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Impact of Macroeconomic Determinants on Foreign Portfolio Investment in Nigeria

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ABSTRACT: *Foreign capital inflows, including foreign portfolio investments (FPI), significantly contribute to filling Nigeria's domestic saving gap and are important sources of capital formation, technological development, innovative capacity, skills building, and organizational improvements. However, exchange rate fluctuations have controversially impacted FPI flows. Some studies found exchange rate changes increased Nigerian FPI, while others determined a negative relationship. This study examined macroeconomic determinants of FPI in Nigeria from 2011-2022 using quarterly data. Applying OLS modeling after confirming variables were integrated at levels and first differences, results showed exchange rates, inflation, and GDP significantly influenced FPI flows. Specification tests validated model stability. Analysis revealed exchange rate fluctuations substantially drove capital inflow and divestment decisions. Suggesting exchange rate uncertainty discourages long-term FPI, findings imply the need for fiscal policies supporting security and business environment certainty to attract foreign investors. Additionally, raising benchmark interest rates above inflation could ensure positive real returns and promote investments. Overall, creating macroeconomic stability through coordinated fiscal, monetary, and exchange rate policies appears critical for Nigeria to reap the development benefits of sustained foreign portfolio inflows. It therefore, suggested that, Fiscal Authority should create an enabling environment, especially by providing adequate security in the country in order to attract and retain foreign investors in Nigeria. Also, the monetary authority should increase the interest rate (MPR) which is the anchor rate in order to have positive rate of return after considering the rate of inflation in the country. In conclusion, the study recommended for further study especially on foreign direct investment in Nigeria.*

KEYWORDS: Macroeconomic Determinants, Foreign Portfolio Investment, Capital inflows

INTRODUCTION

In the context of an increasingly interconnected global economy, the significance of capital flows as indicators of economic health and development cannot be overstated. The determinants of

macroeconomic variables can have a significant impact on foreign capital inflows in any country, including Nigeria (Alabi et al., 2019). For emerging economies like Nigeria, foreign capital inflows play a pivotal role in fostering economic growth, industrialization, and international trade. However, the persistent concern of exchange rate volatility has cast a shadow over the stability and attractiveness of Nigeria's investment climate (Dabwor et al., 2019).

Foreign capital inflows, encompassing various forms such as foreign direct investment, foreign aid, and foreign portfolio investment, are crucial for the development of nations, especially in the case of developing economies like Nigeria (CBN Policy Documents, 2019). The study focuses on the investment component of these inflows, specifically examining the issuance of certificates of capital importation and their role in accessing official foreign exchange windows. Moreover, the formulation of exchange rate policies emerges as a critical context, shaped by the desire to maintain external reserves and achieve a realistic exchange rate for the domestic currency (Adeyinka et.al 2022). In Nigeria, managing foreign exchange, particularly the exchange rate of the naira, poses a significant challenge for both fiscal and monetary authorities.

The choice of exchange rate regimes in emerging nations involves navigating complex internal and external factors, including government revenue fluctuations, economic recovery in developed nations, foreign reserve levels, inflation rates, and GDP growth (Okonkwo, 2019). The study recognizes the interconnectedness of these factors and their impact on the foreign portfolio investment, which, in turn, influences the external value of the currency. Amid these challenges, foreign capital inflows emerge as a critical concept, acting as a catalyst for economic growth by bringing in managerial skills and international capital markets (Adeyemi et al.2019).

Nigeria, as a developing economy, heavily relies on foreign capital to fuel investments and foster economic growth. The exchange rate fluctuations experienced by the country during the study period pose both positive and negative implications for foreign investors. Foreign capital inflows play a crucial role in stimulating growth in developing economies like Nigeria, serving not only as a source of capital formation but also as a catalyst for technological development through the transfer of productive technology, innovation, skills development, and organizational improvement. The study acknowledges the importance of foreign capital inflows in Nigeria, with previous research by Makoni (2020), and Karimo (2020) highlighting key determinants, including the exchange rate. However, there remains a controversial and unresolved aspect concerning the impact of exchange rate fluctuations on foreign capital inflows.

