227454 | Durbin-Watson | stat | 2.040388 |
| Prob(F-statistic) | 0.981500 | | | |

From the above regression it shows that there is no Lm autocorrelation since the probability value of the chi square (0.3024) and F statistics (0.4179) is greater than 5% (0.05) at 5 percent level of significance.

C. Heteroskedasticity: This test will be carried out using white general heteroskedasticity test; supporting it also with Breusch pagan and Arch heteroskedasticity test.

The hypothesis is therefore stated as;

Ho: $\beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_5 = 0$ (Homoskedasticity)

H1: $\beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq \beta_5 \neq 0$ (Heteroskedasticity)

Table 1.7 White heteroskedasticity test

Heteroskedasticity Test: White

| F-statistic | 0.469180 | Prob. F(6,23) | 0.8240 |
|---------------------|----------|---------------------|--------|
| Obs*R-squared | 3.271437 | Prob. Chi-Square(6) | 0.7741 |
| Scaled explained SS | 9.590220 | Prob. Chi-Square(6) | 0.1430 |

Test Equation: Dependent Variable: RESID^2 Method: Least Squares Date: 12/28/18 Time: 17:18 Sample: 1987 2016 Included observations: 30 HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 4.0000)

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--|--|---|--|--|
| C LAGEXC^2 IRATE^2 INF^2 GDP_GROWTH^2 IMPBILLIONS_^2 EXPBILLIONS_^2 | 415.4013 -0.014617 0.341365 -0.148216 -0.281265 1.14E-14 -2.63E-13 | 226.0571 0.019125 0.909020 0.115432 0.219105 5.18E-14 1.23E-12 | 1.837594 -0.764287 0.375530 -1.284006 -1.283704 0.219372 -0.213816 | 0.0791 0.4525 0.7107 0.2119 0.2120 0.8283 0.8326 |
| R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob(F-statistic) | 0.109048 -0.123374 629.9104 9126104. -231.9499 0.469180 0.823969 | Mean depende S.D. depender Akaike info crit Schwarz criteri Hannan-Quinn Durbin-Watson | ent var it var erion on criter. e stat | 185.0127 594.3148 15.93000 16.25694 16.03459 2.251034 |

From the above test, it shows the chi square probability value is greater than 5% which means we accept the null hypothesis of Homoskedasticity and reject the alternative hypothesis of Heteroskedasticity at 5 percent level of significance. The model in essence is desirable since there is no existence of heteroskedasticity.

Table 1.8 Breusch Pagan Godfrey heteroskedasticity test

| F-statistic | 0.629103 | Prob. F(6,23) | 0.7055 |
|---------------------|----------|---------------------|--------|
| Obs*R-squared | 4.229326 | Prob. Chi-Square(6) | 0.6457 |
| Scaled explained SS | 12.39827 | Prob. Chi-Square(6) | 0.0537 |

Test Equation: Dependent Variable: RESID^2 Method: Least Squares Date: 01/02/19 Time: 16:26 Sample: 1987 2016 Included observations: 30 HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 4.0000)

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--|--|--|--|--|
| C LAGEXC IRATE INF GDP_GROWTH IMPBILLIONS_ EXPBILLIONS_ | 494.3271 -2.696090 14.70792 -12.51928 -9.157803 -2.01E-08 3.79E-06 | 418.5111 3.600331 39.47180 9.784949 9.979009 3.78E-06 2.67E-05 | 1.181157 -0.748845 0.372618 -1.279443 -0.917707 -0.005305 0.142044 | 0.2496 0.4615 0.7128 0.2135 0.3683 0.9958 0.8883 |
| R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob(F-statistic) | 0.140978 -0.083115 618.5202 8799046. -231.4025 0.629103 0.705470 | Mean dependent var S.D. dependent var Akaike info criterion Schwarz criterion Hannan-Quinn criter. Durbin-Watson stat | | 185.0127 594.3148 15.89350 16.22045 15.99809 2.240682 |

