



## INCIDENCE OF SHORT TERM PRIVATE CAPITAL OUTFLOW: EMPIRICAL ANALYSIS IN NIGERIA

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### ABSTRACT

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Over the years, the rising uncertainty in macroeconomic policy environment coupled with the prevailing uncertain non-economic factors like political instability, corruption, poor governance, civic conflicts and property right is perceived to be having contributing factors on short term private capital outflow in Nigeria. The study investigated the incidence of short term private capital outflow in Nigeria where a combination of the push factors and portfolio risk theories were adopted in the study for the period 2013/March – 2018/May using the fully modified OLS technique. The long-run and short-run results show that uncertainty of macroeconomic policy environment such as inflation-price instability, real exchange rate volatility and lack of confidence on domestic stock market enhanced the increasing level of short term private capital outflow in Nigeria. The study recommends that authority should adopt more pro-growth policies that can ensure and maintain sound domestic macroeconomic policies to stem short term private capital outflow and that stock market authority should ensure accountability and transparency to strengthen the interest of domestic investors if they want to reduce the outflow of domestic capital.

**Contribution/Originality:** This study contributes to the existing literature by distinguishing itself identifying the dimensions of the domestic uncertainty at the macroeconomic level on short term private capital outflow.

## 1. INTRODUCTION

It had been reiterated that short term private capital outflow is associated with risk diversification motive in term of relative risk incentives which arises due to factors associated with the relative riskiness of the domestic economy and return differential incentives accompanying macroeconomic environment adversely such limit the risk adjusted returns to domestic assets (Sheets, 1995) while Eryar (2005) argues that capital outflow seems to be as a result of confidence lost in overall economy. This indicates that residents of a country consider the macroeconomic instability as a threat to holding of domestic assets, such lead to switch to foreign assets so as to protect the value of their assets from any sudden changes. These sudden changes can be in the form of a freeze on assets in the banking system or a postponement of interest payments on public debts. Ajayi (1992) argues further that capital flight is associated with an expectation of currency appreciation; such will encourage domestic wealth owners to shift assets into foreign assets. In addition, where a currency is overvalued, domestic wealth owners expect the currency to be subjected to devaluation in the future. Such tends to encourage residents to avoid the potential capital loss by

converting into foreign wealth and currencies. The implication of this argument is that exchange rate can exert either negative or positive impact on capital flight depending on residents' expectation of future currency value.

According to Reilly and Brown (2012) investors in pursuance of optimal investment portfolio unavoidably become risk-averse selecting assets with the lowest risk in the list of options open to them. Portfolio investment is hinged on the framework of risk return trade-off, as higher return on investment is accompanied by higher level of risk (Moreno-Vozmediano *et al.*, 2007). There are the factors driving domestic capital out whereby the content and direction of present and future macroeconomic policies are uncertain and/or volatile, domestic investors will be unsure about the effect of these macroeconomic volatilities or uncertainties on the value of their assets locally. This vulnerability may motivate them to pull back their investments from the economy and invest in foreign assets instead (Meade, 1951); (David and Ampah, 2018). These outflows are inherently related to welfare losses especially, developing countries where they are unable to cover their investment, import and government budgetary requirements or service their liabilities. Thus, any systematic capital outflows represent a great constraint on their economic development potential (Collier *et al.*, 2001).

In the literature, Short term private capital outflow has been conceptualized to mean investment in financial assets such as shares, stocks, debt instruments, mutual fund etc. with varying risk and returns (Myles, 2003; Levišauskait, 2010) which flow out of one country into another country, there are few of empirical studies with regards to determinants of capital outflow or capital flight in Nigeria such as Lawanson (2007); Ayadi (2008); Oluwaseyi (2017) in which a number of measures had been identified to capture capital outflow or capital flight such as residual method, Dooley method, hot money and asset method. Each method of measure has some drawbacks, due to lack of consensus with respect to appropriate measure for capital outflows, such makes this study to distinguish itself by identifying the dimensions of the domestic uncertainty at the macroeconomic level by assessing the effect of each dimension on short term private capital outflow instead of adopting any of the conventional measure of capturing capital flight aforementioned in Nigeria.

## 2. LITERATURE REVIEW

One fundamental question in domestic private capital outflow/capital flight literature that has preoccupied policy makers is why economies suffer domestic private capital out flow/ capital flight. One leading key factor receiving considerable attention is the effect of macroeconomic uncertainty in the domestic private capital outflow process. Studies like Nyoni (2000); Forson *et al.* (2017); Liew *et al.* (2016); Lawanson (2007); Ayadi (2008); Le and Zak (2006); Boyce and Ndikumana (2001); Victor (2004) have studied the effects of macroeconomic uncertainty on domestic capital outflows. Some of these studies are time series based while others are both time series and cross-section based (panel data analysis).

Based on time series analysis, for instance, Nyoni (2000) conducts a study by analyzing the macroeconomic impact and political shock on capital outflow on Tanzania using time series between 1973 and 1992. The study concluded that lagged capital outflow, real growth rates, interest rate and exchange rate differentials significantly impacted on a capital flight while political shock had no statistically significant impact on capital flight.