Despite the plethora of studies on the relationship between macroeconomic variables and foreign capital investment, the non-inclusion of foreign portfolio investment in many analyses overlooks a vital aspect of the story. While foreign direct investment (FDI) and foreign portfolio investment (FPI) serve distinct purposes, the former being long-term and the latter short-term, their reactions to exchange rate fluctuations differ significantly. FDI tends to be less sensitive to short-term fluctuations, focusing on economic fundamentals and long-term prospects. Conversely, FPI, characterized by easy transfer and repatriation, exhibits greater sensitivity to exchange rate movements. The research aims to shed light on

these dynamics by examining the interplay between exchange rate fluctuations, inflation, interest rates, GDP growth, and foreign portfolio investment.

The research addresses the existing gap in the literature, emphasizing the complexity of effective exchange rate management in the face of exogenous factors. The study aims to shed light on the dynamic relationship between these macroeconomic determinants and foreign portfolio investment, providing valuable insights for policymakers and investors aiming to enhance economic stability and attract foreign capital to Nigeria. Specifically, this study sought to achieve the following objectives;

i. evaluate the impact of exchange rate on foreign portfolio investment in Nigeria;
ii. examine the impact of inflation on foreign portfolio investment in Nigeria;
iii. determine the impact of interest rate on foreign portfolio investment in Nigeria;
iv. identify the impact of GDP on foreign portfolio investment in Nigeria;

LITERATURE REVIEW

The concepts, theoretical background, and empirical research submissions on relationship between strategy implementation and performance were presented.

Conceptual Clarification

Foreign portfolio investment (FPI) refers to the investment by foreigners in the financial assets of another country, such as stocks and bonds. It does not provide the investor with direct ownership or control over the underlying assets (Levchenko and Mauro, 2017). FPI allows investors to diversify their portfolios internationally and seek higher returns, while providing emerging economies with much-needed foreign capital for development (Mishra and Sharma, 2016). In recent years, FPI flows to developing countries have increased substantially due to positive growth expectations and improving political environments (Oyerinde, 2019). However, these flows are often volatile as investors tend to pull out money quickly during periods of uncertainty. Policymakers face the challenge of balancing the benefits of FPI, such as development of domestic financial markets and integration into global capital markets, against the risks of financial crises associated with rapid outflows (IMF, 2016). Overall, FPI generates gains for both source and destination countries but requires careful macroprudential regulation to ensure financial stability.

An exchange rate is the value of one currency in terms of another (Blanchard, 2017). Exchange rates determine the relative price of goods and services across borders, thereby influencing the flow of trade and financial assets globally (Ilzetzki et al., 2020). Exchange rate movements reflect macroeconomic fundamentals, policy changes, market expectations, and risk sentiment, making them highly volatile (Engel, 2014). Appropriately valuing exchange rates is critical for international trade competitiveness, capital flows, and overall economic performance.

Similarly, inflation refers to the sustained rise in the general price level across an economy over a period of time (Mankiw, 2021). It erodes the purchasing power of the currency and is regarded by monetary authorities and policy makers as an important signal about the state of aggregate demand relative to productive capacity (Federal Reserve, 2018). Keeping inflation low and stable through interest rates and other policy levers promotes price transparency and helps anchor inflation expectations, thereby supporting savings, investment and growth.

Interest rates refer to the cost of borrowing or opportunity cost of lending money for a period of time (Feiveson et al., 2018). In an economy, interest rates have two functions: they determine borrowers' cost of borrowing and, conversely, they determine investment yield. As borrowing costs rise, a high local interest rate may discourage domestic investment; conversely, it may entice foreign investors to transfer money from economies with low interest rates to those with high interest rates (Odionye et al 2023). As key monetary policy instruments, interest rates allow central banks to regulate economic growth, inflation, currency exchange rates and capital flows (Taylor, 2019). Higher interest rates aim to constrain excess demand and curb inflationary pressures, while low rates encourage spending and investment to support economic growth and employment.