The result above from Breusch Pagan Godfrey heteroskedasticity test shows that there is no existence of heteroskedasticity. As shown in the regression above, the probability F value and Chi square value are greater than 0.05 at 5% level of Significance

Table 1.9 Arch heteroskedasticity test Heteroskedasticity Test: ARCH

| F-statistic | 0.063217 | Prob. F(1,27) | 0.8034 | | | | |
|---|--|--|-----------------------|--|--|--|--|
| Obs*R-squared | 0.067741 | Prob. Chi-Square(1) | | 0.7947 | | | |
| Test Equation: Dependent Variable: RESID^2 Method: Least Squares Date: 01/02/19 Time: 16:45 Sample (adjusted): 1988 2016 Included observations: 29 after adjustments HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 4.0000) | | | | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. | | | |
| C RESID^2(-1) | 196.0436 -0.048408 | 114.7972 0.037732 | 1.707739 -1.282965 | 0.0992 0.2104 | | | |
| R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood | 0.002336 -0.034615 615.1319 10216457 -226 3463 | Mean dependent var S.D. dependent var Akaike info criterion Schwarz criterion Hannan-Quinn criter. Durbin-Watson stat | | 186.7790 604.7543 15.74802 15.84232 | | | |

The following test shows the regression results of Arch heteroskedasticity test, both the probability F value and the chi square value are greater than 0.05 at 5% level of significance which shows that there is no existence of heteroskedasticity in the model. The model is tested and proven to be desirable.

D. Ramsey RESET test: The (RESET) Regression Equation Specification Error Test by Ramsey helps test whether non-direct mixes of the fitted qualities help clear up the reaction variable. It helps to know if the model is correctly specified or there is a misspecification. This test focuses on the P-value of the fitted square and analysis it.

Ho: Y=0

H1: Y≠0

where Y=Y if the fitted value square is greater than 5%, means we do not reject the null and conclude that there is no misspecification problem.

Table 1.10 Ramsey RESET test

Ramsey RESET Test Equation: UNTITLED Specification: EXC____\$_C LAGEXC IRATE___ INF___ GDP_GROWTH___ IMP__BILLIONS_ EXP__BILLIONS_ Omitted Variables: Squares of fitted values

| | Value | Df | Probability |
|-------------------|------------|---------|-------------|
| t-statistic | 0.292252 | 22 | 0.7728 |
| F-statistic | 0.085411 | (1, 22) | 0.7728 |
| Likelihood ratio | 0.116244 | 1 | 0.7331 |
| F-test summary: | | | |
| | | | Mean |
| | Sum of Sq. | Df | Squares |
| Test SSR | 21.46500 | 1 | 21.46500 |
| Restricted SSR | 5550.380 | 23 | 241.3209 |
| Unrestricted SSR | 5528.915 | 22 | 251.3143 |
| LR test summary: | | | |
| - | Value | | |
| Restricted LogL | -120.8745 | | _ |
| Unrestricted LogL | -120.8164 | | |

Unrestricted Test Equation: Dependent Variable: EXC____\$_ Method: Least Squares Date: 01/02/19 Time: 17:16 Sample: 1987 2016 Included observations: 30 HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 4.0000)

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--|--|--|--|--|
| C LAGEXC IRATE INF GDP_GROWTH IMPBILLIONS_ EXPBILLIONS_ FITTED^2 | 3.235908 1.128600 0.651925 -0.233327 -0.376693 6.44E-07 -1.23E-06 -0.000500 | 11.21240 0.213278 0.965009 0.213507 0.285741 4.84E-07 6.38E-07 0.001250 | 0.288601 5.291684 0.675564 -1.092828 -1.318299 1.329850 -1.932688 -0.400223 | 0.7756 0.0000 0.5064 0.2863 0.2010 0.1972 0.0662 0.6929 |
| R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob(F-statistic) Prob(Wald F-statistic) | 0.960595 0.948057 15.85290 5528.915 -120.8164 76.61563 0.000000 0.000000 | Mean dependent var S.D. dependent var Akaike info criterion Schwarz criterion Hannan-Quinn criter. Durbin-Watson stat Wald F-statistic | | 91.68719 69.55800 8.587760 8.961413 8.707295 2.296964 11350.35 |
From the above regression, the fitted value square (0.6929) > (0.05) means we do not reject the null, we conclude that there is no model misspecification problem.