Lawanson (2007) states in his study on capital flight from Nigeria based on portfolio choice approach using data from 1970-2001, found that GDP growth rate has a negative significant effect on capital flight in the short-run. The results also revealed that higher external debt-GDP ratio, increase in real interest rate differential and an increase in inflation rate drive capital flight in Nigeria. Ayadi (2008) agrees with Lawanson (2007) where Ayadi (2008) investigates an analysis of capital flight in Nigeria. The study found the validity of the portfolio theory which postulates how risk-averse investors can build portfolios in order to optimize or maximize expected returns given a level of market risk. The study revealed that capital flight is caused by the interest rates differential both in the short and in the long run. In addition, exchange rate depreciation significantly increases capital outflow in Nigeria. Output growth has negative and significant in the short-run. These findings are validated by Oluwaseyi (2017) that

there is a negative relationship between economic growth and capital outflow or capital flight. The results also depict that a positive and significant relationship exists between capital flight and interest rates differential, explaining that the higher risk-adjusted returns abroad influence domestic capital flight.

According to a similar study in Ghana, Forson *et al.* (2017) finds that the long-run and short-run real GDP growth rate, higher domestic real interest rate over foreign interest rate, financial development, good governance and strong property rights reduce capital outflow, while external debt to GDP leads to increase in capital flight in Ghana. However, lagged external debt to GDP and lagged financial development had a negative and positive effect respectively in the short-run. Contrary to this study, Liew *et al.* (2016) posit that in Malaysia that political risk and financial crises are positively related to capital flight in Malaysia while FDI, external debt and stock market have a negative impact on capital flight. Alam and Quazi (2003) confirms that corporate income taxes, higher real interest rate differentials and lower GDP growth rates, proved to be significant but political instability was the most important factor affecting capital flight determinants of capital outflow was examined on Bangladesh using ARDL model.

Levin *et al.* (2000) argue that panel data analysis better capture the complexity of heterogeneity inherent in each individual country. Since panel data provides time series on each cross section unit in a group, Le and Zak (2006) presented a portfolio choice model that relates capital outflow to return differentials, risk aversion, and three types of risk: economic risk, political instability, and policy variability. In their estimation for a panel of forty-five developing countries over sixteen years, all three types of risk had a statistically significant impact on capital outflow and political instability was the most important factor associated with capital flight.

Hermes and Lensink (2000) argue that uncertainty with respect to government policies perceived by domestic wealth holders has its influence on capital flight in less developing countries. The outcomes of investigation support the view that policy uncertainty stimulates capital flight. It has been identified that if the content and direction of current and future public policies are uncertain and/or unstable, domestic investors will also be uncertain about the impact of these policies on the real value of domestically held assets in the future. Policy uncertainty measured by uncertainty of budget deficits, tax payments, government consumption and real interest rates appears to have a statistically significant positive impact on capital flight. In support of Hermes and Lensink (2000) position, David and Ampah (2018) examines whether macroeconomic volatilities as perceived by domestic investors in the sub-region have any influence on these outflows taking some selected heavily indebted poor countries (HIPC) and dataset for the period 1990 to 2012 employing GARCH model and Panel ARDL model. The outcomes reflect the current situation in the sub-region which supports the view that domestic investors will withdraw their investments and other financial holdings from the domestic economy if they perceived present and future government policies to be volatile.

Victor (2004) formulated the hypothesis that inflation has a positive additional impact on post-war capital flight flows where a study was conducted on 77 developing countries between 1971 and 2000 using panel data. The outcome of the results consistently support the hypothesis that post-war, inflation exacerbates annual capital flight flows by about 0.005 to 0.001 percentage points of GDP. He further concluded that low inflation helps in dampening capital flight in post-conflict economies. Cuddington (1986) verifies the relationship between capital flight and a number of macroeconomic variables in 7 Latin American countries. His results showed that interest rate differentials, external debt flows, lagged capital flight, inflation and exchange rates significantly accounted for capital flight in those countries. Studies like Boyce (1992) confirmed Cuddington (1986) on the contribution of external debt, budget deficits, and interest rates in the determination of capital flight. Collier *et al.* (2001) and Ndikumana and Boyce (2003) used M2/GDP and M3/GDP respectively as a measure to financial development and found that financial development is insignificant in determining capital flight in Sub-Sahara Africa. These findings contradict (Raheem, 2015) who re-examined determinants of capital flight using twenty-eight Sub-Sahara Africa countries and found that M2/GDP has a positive and significant coefficient. The inconclusiveness in the

uncertainty of economic policy environment and non-economic policy environment – private capital outflow debate seems to vary across changing policy environment setting and structure, time frame and methodologies. There is a need to have a proper understanding of macroeconomic factors influencing each of the various forms of capital outflow or capital flight than using a conventional method of measuring capital outflow or capital flight. