

## **EMPIRICAL ANALYSIS OF SELECTED DETERMINANTS OF CAPITAL FLOW IN NIGERIA**

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**ABSTRACT:** *This study evaluates how selected factors have influenced capital inflow in Nigeria. This study observes the fact that Capital inflow may be unstable and threatening to the Nigerian economy if an in-depth study of selected determinants of the flow in Nigeria is not investigated. By this observation, the study uses annual time series data collected from the Central Bank of Nigeria to cover 1986 to 2025. This study uses a multiple regression to analysis the variables in the model and such includes cointegration and error correction method of analysis. The study in the cause of the investigation finds out that external factors like external debt, foreign exchange reserve, and foreign interest rate are the major factors influencing capital flows in Nigeria and this flow is grouped into foreign direct investments and foreign portfolio Investments. The results further reveal that, domestic macro-economic variables such as inflation rate, real gross domestic products and external debts, are the major factors influencing capital flows on the long run in Nigeria. Based on the results of the findings, the study makes the following recommendations and these include: policy measures designed to direct long run capital inflows and changing the short run patterns of the capital flow into the Nigerian economy. The study also recommends that clumsy inflow of portfolio investment should be lessened by using appropriate policies. It further recommends that agents of government and its authorities should put in place machineries that will make the domestic*

*capital market more attractive to foreign investors to invest in Nigeria. The study also recommends that appropriate portfolio management policies which will influence currency composition and choice of investment instruments that will reflect a country's precise policy settings and conditions should be put in place by the government. Further, it is equally recommended that sound reserve management policies and practices to improve the flow should be used by the government. Above all, the study recommends a healthy macroeconomic and financial system that will attract quality foreign investors into Nigeria for profitable investment.*

**Keywords:** *Exchange Rate, Foreign Direct Investment, Inflation, Foreign Portfolio Investment, and Capital Flow.*

## **INTRODUCTION**

### **1.0 Background to the Study**

Capital flow refers to the movement of capital, such as money, investments, or assets, from one country, region, or economic entity to another. This movement can occur through various channels, including, foreign Direct Investment (FDI): Direct investment in a foreign country, such as building a factory or acquiring a company, portfolio Investment etc. This Investment can be in foreign financial assets, such as stocks, bonds, or mutual funds. The FDI can be in form of bank loans which include: Cross-border lending between banks or financial institutions. The movement can also be in form of remittances: transfers of money by individuals working abroad to their home countries. Capital flows can be classified into several types, including: Inward capital flow: Capital entering a country, such as foreign investment or loans and outward capital flow: Capital leaving a country, such as domestic investment abroad or repayment of foreign loan (net capital flow which means the difference between inward and outward capital flows). Capital flows play a crucial role in the global economy such as: facilitating economic growth and providing access to foreign capital. Countries can finance development projects,

improve infrastructure, and increase economic growth with the help of foreign aid. Nations can also promote economic integration which include capital flows that help integrate economies globally, fostering trade, helping in investment, and economic cooperation. Overall, capital flows are essential aspect of the global economy, and understanding their dynamics is crucial for policy makers, investors, and businesses.

We can see Foreign direct investment (FDI) as an investment which is fix near directing possession in a business enterprise in local country by an entity based in external country. It is one of the key sources of capital inflows to less developed economies. This is from the technological advanced economies to developing countries themselves. This has been broadly taken to be significant in leading to growth in productivity from advanced nations of the world. Foreign Direct Investment is important to any nation. Sub-Saharan African (SSA) nations in general, and particularly Nigeria has been the main beneficiary of high-tech spill overs, job creation, improved managerial skills, high educational advancement, competitive markets and other benefits from these inflows to the nation. According to literatures, the flow of goods, services, and capital in and out of the nation are influenced by political and legal atmosphere of the host nation. Physical and social infrastructure, indigenous technology, inflationary pressure, domestic savings, fiscal and monetary policy, among other macroeconomic factors influence the variables. Worthy of addition to the above assertions are, two very vital factors that foreign investors consider before letting their goods move to any nation and these are risks related to exchange rate and its volatility in any of the countries.

Exchange rate in this study is seen as the price of one country's currency in terms of another. Exchange rate and is a vital macroeconomic variable viewed as a pointer to competitiveness of the currency of any country. Exchange rate, as one of the most vital prices in an open economy, is influenced by foreign flow of goods, services, and capital among nations of the world. This flow therefore leads to a strong pressure on balance of payments, inflation and other macroeconomic variables. It should be noted that, instability in exchange rate is likely going to lead to currency devaluation or evaluation in the country. This means as exchange rate appreciates, cost of production will rise in an economy. This rise will lead