E. CUSUM test: The Cumulative aggregate test are plotted against the plotted lines at 5% dimension of noteworthiness and if the plot of the CUSUM lies inside the basic limits at 5% dimension of critical, this implies the relapse demonstrate is steady and attractive.



Figure 1.3 Illustration of CUSUM test

The above chart explains CUSUM test, the regression model is stable at 5% level of significance as the CUSUM lies inside the critical bounds of 5% significance which is stable and desirable.

4.3 Evaluation of Research Hypothesis

H0: Exchange rate does not have any vital impact on Nigeria Economic growth.

H1: Exchange rate has a vital impact on Nigeria Economic growth.

Based on empirical evidence derived in this thesis, it is observed that the fluctuation in output growth (GDP) has no significant effect on exchange rate in Nigeria under the period considered in this Thesis. Therefore, we accept the null

hypothesis which confirmed to the empirical findings of this thesis; that is, Exchange rate has no significant impact on Nigeria Economic growth. The F test also shows that the model is statistically significant in explaining the variation in EXC.

CHAPTER FIVE

SUMMARY OF FINDINGS, RECOMMENDATIONS AND CONCLUSION

5.1 Summary of Findings and Conclusion

This research (Thesis) work was carried out to know the Effect of Exchange rate fluctuations on the Nigerian Economic Growth using a time series data within the period of 1986 to 2016. It made used of the application of the Ordinary Least Squares (OLS) method to conduct different test, the result reveals that exchange rate has a negative and non-significant relationship with Nigerian Economic growth which the proxy for it was GDP growth. This results in line with most studies like Adebiyi (2009) that known an insignificant relationship between rate of exchange and gross domestic product growth. Additionally Bosworth (1995), Aghion et al (2009), Eichengreen and Lebtang (2003), Eme and Johnson (2012) all documented the very fact that no positive relationship exist between rate of exchange rate does not have any vital impact on Nigeria Economic growth.

Asher (2008) utilizing yearly information had a positive connection between conversion standard and GDP development inside the time allotment of (1980-2010), likewise Akpan (2008) and Obansa et al (2013) uncovered that there is a positive relationship existing between swapping scale and GDP development. Distinctive outcomes between this postulation and some past examinations might be inferable from model determinations, factors definition, estimations, test measure, procedures utilized in exact works and so forth. From the experimental looked into work, changed creators and specialists contended that swapping scale is adversely identified with financial development, while a few creators contended that it is decidedly related.

It is seen that most import dependent countries like Nigeria faces the problem of exchange rate volatility. Nigeria's over dependence on the Oil sector and Gas sector of the economy has affected the major macro-economic variables and different foreign exchange rate regimes have affected the Nigeria economy over the years. Different test was been made and some transformation of variable such as adding LAG of EXC as an independent variable, this helped remove the existence of Serial LM autocorrelation, in the final analysis, the test showed the model is desirable and the F test shows it is statistically significant, there was no model misspecification using the first differential in the unit root test and also the model was as well stable as shown in the CUSUM test.