In the same vein, GDP or gross domestic product measures the total value of finished goods and services produced in an economy over a specific period, representing its size and productive capacity (Callen, 2020). As the foremost macroeconomic indicator, GDP growth rates guide policy interventions and investment decisions (World Bank, 2018). GDP must expand at rates that exceed population growth to raise per capita incomes and living standards over time.

Equally, foreign exchange reserves include government-held cash, bank deposits, bonds and other financial assets denominated in foreign currencies (Aizenman et al., 2020). Reserves safeguard a country’s ability to meet external payment obligations, influence exchange rates, and maintain market confidence in periods of stress. Developing economies accumulate reserves as insurance against capital flight while advanced economies hold them to coordinate foreign exchange operations.

According to Nwagu (2023) previous research, nations with minimal investment risk and macroeconomic stability, including stable prices, rapid GDP growth, little fluctuation in exchange rates, and moderate interest rates, are more appealing to international investors

Conceptual Framework

This study aims to explore the relationship between exchange rate fluctuations and foreign capital inflows in the Nigerian economy, establishing a conceptual framework to guide the research (Figure 1). The primary variables under investigation include exchange rate, inflation, interest rate, and GDP. The study posits that exchange rate movements play a pivotal role in determining the appeal of a country's assets to foreign investors; a depreciating exchange rate can make Nigerian assets more affordable, potentially increasing foreign capital inflows. However, the impact of inflation on this relationship is crucial, as high inflation rates may undermine the attractiveness of Nigerian assets despite a depreciated exchange rate. The study emphasizes the need to consider the interplay between exchange rate fluctuations and inflation

when evaluating their influence on foreign capital inflows. Additionally, the interest rate is identified as a key factor, suggesting that higher interest rates in Nigeria, relative to other countries, can act as a magnet for foreign investors seeking enhanced returns on their investments.