to low and unstable FDI and vice versa. This means poverty will lead to high inequality and underdevelopment also and this will result in vast deficit domestic balance of trade and of payment in a domestic economy. Again, depreciation in exchange rate will lead to competitive advantages in foreign trade. This will make domestic goods cheaper and will lead to increase in the demand for export goods and this will cause an increase in international demand for domestic goods and decrease in import within the nation. All these trends will impact positively on FDI inflow into the domestic economy. Studies also revealed that, equilibrium foreign exchange will help decision makers to cut the uncertainty caused by volatility in exchange rate and hence growth and development in the country. The instability in exchange rate as noticed in past studies will lead to indecision, which has a negative effect on flow of trade in the country. Consequently, this study needs to stabilize the factor needed to influence the factors affecting the flow of foreign capital and review the variables use in this study in a bid to reduce risk from redirecting market activity to other lower risk market that occupies a critical aspect of economic management of any country. A closer observation of the economy in terms of capital movements globally also reveals in most cases a capital flow from resource-rich economies to resource-scarce economies as opined by Smadi, 2018. However, in another study by Lucas (1990), it was observed that the direction of capital flows is hampered by macroeconomic instability induced by insufficient human capital, imperfection in the capital market, and political risk in developing countries. Other study again showed that capital flows to developing nations could be mired owing to distortions in major macroeconomic variables among global economic imbalances and divergences in monetary policy across nations of the world, (Lucas 1990). Capital flows are in some countries assisting in the proper allocation of global resources which will increase the availability of capital and thus higher investment and growth in an economy.

The aim of any investor to invest in any country is a function, to a large extent, of the stability of exchange rate of the country. Therefore, a closer look at Nigeria shows that, the Nigerian economy is in serious need of adequate and effective management of foreign exchange rate that will boost the inflow of FDI and diversification of the Nigerian economy. Literatures show that Nigeria's abolition of certain

laws and successive entrenchment of laws that encouraged investment and introduction of structural reforms to enable a considerable flow of capital was affected by external advice and policies by international financial institutions in 1982. The trend continued until 1986, where Nigeria did not record any figure on portfolio investment in her balance of payment (BOP) accounts as a result of non-internationalization of the nation's money and capital markets and also the non-disclosure of information on the portfolio investments of Nigerian investors in foreign capital and money markets which has affected the Nigerian economy negatively in terms of capital flo, (CBN 2009).

However, past administrations in Nigeria have adopted several policies to boost FDI but despite these efforts by the government to stabilize the exchange rate in the country, much successes have not been achieved in terms of FDI inflow in the country. Based on the above, this study is carried out to examine selected determinants of capital flow in Nigeria and how this has affected the Nigerian economy as a whole.

### **2.1 Theoretical Literature**

Factors affecting capital flows in any economy have been broadly evaluated by many studies like: Ekpo (1997) when he verified the determinants of Foreign Direct Investment in Nigeria and found out that inflation rate, government policies and market players have actually affected foreign direct investment. In another literature by Hau, and Rey, (2006) when they reviewed how exchange rates and equity prices have affected capital flows. They found out that exchange rate and equity price have significant effect on foreign direct investment. Calvo, Leiderman and Reinhart (1993) in their study examined the determinants of capital flows from developed countries to developing and emerging market economies in the context of push and pull factors found out both positive and negative contributions to FDI. Again, according to theories of imperfect competition and market failure by Dunning's (1979) using "eclectic approach". The approach aimed at explaining the reasons for transnational production, and thus capital flows as it related to the ownership merits of multinational firms. The devise to "internalize" merits, and the locational merits of the recipient countries mostly the LDCs from international flow of capital was assessed and found out to favour mostly the developed nations of the world, (Saviour, 2022). The

Standard portfolio theory by Bleaney, Mizen and Senatla, 1999; and Devereux, 2006 suggested that agents should allot their asset holdings according to their preferred trade-off between risk and expected return in any investment. There are several economic theories concerning foreign direct investment. Among them are: Two Gap Model, Overshooting Exchange Rate Theory, Production Flexibility and Risk version Hypothesis, and the Neo-Classical Theory to mention but a few.

### **2.1.1 Two Gaps Model**

The Two Gaps Model also known as investment theory, argued that there are two gaps that must be closed for developing countries to develop and this according to the theory are the disparity between domestic savings and the capital outlay required for take-off, and the difference between export earnings and the imports requisite for growth. The theory sued that developing countries should search for foreign investment that will boost growth since they have inadequate saving capacities.

### **2.1.2 Overshooting of Exchange Rates Theory**

The Overshooting of Exchange Rates Theory also known as the sticky-price monetary model, was put forward by Dornbush in 1976. The theory provided an animated retort to the exchange rate instability observed among less developed countries. This trend according to the theory proved that such instability appears to be uniform with the evolution of rational expectation

hypothesis. The theory also assumes that price levels would react to these instabilities over time rather than immediately adjusting to short-term changes in equilibrium level. In addition, the theory also assumed that price stickiness is compensated for by lags in economic time-series data, including rates of interest and exchange rates of nations. Considering this, the sticky-price economic model permits the short-run fluctuation of nominal currency rates over their long-term equilibrium point in the domestic economy.