5.2 Recommendations

The exchange rate is one of the most important policy variables, which in most cases determines the inflation, interest rate, imports and export of an economy. Many economies, particularly African countries faced crisis due to miss application and bad choice of exchange rate regime. Result to the findings of this study, the study offers recommendations applicable to policy manufacturers, investors, regulators, money establishments and future researchers. The study propose that policy manufacturers ought to come back up with satisfactory strategic policy that may stabilize the exchange rate additionally as alternative major macro-economic variable therefore on attain growth and development within the economy, a number of the policies recommended includes:

- Strict trade the board strategies should be set up in order to aid right assurance of the value of the rate. This may along these lines; inside the long haul encourage reinforcing the value of the Nigerian fiscal unit.
- ii. High reliance on import must be debilitated by the burdens of strict levies.
- iii. A tasteful and suitable environment and infrastructural office requests to be whole set up along these lines it will draw in outside speculators which can cause remote direct venture. This may along these lines cause formation of occupations, work openings and inside the long haul enhance the general population's way of life which can encourage enhance the extension of the economy.

- iv. Rate of intrigue should be kept up at its base with the goal that the buying intensity of the commonplace Nigerian will be duplicated.
- v. This think about moreover prescribes that budgetary arrangement experts need to ensure a ground-breaking rate strategy that men of the hour the eccentricities of the Nigerian economy to ensure a legitimate monetary process.
- vi. Finally the government has to induce the exchange rate by decreeing positive economic reforms that may scale back the unfavorable impact of exchange rate fluctuation on the Nigerian economy with regard to trade flows and economic growth.

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APPENDIX

Appendix I: LM serial correlation

Breusch-Godfrey Serial Correlation LM Test:

| F-statistic | 0.909815 | Prob. F(2,21) | 0.4179 |
|---------------|----------|---------------------|--------|
| Obs*R-squared | 2.392189 | Prob. Chi-Square(2) | 0.3024 |

Test Equation: Dependent Variable: RESID Method: Least Squares Date: 12/28/18 Time: 15:58 Sample: 1987 2016 Included observations: 30 Presample missing value lagged residuals set to zero.

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--|--|--|--|--|
| C LAGEXC IRATE INF GDP_GROWTH IMPBILLIONS_ EXPBILLIONS_ RESID(-1) RESID(-2) | -6.567617 0.020924 0.356671 -0.015710 -0.074328 -1.47E-08 1.09E-07 -0.198488 -0.271559 | 16.81651 0.084975 0.963550 0.184013 0.468586 2.21E-07 9.50E-07 0.222955 0.239494 | -0.390546 0.246242 0.370163 -0.085377 -0.158623 -0.066378 0.114662 -0.890260 -1.133887 | 0.7001 0.8079 0.7150 0.9328 0.8755 0.9477 0.9098 0.3834 0.2696 |
| R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob(F-statistic) | 0.079740 -0.270836 15.59578 5107.795 -119.6280 0.227454 0.981500 | Mean depen S.D. depend Akaike info o Schwarz crite Hannan-Quin Durbin-Wats | dent var ent var riterion erion nn criter. on stat | -2.11E-14 13.83446 8.575203 8.995562 8.709679 2.040388 |

Appendix II: White Heteroskedasticity

Heteroskedasticity Test: White

| F-statistic | 0.469180 | Prob. F(6,23) | 0.8240 |
|---------------------|----------|---------------------|--------|
| Obs*R-squared | 3.271437 | Prob. Chi-Square(6) | 0.7741 |
| Scaled explained SS | 9.590220 | Prob. Chi-Square(6) | 0.1430 |
| | | | |

| Test Equation: |
|---|
| Dependent Variable: RESID^2 |
| Method: Least Squares |
| Date: 12/28/18 Time: 17:18 |
| Sample: 1987 2016 |
| Included observations: 30 |
| HAC standard errors & covariance (Bartlett kernel, Newey-West fixed |
| bandwidth = 4.0000) |