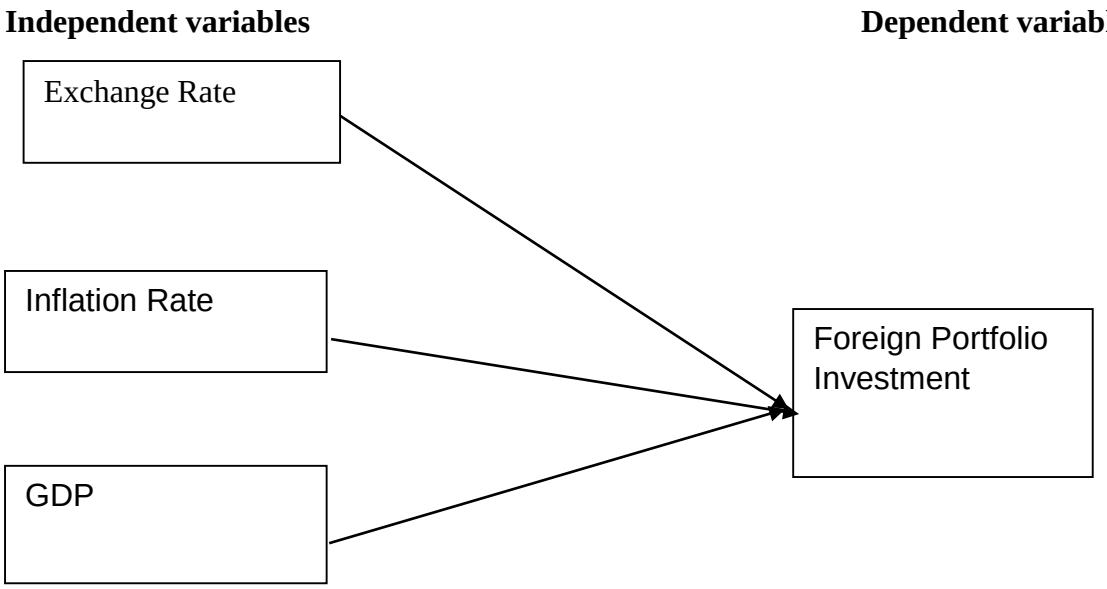

Figure 1: Conceptual framework

Theoretical Framework

This theoretical framework aims to explore the repercussions of exchange rate fluctuations on foreign capital inflows in Nigeria, drawing on various economic theories for a comprehensive understanding of this relationship. The study will delve into Purchasing Power Parity (PPP), Interest Rate Parity (IRP), Balance of Payment (BOP), Mint Parity, Fisher Effect, and Monetary Approach to Exchange Rate theories. The PPP hypothesis asserts that exchange rates should equalize buying power between two currencies, and the study will investigate how such variations impact foreign capital inflows and relative prices in Nigeria. The IRP theory, focusing on interest rate differentials, will be used to analyze the effects of exchange rate changes on foreign capital inflows. The BOP theory, chosen as the primary analytical framework, considers various BOP components, such as the current account and capital account, providing a systematic approach to examining how exchange rate fluctuations affect foreign capital inflows. Despite criticisms, particularly regarding its assumptions about the always-balanced current and capital accounts, the BOP theory remains widely accepted, offering a comprehensive perspective on the impact of exchange rate fluctuations on the external position of Nigeria and allowing for a comparison of their effects on different BOP components.

Empirical Review

Several studies have recently macroeconomic variables to foreign portfolio investment. For instance, a study by Olubiyi (2021) found that depreciation of the naira positively impacted foreign portfolio investments in Nigeria in the short run. Meanwhile, Babatunde (2017) determined exchange rate volatility had an insignificant negative relationship with equity portfolio flows.

Inflation. Equally, Umar and Abdulhakeem (2021) concluded that inflation rate volatility discouraged flow of foreign portfolio investments into Nigeria. Conversely, a study by Okonkwo (2021) found no significant long run impact of inflation on portfolio investments in Nigerian equity and money markets. In the same vein, Ahmed and Kelikahili (2022) determined rising interest rates promoted greater inflow of foreign portfolio investments into Nigeria's fixed income securities. However, Asiedu (2020) found interest rate differential between Nigeria and investing countries discouraged equity portfolio investments in Nigeria. Empirical evidence from Ojeme and Louis (2021) showed GDP growth rate had a significant positive impact in driving portfolio investments into the Nigerian stock market. Similarly, Babajide et al. (2018) found strong GDP was a key determinant of foreign investments into Nigerian money and equity markets. According to Osuji (2015), growth in Nigeria's external reserves encouraged higher foreign portfolio investments by assuring investors about availability of foreign currencies. But Ayadi (2016) found lagged reserves had an insignificant impact on portfolio flows into Nigeria's bond and equity markets.

METHODOLOGY

The research design employed in this study is an ex-post-facto design, which is a quasi-experimental approach examining how independent variables, existing prior to the study, impact dependent variables. Utilizing time series data spanning from 2011 to 2022, the study focuses on the fluctuations of exchange rates and their effects on foreign capital inflows in Nigeria, particularly foreign portfolio investment. The population of the study is derived from historical quarterly data of exchange rate fluctuations, inflation, interest rate, FX Reserve, and GDP, obtained from the Central Bank of Nigeria Online Statistical Bulletin. The sample size and sampling techniques involve using the entire population sample for the study, drawn from the Central Bank of Nigeria Statistical Bulletin, utilizing a time series regression over an 11-year period (2011-2022). The data collection process involves gathering quarterly data on foreign portfolio investment and independent variables (exchange rate, inflation, interest rate, GDP, and FX Reserve) from the reliable source of the CBN Statistical Bulletin and the CBN website. The data analysis methods entail employing multiple linear regression to examine the relationship between macroeconomic determinants indicators and foreign capital inflow indicators. The study adopts a significance level of 0.05% for hypothesis testing, following the decision rule that a P-value less than 0.05 indicates the rejection of the null hypothesis, signifying a statistically significant impact of independent variables on the dependent variable. In this study, the focus is on econometric methods for data analysis in economics, with a particular emphasis on the Autoregressive Distribution Lag (ARDL) technique for time series analysis. The choice of ARDL is justified based on its robustness and consistency in handling co-

integration and estimating parameters for both long-run and short-run effectiveness. Notably, researchers like Bicudo and Azu (2018) have advocated for the use of ARDL due to its advantages. The study emphasizes the limitations of conventional co-integration and Ordinary Least Square (OLS) methods, highlighting biasness in certain cases. The study modified the model into the model in equation 3.1