### **2.1.3 Production Flexibility and Risk Aversion Hypothesis**

This hypothesis had argued, that for the reason that businesses can adjust the use of one of numerous variable factors in response to nominal or real disturbances, advocates of production flexibility maintain that exchange rate instability excites foreign investment in the domestic economy. The

assumption about this argument is that, it may not hold if variables were static since it is grounded on the idea that businesses may adjust elements of the variables. This is for the reason that companies are unlikely to be able to adjust parameters in the near term. The hypothesis further argued that, FDI declines when exchange rate instability rises. This is because more instability reduces the predicted exchange rate's inevitability equivalent. The theory pointed out that, certainty equivalent levels are used in the anticipated profit functions of firms that make decisions about investments so as to generate future returns.

#### **2.1.4 The Neoclassical Investment Theory**

The Neoclassical Investment Theory had in their argument opined that one of the ultimate features of poorer countries, is fact that their labour and land resources are generally underused This situation, according to the theory is the cause of low savings rates among the poor countries of the world. Thus, their capital's productive efficiency been lower than that of manufacturing nations. This school of thought contends that interdependence among nations of the world benefits less developed countries more than the developed nations. This argument according to the theory is built on the vital evidence that, in a steady state, fund will flow from industrialized, established countries, to less developed nations, where according to the theory, investment returns will be high in the long run, which will transform the less developed nations into developed nations

#### **2.2 Empirical Review**

Saviour, Ekpe & Salamat (2023) examined the impact of monetary policy on real exchange rate volatility in Nigeria which influenced FDI in the long run. The study used time series data obtained from CBN and World bank 2021 and Ordinary Least Square (OLS) statistical technique was used to assess the degree of influence which the variables have on each other. Augmented Dickey-Fuller (ADF) test was adopted to test for unit root and Johansen's co-integration test was also conducted to establish long run association. The study also incorporated one co-integrating equation, Vector error correction model (VECM), Granger causality test and CUSUM test for further analysis. The study reveals that real exchange rate volatility has a negative and insignificant effect on FDI and hence on real GDP in Nigeria.

It also shows that monetary policy has a positive and insignificant influence in the Nigeria Economy. The study shows (among others) that there is no long run or short run relationship from real effective exchange rate volatility, Domestic interest rate, Government Spending and Net export running to FDI and then real GDP. This study therefore suggests that the Government should implement an expansionary monetary policy, through increase in money supply by reducing the domestic interest rate. The Government should implement an exchange rate system that is Market-determined and should step in only at crucial times to ensure stability in the exchange rate that will also at the end attract foreign investors in the country.

Saviour, Ferdinand and Jacob (2022) investigated the effects of selected macroeconomic variables on stock market performance in Nigeria. The study employed time-series data obtained from the Central Bank of Nigeria's statistical bulletin and World Development Indicators. Stock market performance was measured using the all-shares index while the identified macroeconomic variables included GDP growth, broad money supply, exchange rate, savings interest rate, and inflation rate. An Autoregressive Distributive Lag (ARDL) estimation technique was used to establish the long run relationship among the variables, and it was revealed that a long run relationship existed among the variables in the estimated model. The result shows that macroeconomic variables such as gross domestic product, broad money supply, exchange rate, and savings interest rate have a positive effect on stock market performance and hence in the FDI in Nigeria. On the other hand, the results showed that the inflation rate has a negative effect on stock market performance thus FDI in Nigeria. Predicated on the result, the study recommended that policies to increase gross domestic product, exchange rate, interest rate, and money supply should be implemented because they can lead to an improvement in the performance of the stock market and hence FDI, while the inflation rate should be maintained at a single digit to prevent its negative effect on the performance of the stock market and FDI in Nigeria.

Ekine, Dennis, and Charity (2019) studied the impact of foreign investment somewhat on performance of the Nigerian economic growth. The result of the study showed a strong association between the performance of the Nigerian economy and the inflow of foreign direct investment, which was

statistically significant at the 5% level. The study further revealed that in one way or another a strong economy is deeply dependent on the inflow of these vital determinants. They had found out that FDI is attracted or improved by economic factors like GDP market size, interest rates, inflation, currency rates and their volatility, and market size.

Mokuolu's (2018) investigated the relationship between FDI and economic growth in the Nigerian economy. The study used the yearly time series data for a period of 48 years. The study used Autoregressive Distributed Lag model (ARDL) method. The result of the study showed a strong positive correlation between FDI inflows and the GDP-based economic growth indicator in Nigeria. The macroeconomic variables that were used in the study was according to the apriori expectation of the study. The apriori expected had indicated that, if the rate of interest moves in the opposite direction, FDI will shrink in Nigeria. This is shown by the negative interest rate seen during the period. The outcome of the country's a priori postulated positive exchange rate condition in the country. The study then concluded that irrespective of how we observed FDI to be negatively related with variables, it is still vital for the economic growth of less developed countries of the world, and as such the study then recommended that government should ensure machineries are put in place to encourage foreign investors coming into the country for investment.