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--|--|---|--|--|
| C LAGEXC^2 IRATE^2 INF^2 GDP_GROWTH^2 IMPBILLIONS_^2 EXPBILLIONS_^2 | 415.4013 -0.014617 0.341365 -0.148216 -0.281265 1.14E-14 -2.63E-13 | 226.0571 0.019125 0.909020 0.115432 0.219105 5.18E-14 1.23E-12 | 1.837594 -0.764287 0.375530 -1.284006 -1.283704 0.219372 -0.213816 | 0.0791 0.4525 0.7107 0.2119 0.2120 0.8283 0.8326 |
| R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob(F-statistic) | 0.109048 -0.123374 629.9104 9126104. -231.9499 0.469180 0.823969 | Mean depende S.D. dependen Akaike info crit Schwarz criteri Hannan-Quinn Durbin-Watson | ent var it var erion on criter. i stat | 185.0127 594.3148 15.93000 16.25694 16.03459 2.251034 |

Appendix III: Ramsey RESET TEST

Ramsey RESET Test Equation: UNTITLED Specification: EXC____\$_C LAGEXC IRATE___ INF___ GDP_GROWTH___ IMP__BILLIONS_ EXP__BILLIONS_ Omitted Variables: Squares of fitted values

| | Value | df | Probability |
|-------------------|------------|---------|-------------|
| t-statistic | 0.292252 | 22 | 0.7728 |
| F-statistic | 0.085411 | (1, 22) | 0.7728 |
| Likelihood ratio | 0.116244 | 1 | 0.7331 |
| F-test summary: | | | |
| | | | Mean |
| | Sum of Sq. | df | Squares |
| Test SSR | 21.46500 | 1 | 21.46500 |
| Restricted SSR | 5550.380 | 23 | 241.3209 |
| Unrestricted SSR | 5528.915 | 22 | 251.3143 |
| LR test summary: | | | |
| | Value | | |
| Restricted LogL | -120.8745 | | _ |
| Unrestricted LogL | -120.8164 | | |
| | | | |

Unrestricted Test Equation: Dependent Variable: EXC____\$_ Method: Least Squares Date: 01/02/19 Time: 17:16 Sample: 1987 2016 Included observations: 30 HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 4.0000)

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|------------------------|-------------|----------------------|-------------|----------|
| С | 3.235908 | 11.21240 | 0.288601 | 0.7756 |
| LAGEXC | 1.128600 | 0.213278 | 5.291684 | 0.0000 |
| IRATE | 0.651925 | 0.965009 | 0.675564 | 0.5064 |
| INF | -0.233327 | 0.213507 | -1.092828 | 0.2863 |
| GDP_GROWTH | -0.376693 | 0.285741 | -1.318299 | 0.2010 |
| IMPBILLIONS_ | 6.44E-07 | 4.84E-07 | 1.329850 | 0.1972 |
| EXPBILLIONS_ | -1.23E-06 | 6.38E-07 | -1.932688 | 0.0662 |
| FITTED^2 | -0.000500 | 0.001250 | -0.400223 | 0.6929 |
| R-squared | 0.960595 | Mean depend | ent var | 91.68719 |
| Adjusted R-squared | 0.948057 | S.D. depende | nt var | 69.55800 |
| S.E. of regression | 15.85290 | Akaike info cr | iterion | 8.587760 |
| Sum squared resid | 5528.915 | Schwarz crite | rion | 8.961413 |
| Log likelihood | -120.8164 | Hannan-Quinn criter. | | 8.707295 |
| F-statistic | 76.61563 | Durbin-Watson stat | | 2.296964 |
| Prob(F-statistic) | 0.000000 | Wald F-statistic | | 11350.35 |
| Prob(Wald F-statistic) | 0.000000 | | | |