$y_i = \beta_0 + \beta_1 \times_{i1} + \beta_2 \times_{i2} + \ldots + \beta_k \times_{ik} + e$

where, for i=n observations:

y_i = dependent variable

$\times_i$ = Explanatory variable

β_0 = y –intercept (constant term)

β_p = Slope coefficient for each explanatory variable

e = The models error term

FPI=f(Macroeconomic Determinants)……...1

FPI=f(EXH, INF,INT)……....2

$FPI = \beta_0 + \beta_1 EXH + \beta 2INF + \beta_3 INT + e$……..*3*

$FPI = \beta_0 + \beta_1 EXHt + \beta 2INFt + \beta_3 INTt + et$……..*4*

Hence,

Foreign Portfolio Investment (FPI)= β_0 +Exchange Rate (EXH) + Inflation (INF)+ Interest Rate (MPR)

Where:

FPI= is the foreign portfolio investment

EXH= is the exchange rate

INF= is the inflation rate (MPR)

E= is the error term.

t. = time series data

RESULTS AND DISCUSSIONS

The descriptive statistics in this study provide a comprehensive overview of the central tendency, variability, and distribution characteristics of the economic indicators under consideration. Table 1 presents descriptive statistics for four variables: FPI (Foreign Portfolio Investment), EXCH_RATE (Exchange Rate), INFLATION, and REAL_GDP_N (Real Gross Domestic Product in nominal terms). The mean values provide a measure of central tendency, indicating the average value for each variable. For instance, the mean FPI is approximately 2245.836, EXCH_RATE is 284.6263, INFLATION is 12.65708, and REAL_GDP_N is 16858738. These values give a sense of the typical levels observed in the dataset. The measures of dispersion, such as the standard deviation, highlight the degree of variability in the data. Notably, FPI exhibits a relatively high standard deviation of 1818.144, suggesting considerable variability in foreign portfolio investment. Skewness measures the asymmetry of the distribution, and positive skewness values (as seen in FPI) indicate a distribution that is skewed to the right. Kurtosis measures the tailedness of the distribution, and high kurtosis values (as seen in FPI) suggest heavy tails. The Jarque-Bera statistic tests the assumption of normality, and the associated

probability values indicate that the variables deviate from normal distribution assumptions, particularly FPI and EXCH_RATE.

Table 1 Descriptive Statistics

	FPI	EXCH__RATE	INFLATION	REAL_GDP__N_
Mean	2245.836	284.6263	12.65708	16858738
Median	1741.905	318.6250	12.04500	16694666
Maximum	7145.980	424.1100	18.55000	20329062
Minimum	35.15000	152.4800	7.780000	13450717
Std. Dev.	1818.144	106.0752	3.409583	1646480.
Skewness	0.848136	-0.111025	0.227399	0.077438
Kurtosis	2.766079	1.237884	1.773447	2.609281
Jarque-Bera	5.864110	6.308714	3.422548	0.353296
Probability	0.053287	0.042666	0.180635	0.838075
Sum	107800.1	13662.06	607.5400	8.09E+08
Sum Sq. Dev.	1.55E+08	528841.2	546.3872	1.27E+14
Observations	48	48	48	48

Source: Authors computation (2023)

The Ordinary Least Square (OLS) regression results presented in Table 2 provide valuable insights into the relationship between the dependent variable, represented by FPI (Foreign Portfolio Investment), and the independent variables EXCH__RATE (Exchange Rate), INFLATION, and REAL_GDP__N_ (Real Gross Domestic Product). The coefficient for EXCH__RATE is 7.515100, indicating that a one-unit increase in the exchange rate is associated with an approximately 7.52-unit increase in FPI. Although the coefficient is positive, the t-Statistic of 2.003936 with a corresponding probability of 0.0513 suggests that the relationship is not statistically significant at the conventional 5% significance level, highlighting the need for caution in interpreting this particular variable's impact on FPI.