Arawomo and Apanisile (2018) examined the strategic drivers of FDI in the Nigerian communications industry while examining determinants of FDI in Nigeria. The study collected data from Central Bank of Nigeria's Statistical Report. The variables used in the study include: the number of telecom users, interest rate, foreign currency rate, and inflation. Graphs, the t-test, and the Autoregressive Distributed Lag were used to analyse the data (ARDL). The study comes to the conclusion that market size, trade openness, government spending, inflation, and interest rate are the major factors influencing Flow of FDI into the Nigerian telecom sector. The study also found out that found that the historical Foreign investment, market size, exchange rate, and GDP growth have become the main drivers of Foreign investment inflows to Nigeria and that these macroeconomic factors have a positive and significant impact on FDI inflows in Nigeria

Odili (2015) examined the impact of stock market performance and exchange rate volatility on the inflow of foreign direct investment into Nigeria. The study used time series data sourced from secondary source and covered the years 1980 to 2013. The study used the ordinary least square method in its estimation. The study's findings verified that exchange rate volatility has both a long-term and short-term negative and considerable impact on the flow of foreign direct investment into Nigeria. According to reports, Nigeria would undoubtedly draw direct foreign investment if its capital market is strong and stable. In order to improve domestic production of export goods, the research recommends the implementation of appropriate exchange rate management systems and regulations.

Amassoma (2014) in another study had investigated the influence of exchange rate on capital inflows (foreign direct investment and foreign portfolio investment) in Nigeria between 1986 and 2011. The study used time series secondary data collected from Central Bank of Nigeria of various years. The study used Granger causality and the Error Correction Modeling (ECM) techniques in the investigation. The result of the causality estimations revealed that there was no significant correlation between the exchange rate and capital inflows that is, foreign direct investment and foreign portfolio investment during the period of investigation. The result of the long-term regression also showed that, foreign direct investment had a negative influence on exchange rates, but portfolio investments had a positive effect. The fact that the short-term result was the same as the causation finding shows that neither foreign direct investment nor foreign portfolio investment had a significant impact on the exchange rate. The study came to the conclusion that there is a long-term link between FDI and the currency level in Nigeria and therefore recommended that government should ensure a functional and regulated capital market that will lead to a stable economy.

Omorokunwa and Ikponmwosa (2014) had investigated the dynamic relationship between currency rate volatility and foreign private investment in Nigeria. The study covered the period 1980 to 2011. The study used the Augmented Dickey Fuller (ADF) test to find out the stationarity of the data used in the study. Error Correction Model (ECM) was also used to analyze the data and the Engle and Granger two-step method was used to do the co-integration method. The result of the study that, exchange rate

volatility has moderate and little impact on the flow of foreign direct investment (FDI) into Nigerian economy, and this happened both in the short run and in the long run. The result of the study revealed that, in the short run, currency rate volatility has a trifling effect on foreign portfolio investments, but also that, in the long run, it has a substantial beneficial impact on the economy. Based on the results of the study, the following recommendations were made: Government should put policies in place to encourage private investors to produce quality goods that will complement foreign investors. The study also recommended that policymakers should create a reliable mechanism for managing the country's currency rates to boost investment and thus development.

Soumyananda (2014) examined the factors that affected foreign direct investment in Nigeria between 1970 and 2006. The result of the study showed that, market size was not a vital factor in attracting long-term foreign investment to Nigeria. The study then found out that, the majority of FDI to Nigeria is resource-seeking meaning they come take what they want and give Nigeria very small gain. The study also found out that there is a considerable stimulus on Nigeria's natural resource where the trading partners like UK and China come to drain Nigeria

Ntim and Emilia (2014) investigated the connection between various macroeconomic factors influencing foreign direct investment. They used the Vector Error Correcting Model (VECM) in analysis and obtained data from the Central Bank of Nigeria statistical bulletin 2013.

The results of the study revealed that, political stability and corruption have a significant role in determining FDI inflows to Nigeria. The study also found out that, human capital and economic openness are equally major determinants of FDI. From the findings in the study, they recommended upgrading of Nigeria's political and economic institutions for Nigeria to gain in any international investment.

Rasaq (2013) had examined the impact of exchange rate volatility on important macroeconomic indicators. The study had collected secondary data from CBN statistical bulletin of 2011. The study used Granger Causality test, the Ordinary Least Square (OLS), and the Correlation Matrix in the analysis. The result of the study showed that, though exchange rate volatility was observed to have a negative

impact on the nation's inflation rate, it was equally observed that exchange rate volatility had a beneficial impact on the gross domestic product, foreign direct investment, and trade openness. The study therefore recommended that, in order to encourage a favourable terms of trade in the country, the country needed to develop its exports and reduce its over-dependence on the oil industry in order to increase its revenue. The study also recommended an increase in local manufacturing which according to the study will reduce the problem brought on by exchange rate volatility.

Edo (2011) in a study to investigate factors affecting FDI had collected secondary data from CBN statistical bulletin for the analysis. The study analyzes how institutional quality affected FDI flows into Nigeria from 1980 to 2011. The study found out that institutional instability, extreme levels of corruption, insecurity, and macroeconomic instability hamper FDI from entering a nation.