Appendix IV: Years, Variables and data

| | | | | GDP GROWTH | IMP | EXP |
|------|------------|-----------|---------|------------|------------|------------|
| YEAR | EXC (₦/\$) | IRATE (%) | INF (%) | (%) | (BILLIONS) | (BILLIONS) |
| 1986 | 2.0206 | 10 | 5.72 | -8.8 | 6 | 14.9 |
| 1987 | 4.0179 | 12.75 | 11.29 | -10.8 | 17.9 | 48.2 |
| 1988 | 4.5367 | 12.75 | 54.51 | 7.5 | 21.4 | 52.6 |
| 1989 | 7.3916 | 18.5 | 50.47 | 6.5 | 30.9 | 88.8 |
| 1990 | 8.0378 | 18.5 | 7.36 | 12.8 | 45.7 | 155.6 |
| 1991 | 9.9095 | 15.5 | 13.01 | -0.6 | 89.5 | 211 |
| 1992 | 17.2984 | 17.5 | 44.59 | 0.4 | 143.2 | 348.8 |
| 1993 | 22.0511 | 26 | 57.17 | 2.1 | 165.6 | 384.4 |
| 1994 | 21.8861 | 13.5 | 57.03 | 0.9 | 162.8 | 368.8 |
| 1995 | 21.8861 | 13.5 | 72.84 | -0.3 | 755.1 | 1705.8 |
| 1996 | 21.8861 | 13.5 | 29.27 | 5 | 562.6 | 1872.2 |
| 1997 | 21.8861 | 13.5 | 8.53 | 2.8 | 845.7 | 2087.4 |
| 1998 | 21.8861 | 13.5 | 10.00 | 2.7 | 837.4 | 1589.3 |
| 1999 | 92.6934 | 18 | 6.62 | 0.5 | 862.5 | 2051.5 |
| 2000 | 102.1052 | 14 | 6.93 | 5.3 | 985 | 2930.7 |
| 2001 | 111.9433 | 20.5 | 18.87 | 4.4 | 1358.2 | 3226.1 |
| 2002 | 120.9702 | 16.5 | 12.88 | 3.8 | 1512.7 | 3256.9 |
| 2003 | 129.3565 | 15 | 14.03 | 10.4 | 2080.2 | 5168.1 |
| 2004 | 133.5004 | 15 | 15.00 | 33.7 | 1987 | 6589.8 |
| 2005 | 132.147 | 13 | 17.86 | 3.4 | 2806.9 | 10047.4 |
| 2006 | 128.6516 | 10 | 8.24 | 8.2 | 3108.5 | 10433.2 |
| 2007 | 125.8331 | 9.5 | 5.38 | 6.8 | 3912 | 12221.7 |
| 2008 | 118.5669 | 9.75 | 11.58 | 6.3 | 5593.2 | 15980.9 |
| 2009 | 148.8802 | 6 | 11.54 | 6.9 | 5480.7 | 14087 |
| 2010 | 150.298 | 6.25 | 13.72 | 7.8 | 8164 | 20175.5 |
| 2011 | 152.8616 | 12 | 10.84 | 4.9 | 10995.9 | 26232.5 |
| 2012 | 157.4994 | 12 | 12.22 | 4.3 | 9766.6 | 24905.5 |
| 2013 | 157.3112 | 12 | 8.48 | 5.4 | 9439.4 | 24701.4 |
| 2014 | 158.5526 | 13 | 8.06 | 6.3 | 10538.8 | 23499.3 |
| 2015 | 193.2792 | 13 | 9.02 | 2.7 | 11676.1 | 19921.2 |
| 2016 | 253.4923 | 14 | 15.70 | -1.6 | 9480.4 | 18316 |







PLAGARISM REPORT

Exchange Rate Fluctuation

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ETHICS COMMITTEE APPROVAL



BİLİMSEL ARAŞTIRMALAR ETİK KURULU

16.01.2019

Dear Thomas Abuobeleye Akpanke

Your project "The Effect of Exchange Rate Fluctuations on the Nigerian Economic Growth" has been evaluated. Since only secondary data will be used the project it does not need to go through the ethics committee. You can start your research on the condition that you will use only secondary data.

Assoc. Prof. Dr. Direnç Kanol

Rapporteur of the Scientific Research Ethics Committee

Direnc Kanol

Note: If you need to provide an official letter to an institution with the signature of the Head of NEU Scientific Research Ethics Committee, please apply to the secretariat of the ethics committee by showing this document.