The coefficient for INFLATION is -414.8088, with a t-Statistic of -4.335431 and a probability of 0.0001, indicating a statistically significant negative relationship. This suggests that higher inflation is associated with a decrease in FPI. The coefficient for REAL_GDP__N_ is -0.000332, and while it is not statistically significant at the 5% level (p-value of 0.0653), it suggests a negative association between FPI and real GDP. The intercept term (C) of 10,952.50 is statistically significant, indicating the baseline level of FPI when all independent variables are zero.

The model's overall fit is assessed through the R-squared value of 0.370342, indicating that approximately 37.03% of the variability in FPI is explained by the independent variables. The adjusted R-squared accounts for the number of predictors in the model, yielding a value of 0.327411. The F-statistic of 8.626409 is associated with a low probability (0.000129), indicating that the overall model is statistically significant. The Durbin-Watson statistic of 1.855223 suggests a potential presence of autocorrelation in the residuals. In summary, while the model explains a significant portion of the variation in FPI, caution is advised in interpreting the specific impact of the exchange rate, and further diagnostics may be necessary to address potential issues such as autocorrelation.

Table 2: Ordinary Least Square Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXCH__RATE	7.515100	3.750170	2.003936	0.0513
INFLATION	-414.8088	95.67880	-4.335431	0.0001
REAL_GDP__N_	-0.000332	0.000176	-1.890352	0.0653
C	10952.50	2771.899	3.951262	0.0003
R-squared	0.370342	Mean dependent var		2245.836
Adjusted R-squared	0.327411	S.D. dependent var		1818.144
S.E. of regression	1491.087	Akaike info criterion		17.53205
Sum squared resid	97827016	Schwarz criterion		17.68799
Log likelihood	-416.7693	Hannan-Quinn criter.		17.59098
F-statistic	8.626409	Durbin-Watson stat		1.855223
Prob(F-statistic)	0.000129			

Source: Authors computation (2023)

DISCUSSIONS

The Ordinary Least Square (OLS) regression results illuminate the complex dynamics between Foreign Portfolio Investment (FPI) and crucial macroeconomic variables within the Nigerian context. The positive coefficient for EXCH__RATE suggests a theoretical association between an increase in the exchange rate and a rise in FPI. However, the non-statistically significant result urges caution in making definitive conclusions about the impact of the exchange rate on FPI. This underlines the nuanced nature of exchange rate effects, where variables such as investor sentiment, global economic conditions, and

government policies might exert substantial influence on FPI dynamics, warranting a more nuanced examination in future research.

In contrast, the noteworthy negative coefficient for INFLATION, coupled with its statistical significance, implies a robust relationship between higher inflation and decreased FPI. This finding aligns with economic intuition, as investors are likely deterred by the eroding purchasing power associated with inflation. While the negative coefficient for REAL_GDP__N_ does not achieve statistical significance at the conventional 5% level (p-value of 0.0653), it hints at a potential link between economic growth and FPI, emphasizing the importance of considering economic development factors in understanding portfolio investment decisions. This contributes to the ongoing discourse on FPI determinants, offering valuable insights for policymakers and researchers seeking to enhance the investment climate in Nigeria.

Furthermore, the significance of the intercept term (C) at 10,952.50 underscores the baseline level of FPI when all independent variables are zero. This baseline captures the influence of unobserved factors or structural characteristics that contribute to the overall attractiveness of the Nigerian market for portfolio investment. Integrating this baseline into the model not only enhances its interpretability but also provides a more comprehensive understanding of FPI dynamics by accounting for factors beyond the explicitly measured variables. Policymakers can leverage this information to craft targeted strategies that address underlying structural elements influencing FPI in Nigeria.