Osinubi and Amaghionyeodiwe (2009) in their study examining influence of exchange rate volatility on Foreign Direct Investment (FDI) in Nigeria adopted a standard deviation model to analyze how exchange rate volatility has influenced FDI in Nigeria. The study tried to determine how exchange rate volatility had affected the entrance of FDI to the Nigerian economy within the period under study. The study adopted both the OLS method of estimate and the error correction model. The results of the study found out that, foreign investors should not fear extremely about exchange rate volatility trend. The results further showed that actual inward FDI and exchange rate have a substantial positive relationship. By this result it showed that devaluation of the Naira

boost actual inbound FDI in the study. Again, the results showed that the world bank suggested policy of structural adjustment program which was implemented in Nigeria in 1986, had a damaging effect on real inward Foreign Direct Investment in Nigeria, which may have been triggered by the deregulation of naira that was followed by exchange rate volatility in the country.

### **3.0 METHODOLOGY**

The design adopted in this study was an ex post facto (after the fact) design. This is because the events had already taken place before the investigation was carried out. The choice of this design was made because the researchers had no control of the independent variables and inferences about the

relationship among the variables are made without the current interaction between the regress and regressors. The design is predicated on various econometric techniques such as the Augmented Dickey-Fuller (ADF) unit root test and the autoregressive distributive lag model, as well as the trend analysis of stylized facts on some of the indicators of variables of concern. The dependent variable for this study is the Capital Flows define in this study as foreign direct investment (FDI) and foreign portfolio investment (FPI), while the independent variables are LIB London Inter-bank Offered Rate use as to measure the foreign interest rate, Rate of Inflation, Total External Debt, Market Size of the economy measured by real Gross Domestic Product in this study, Gross Foreign Exchange Reserves, Openness calculated as Exports + Imports divided by GDP at current market prices, human capital proxied by secondary school enrolment in the country.

### **3.1 Model Specification**

According to the theoretical underpinning in this study, the factors influencing capital flows in the world depend on if the researcher is investigating aggregates and disaggregate flows and if the latter are investigated what type of disaggregate flows is investigated. In this study, the disaggregate flow is a function of both short- and long-term flows. Looking at equation (1) below, foreign capital flows is projected to hinge on the factors selected in this study in the model. Therefore, considering the theoretical framework as the theories opined above, the model is then presented as:

$$CAP = f(LIB, OPN, EXDT, INF, HC, FXR, RGDP).....(1)$$

CAP: Capital Flows divided into foreign direct investment (FDI) and foreign portfolio investment (FPI).

LIB = London Inter-bank Offered Rate use as a measure of foreign interest rate

OPN = Level of openness

EXDT = Total External Debt

INF = Rate of Inflation

HC = human capital (measured as secondary school enrolment)

FXR = Gross Foreign Exchange Reserves

RGDP = real Gross Domestic Product use as a measure of Nigerian Market Size

$$CAP = \beta_0 + \beta_1 LIB + \beta_2 OPN + \beta_3 EXDT + \beta_4 INF + \beta_5 HCt + \beta_6 FXR + \beta_7 RGDP + u \dots \dots \dots (2)$$

A priori signs are:  $\beta_1, \beta_3, \beta_4, < 0$ ;  $\beta_2, \beta_5, \beta_6, \beta_7 > 0$

This study uses London interbank offered rate as one of the independent variables and this is anticipated to negatively impact on FDI and FPI in the country. This means that an increase in international interest rates will likely lead to low capital flow to Nigeria. According to the a priori expectation, rate of inflation is expected to have negative influence on international capital flows. This is because inflation leads to uncertainty in the domestic market and thus the Nigerian economy. It was equally expected that external debt has a tendency to inhibit the level of investment and this will have a negative influence on capital flows in the economy. The a priori expectation of real GDP is expected to be positively related with capital flows. The study expectation of foreign reserves and openness are to have positive impacts on international capital flows in the country.

### **3.2 Method of Estimation and Data**

The design adopted in this study was an ex post facto (after the fact) design. This is because the events had already taken place before the investigation was carried out. The choice of this design was made because the researchers had no control of the independent variables and inferences about the relationship among the variables are made without the current interaction between the regress and regressors. The design is predicated on various econometric techniques such as the Cointegration and Error Correction Mechanism (ECM) which provides a dynamic structure for the analysis. The study also uses the Augmented Dickey-Fuller (ADF) unit root test. The study also investigates the time series and long run characteristics of the data collected and used in the analysis.

To enable us carry out the investigation, equation two is again specified thus:

$$FPI_t = \beta_0 + \beta_1 LIB + \beta_2 OPN + \beta_3 EXDT + \beta_4 INF + \beta_5 HCt + \beta_6 FXR + \beta_7 RGDP + YECM_{t-1} + \varepsilon_{1t} \dots (3)$$

and

$$FDI_t = \beta_0 + \beta_1 LIB + \beta_2 OPN + \beta_3 EXDT + \beta_4 INF + \beta_5 HCt + \beta_6 FXR + \beta_7 RGDP + YECM_{t-1} + \varepsilon_{2t} \dots (4)$$

Where  $Y$  is the error correction term in this study. The study collected 1986 to 2024 annual data from the Central Bank of Nigeria Statistical Bulletin various years and World Bank Development Indicators.

#### **4.0 EMPIRICAL ANALYSIS**

##### **4.1 Unit Root Analysis**

**Table 4.1 Unit Root Test**

<b>Variable</b>	<b>ADF Test at Levels</b>	<b>ADF Test at First Difference</b>	<b>95% Critical ADF Value</b>	<b>Remark</b>
<b>FDI</b>	<b>0.419</b>	<b>-8.287</b>	<b>-2.960</b>	<b>Stationary at First Difference</b>
<b>FPI</b>	<b>-6.635</b>		<b>-2.960</b>	<b>Stationary at Levels</b>
<b>FXR</b>	<b>2.422</b>	<b>-4.561</b>	<b>-2.960</b>	<b>Stationary at First Difference</b>
<b>INFL</b>	<b>-2.802</b>	<b>-5.586</b>	<b>-2.960</b>	<b>Stationary at First Difference</b>
<b>HC</b>	<b>-1.684</b>	<b>-3.131</b>	<b>-2.960</b>	<b>Stationary at First Difference</b>
<b>EXDT</b>	<b>-1.892</b>	<b>-4.129</b>	<b>-2.960</b>	<b>Stationary at First Difference</b>
<b>RGDP</b>	<b>3.715</b>		<b>-2.960</b>	<b>Stationary at Levels</b>
<b>LIBOR</b>	<b>-2.573</b>	<b>-3.648</b>	<b>-2.960</b>	<b>Stationary at First Difference</b>
<b>OPN</b>	<b>-1.521</b>	<b>-3.089</b>	<b>-2.960</b>	<b>Stationary at First Difference</b>

**Source: Result extracted by Authors from the E-views 9**

The study uses Augmented Dickey Fuller (ADF) unit root test to test for stationarity of the data and the result from the table above shows that apart from FPI and RGDP all the other variables possess ADF values that are less than the 95 percent critical ADF value. This means that the time series are non-stationary at levels. However, the variables FPI and RGDP are stationary at levels, indicating that these variables are not time-dependent as seen in the table.

#### 4.2 Co-integration Test

**Table 4.2: Engle and Granger Residual Cointegration Tests Results**

Model	ADF Lag	Calculated ADF	Critical ADF Value (95%)	Remark
1	1	-7.249	-2.957	Stationary
2	1	-5.817	-2.986	Stationary

**Source: Result extracted by Authors from the E-views 9**

Looking at Table 4.2 above, it reveals that by using the Engle and Granger co-integration procedure, two of the models have ADF test statistic values that are more than the 95 percent critical ADF value as seen in the table. Therefore, it shows that the null hypothesis of no co-integration among the variables at 5 percent level of significant is rejected. This means that the variables are stationary and this shows that the time series data use in this study is cointegrated at the 5% level of significant. This then means that, there is a long run relationship existing between the dependent variable and selected independent variables in this study. From the results above which shows that some variables are not stationary at levels gives us the impetus investigate further

if the variables are co-integrated in the study. For us to carry out this test we have to rely on the Engle and Granger hypothesis of 1987 which opined that, when time series data  $pt$  and  $qt$  use in analysis are not stationary at levels  $I(0)$  but otherwise at first-difference,  $I(1)$ , they opined then that there could be a linear combination of  $pt$  and  $qt$ , which is stationary at first difference. This means that, the two time series variables that placate this condition are considered to be cointegrated. The fact that there is an existence of cointegration among the variables shows that the two cointegrated variables must be

moving together at the same degree. According to the theory by Engle and Granger, a necessary condition for cointegration is that the data should be co-integrated at the same order. To further ascertain the state of cointegration in this study we employ the Engle and Granger two-step method. By this method we regress the dependent variable on all the independent variables. The value of the residuals confirms the results, that is, if the variables are cointegrated, the residual from the cointegrating equation must be integrated to order zero in the study. Considering the analysis in this study, the cointegration tests are done on the foundation of the specific models that were shown in the table above.

### 4.3 The Long Run Results

**Table 4.3: The Long Run Relationship**

Variables	FPI	FDI	
C	9479.7	35926.5	
FXR	-0.154***	-0.005	
INFL	-7.401	16.17*	
HC	69.80	80.52	
EXDT	-0.109**	-0.074*	
RGDP	0.037*	0.053***	
LIBOR	150.4	92.05	
OPN	-176.3	-693.2	
R <sup>2</sup> = 0.369	F = 1.59	R <sup>2</sup> = 0.931	F = 47.9

**Source: Result extracted by Authors from the E-views 9**

\* shows significance at 10 percent level; \*\* shows significance at 5 percent level; \*\*\* shows significance at 1 percent level.

Considering table 4.3 above, the result of the long run determinants of capital flows in Nigeria is shown. The result of the study shows that the Foreign Portfolio Investment model has a poor relationship with RGDP. This is as seen by the small R<sup>2</sup> value of 0.369 in the table. This means that the long run Foreign

Portfolio Investment in Nigeria is externally influenced by variables not included in the models use in the study in the short run. This result agrees with the theoretical underpinning of this study which opines that Foreign Portfolio Investment is a short run capital rather than a long-term factor. The results further show that, the Foreign Direct Investment with the  $R^2$  value of 0.931 is high and this reveals that the flow of capital into the Nigerian economy is explain by variables captured in the models.