Moreover, the study's alignment with existing literature, drawing on works by Olubiyi (2021), Babatunde (2017), Umar and Abdulhakeem (2021), Okonkwo (2021), Ahmed and Kelikahili (2022), Asiedu (2020), Ojeme and Louis (2021), Babajide et al. (2018), and Osuji (2015), fortifies the robustness of its conclusions. This interconnection with prior research not only validates the study's results but also contributes to the broader scholarly conversation on the intricate interplay between macroeconomic variables and FPI in Nigeria. By contextualizing the findings within the existing body of knowledge, the study enhances the understanding of the factors shaping FPI behaviors and strengthens the foundation for future empirical inquiries in this domain.

CONCLUSION AND RECOMMENDATIONS

The study revealed the complex FPI dynamics in Nigeria, with exchange rate changes exerting a theoretical but statistically inconclusive impact, inflation changes showing a robust negative relationship, economic growth trends hinting at a potential link, and a significant baseline intercept pointing to unobserved structural factors. While the findings align with existing literature and economic intuition, the nuanced and sometimes ambiguous connections underscore the need for more research on how investor sentiment, global conditions, and government policies moderate macroeconomic variables' effects on FPI. Nevertheless, by validating theoretical associations between FPI and crucial macroeconomic factors like inflation and growth within the Nigerian context, while controlling for baseline investment attractiveness, the study makes an incremental but meaningful contribution to the scholarly and policy discourse on enhancing Nigeria’s investment climate.

While the study offers valuable insights, the complex and sometimes ambiguous relationships warrant targeted policies rather than broad reforms. Specifically, exchange rate flexibility should be maintained to adjust to global capital flow shifts, coordinated monetary and fiscal policies should seek to curb inflationary spikes that deter investors, and structural reforms should promote stable economic growth and reinforce investor confidence. Additionally, concerted efforts to strengthen institutional quality, sustain political stability, and increase transparency could amplify the baseline attractiveness of the Nigerian market. Consequently, a multifaceted policy approach addressing both measurable economic variables as well as structural enablers and sentiment factors could provide the most balanced strategy for optimizing the risk-reward profile that guides investment decisions. Ultimately, the interdependencies mean progress will necessitate coordinated efforts across fiscal, monetary, structural and governance priorities to cultivate a more attractive, stable, and resilient environment for sustaining portfolio capital inflows over the long-term.

REFERENCES

Adeyinka S, O. Chinedu B.E & Lezaa L.T. (2022). Exchange Rate Dynamics and Foreign Capital Flows in Nigeria Asian Journal of Economics, Finance and Management 4(1) 545-554

Ahmed, A. & Kelikahili, G. (2022). Macroeconomic factors influencing portfolio investment in Nigeria. European Journal of Economics, Finance and Administrative Sciences, (111).

Aizenman, J., Chinn, M. D., & Ito, H. (2020). Financial spillovers and macroprudential policies. International Journal of Central Banking, 16(1), 205-237.

Alabi Joys, Asaleye A.J & Ogundipe, O.M., (2019). Exchange rate volatility and foreign portfolio investment in Nigeria. *Investment Management and Financial Innovations*, 16(3), pp, 241-250

Asiedu, M. (2020). The effect of exchange rate regimes on portfolio investment in Africa. Research in International Business and Finance, 51.

Ayadi, F.S. (2016). Econometric analysis of foreign portfolio investment in Nigeria. CBN Journal of Applied Statistics, 7(1), 125-148.

Babajide A.A. et al. (2018). Macroeconomic behaviour and FPI in Nigeria. Academy of Accounting and Financial Studies Journal.

Babatunde W.A. (2017). Exchange rate volatility and foreign portfolio investment in Nigeria. International Journal of Economics and Business Management, 3(1), 11-28.

Blanchard, O. (2017). Macroeconomics. Pearson.

Callen, T. (2020). Gross domestic product: An economy's all. Finance & Development, 57(1), 24.