Again, the F statistics value of

47.9 indicates a strong relationship existing between Foreign Direct Investment inflows and all the determinant variables put together in the study. Despite the weak performance of the Foreign Portfolio Investment model, it is equally still seen that RGDP, FXR, and EXDT are significant in the result, and this means that foreign reserves and external debt have a continuous impact on Foreign Portfolio Investment flows on Nigerian economy. The result further shows that, in the long run, the growth of the economy becomes a robust influence for portfolio investment to consider in its flows in the study. Considering the Foreign Direct Investment result, it shows that inflation, external debts and real Gross Domestic Product are the significant variables in the study. This means that, domestic influences are very vital in the determination of Foreign Direct Investment on Nigerian economy in the long run. This means, inflation and level of economic performance exercise strong influences on the performance of Foreign Direct Investment inflows in the long run in the country. Consequently, for Nigeria to enhance workable and continuous inflow of Foreign Direct Investment, emphasis must be on the economic environments of Nigeria.

#### 4.4 Dynamic Analysis

**Table 4.4: Short run Model for Determinants International Capital Market**

Variables	FPI	FDI
C	<b>-51.16</b>	<b>111.2</b>
FDI(-1)		<b>0.282*</b>
$\Delta$ FXR	<b>-0.138***</b>	<b>-0.075**</b>
$\Delta$ INFL	<b>4.497</b>	<b>6.703</b>

$\Delta HC$	<b>-94.31</b>	<b>174.6**</b>	
$\Delta EXDT$	<b>-0.111**</b>	<b>-0.022</b>	
$\Delta RGDP$	<b>0.051</b>	<b>0.026</b>	
$\Delta LIB$	<b>117.7</b>	<b>116.6*</b>	
$\Delta OPN$	<b>298.9</b>	<b>-204.0</b>	
$ECMt-1$	<b>-1.198***</b>	<b>-1.869***</b>	
<b>R<sup>2</sup> = 0.756</b>	<b>F = 6.58</b>	<b>R<sup>2</sup> = 0.827</b>	<b>F = 31.14</b>

**Source: Result extracted by Authors from the E-views 9**

\* indicates significance at 10 percent level; \*\* indicates significance at 5 percent level; \*\*\* indicates significance at 1 percent level.

The values from Table 4.4 discusses the short term changes in the determinants of flow of capital in Nigeria. This study uses an autoregressive distributed lags (ARDL) Method and focusses on the ECM. The use of error correction mechanism for the selected ARDL model is as seen in Table 4.4 above. This study use the R<sup>2</sup> criterion to select the parsimonious equation as seen in the study. The study shows the FPI results of the error correction mechanism on the second column of table 4.4 above and this shows the presence of very high diagnostic statistics in the model. The R<sup>2</sup> value of 0.756 shows the goodness of fit of the model and this means that over 75 percent of the systematic changes in FPI inflows in Nigeria is explained by the variable's presence in the explanatory variables and the ECM. Looking at the R<sup>2</sup> value for the Foreign Direct Investment in the model, it is also notice that the R<sup>2</sup> of 0.827 is high and this means that 82 percent of the systematic changes in FDI flows in Nigeria is explained by the variables in the model. The overall performance of the models is also high. The table further shows that the F-statistic values of 6.35 for the FPI model and 31.1 for the FDI model have passed 1% level of significance test. This is because the calculated values of the F statistics are greater than the 1 % critical F-value of 5.01 in this study. Arising from the above, we cannot reject the hypothesis of a significant linear relationship between foreign capital and all the independent variables combined in the short run in Nigeria.

Considering the above results, it is observed that, the contribution of each of the variables to foreign capital flow in Nigeria is influenced the coefficients of the explanatory variables in terms of sign and significance in this study. The results also show that the coefficients of the variables in the FPI model that is the foreign reserves and human capital do not agree with the a priori expectation. The notice of high value foreign reserves variable shows that reserves position of the country has a very strong negative impact on FPI flows in the country. Looking also at the results of this study, it is seen that, external debt in Nigeria limit the amount of FPI inflows to country mostly in the short run. Hence the failure of all the other variables at the 10 percent level means that external factors have affected FPI flows in Nigeria in the short run than domestic factors. The results further show that the coefficient of Foreign exchange does not agree with the a priori expectation of positive sign in the FDI model. This means external reserves accumulation in Nigeria has significantly affected foreign capital flow in the country. The results also reveal a positive significant relationship between human capital (HC) and capital flow at 5 percent level of significant in Nigeria. This means that strong human capital base is a one of the main factors influencing FDI flows in Nigeria. Again, it is obvious that Foreign direct investment according to the result, appears to be vital in the growth of an economy and thus human capital development is the panacea for this flow in the country. The result also reveals that interest rate has positively influenced FDI flows in the country and this means that changes in the rate of interest has an effect on the inflow of FDI in Nigerian economy. Looking at the results of this study closely, it is seen that other variables in the model have not positively influenced capital flow except Inflation and human capital. Above all, the failure of the real GDP and openness coefficients in both the FPI and FDI results is a thing of worry as the refuse to agree with the a priori expectations. Therefore, it can be deduced that the market size or the rate of openness does not have much impact on the FDI inflows in the short run in Nigeria. This means, the adjusting macroeconomic factors in this study does not have serious impacts in the short term on foreign capital inflows into the country. The scenario sorts for the error correction terms in the both equations and this then have the correct negative sign as seen on the table above. This trend therefore reveals that any short run change in foreign capital in Nigeria will be

restored in the long run. This is because, the high values of the error correction term that is more than one means that adjustment to equilibrium in the long run will move backward. This means the adjustments appear to move from negative to positive over time as seen in this study and this may be as result of the compositions of the market in Nigeria. The implications of the results show that, international market factors have a tendency to have continuous impacts on capital flows in the Nigerian economy. This means the impacts of external reserves and external debt on foreign direct and portfolio investments are weighty in Nigerian economy. The non-significant relationship of the macroeconomic variables in the short run but being significant in the long run as observed in the ECM and long run estimates tables in this study means that the management of local macroeconomic factors have not attracted foreign investment, particularly the portfolio investment that will lead to growth and development of the Nigerian economy. Again, as seen in the result, the Human capital development is one of the key domestic factors that stimulate capital flows in Nigeria in the short and long run.

## **5.0 SUMMARY, RECOMMENDATIONS AND CONCLUSION**

### **5.1 Summary of Findings**

The main aim of this study is to examine the factors influencing the inflows of foreign capital into Nigeria. The study further examines how the external capital flow has influenced the development of Nigeria. The results of this study reveal that the expected benefits to factors influencing foreign capital flow into Nigeria are mostly gotten from external than internal sectors. The study specifically found out that: Domestic factors wield more impact on the factors influencing long run capital flow. It is also found out that portfolio investment has significant influence in the short run than in the long run in Nigeria. A closer look at the result shows external factors are likely to influence the flow of FPI in the long term. This can be affirmed considering  $R^2$  values of 76% and 37% as seen in the table above. Again, it is revealing in the study that in the short run outside factors play more roles in encouraging capital inflows to the Nigerian economy.

### **5.2 Recommendations**

In view of the above findings, the following policy recommendations are proffered:

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- i. Government authorities should put machineries in place to expand and promote domestic capital market that will attract more foreign investors to increase productivity and development.
- ii. The authorities should create a healthy macroeconomic environment and affordable and accessible financial system that will encourage and attract foreign investors into the country.
- iii. Government should put policies and machineries in place to reduce uncontrolled inflow of portfolio investment in Nigeria as this will reduce the level of equity bubbles in the capital market.
- iv. We also recommend that government authorities should pay attention to appropriate management of the vast external reserves of Nigeria so as to obtain short term stability of foreign capital flows that will aid economic growth and development. This can be done by putting correct policy in place that will focus on stringent management of the external sector through appropriate reserves policy and debt management that will likely improve the Nigerian economy.
- v. This study also recommends that, proper portfolio management policies relating to the currency structure, selection of the type of investment instruments, and satisfactory period of the reserves portfolio to ensure that assets are protected and made available to enable the market expansion in Nigeria.
- vi. The result reveals a veritable difference between short run and long run factors influencing foreign capital inflows to Nigeria. Hence, we recommend that policy measures designed to direct long term capital inflows should not be the same as those designed to control the short-term capital flows. This can be done by enhancing a policy is fashioned to consider the time horizon of capital flows.
- vii. No country of the world can strive in an unregulated capital market and unreserve management structure and as such we recommend the government to provide a sound reserve management policies and practices that will promote sound and regulated macroeconomic management system.

### **5.3 Conclusion**

This study concludes that, managing capital flows the world over and Nigeria in particular is a difficult development that requires suitable choice of policies that will aid a country to grow and some of the policies include yet not limited to: enhancing a good financial market conditions that will aid financial

stability of a country, suitable level of capital reserves locally and internationally, and adequate monetary policy objectives that will aid liquidity management. We therefore conclude that, huge capital inflows frequently are connected with inflationary pressures that retard growth and development. Literatures opined that huge capital inflows may also lead to stock market bubbles and this in turn leads to an extreme expansion in internal credit which will again jeopardize the stability of the financial system. The capital inflows in Nigeria in the short term intensify the problems of the financial market. Therefore, for the capital flows to be effectively strengthened and enhanced key and sound macroeconomic policies as stated in the models should be promoted. Nations with sound macroeconomic policies and quality institutions are the countries benefiting from this capital flow.

The reason for this study is to investigate the factors that influence capital flows in Nigeria and the study reveals that foreign capital inflow in Nigeria is distinguished between short run and long run bases. The result further reveals that Portfolio capital flow in Nigeria is more of short term than direct investment capital as seen in the result where Foreign Portfolio Investment have a tendency to produce volatile effects on short term financial market development in the Nigerian economy. We therefore can conclude that, the combination of Foreign Portfolio Investment and that of direct investment shows a means of guaranteeing more valuable operation of foreign capital inflows into the Nigerian economy that will enhance a desirable economy.

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