Federal Reserve. (2018). What are the Federal Reserve's objectives in conducting monetary policy? https://www.federalreserve.gov/faqs/money_12848.htm

Feiveson, L., Mertens, E., & Taylor, J. B. (2018). Forecasting macroeconomic variables using disaggregate survey data. International Journal of Forecasting, 34(1), 65-77.

Ilzetzki, E., Reinhart, C. M., & Rogoff, K. S. (2020). Why is the Euro Punching Below its Weight?. NBER working paper, (w26760).

International Monetary Fund (2016). Enhancing Resilience to Sudden Stops in Capital Flows. IMF Policy Paper.

Karimo T.M, (2020). Impact of Interest Rate Differential and Exchange Rate Movement on the Dynamics of Nigeria's International Private Capital Flows. *CBN Journal of Applied Statistics,* 11(2), 29-63

Kumar, R.R., & Vashisht, P. (2019). Sudden stops and optimal dynamic capital flow taxes. Journal of International Money and Finance, 94, 103-117.

Levchenko, A. A., & Mauro, P. (2007). Do some forms of financial flows help protect against "sudden stops"?. *The World Bank Economic Review*, *21*(3), 389-411.

Levchenko, A.A., & Mauro, P. (2017). Do some forms of financial flows help protect against "sudden stops"?. The World Bank Economic Review, 21(3), 389-411.

Makoni P.L., (2020). Foreign Portfolio Investment, exchange rate and capital openness a Panel Data Approach, *International Journal of Economic and Business Administration*, VIII, (2), 100-113)

Mankiw, N. G. (2021). Macroeconomics. Macmillan Learning.

Mishra, R. K., & Sharma, C. (2016). India's capital surge and asset prices: Further evidence on the saving–investment linkages. Journal of Policy Modeling, 38(1), 117-135.

Mishra, R. R., & Sharma, A. K. (2016). Microwave–material interaction phenomena: Heating mechanisms, challenges, and opportunities in material processing. *Composites Part A: Applied Science and Manufacturing*, *81*, 78-97.

Nwagu K. (2023). The Impact of Macroeconomic Variables on Foreign Direct Investment in Nigeria. Journal of Accounting Business and Finance Research 16(1), 30-35.

Odionye J.C. Ojiaku E. U & Uba C.N. (2023). Impact of Interest rate differential, exchange rate changes and political stability on Foreign Capital inflows in Nigeria. Discreate Threshold Regression Model 1-14

Ojeme, S. & Louis, O.E. (2021). Impact of GDP and population growth dynamics on stock market development. Cogent Economics & Finance, 9(1).

Okonkwo, J. J., Osakwe, C. I., & Nwadibe, E. C. (2021). Exchange rate and foreign direct investment in Nigeria 1981-2018. *International Journal of Academic Research in Business and Social Sciences, 11*(1), 213–232.

Okonkwo, O.N. (2021). Effect of inflation on foreign portfolio investment: evidence from Nigerian banking sector. Masters Thesis, Stellenbosch University.

Olubiyi, E.A. (2021). Exchange rate depreciation and foreign portfolio investment in Nigeria: a bounds testing approach. Future Business Journal, 7(1).

Osuji, C.C. (2015). Impact of fiscal and monetary policies on portfolio investments in Nigeria. British Journal of Economics, Management & Trade, 7(3), 186-201.

Oyerinde, A. A. (2019). Foreign portfolio investment and stock market development in Nigeria. *The Journal of Developing Areas*, *53*(3).

Taylor, J. B. (2019). Monetary policy rules and their role in the macroeconomy. Cato J., 39, 481.

Ukeje E.U. (2017) Exchange Rate Management in Period of Economic Uncertainty. *Bullion: Publication of the Central Bank of Nigeria, 41(1),* 3-14

Umar, A. & Abdulhakeem, A. (2021). Effect of inflation rate on foreign portfolio investment: evidence from Nigerian economy. Asian Economic and Financial Review, 11(8), 1025-1039.

World Bank. (2018). GDP growth (annual %). https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG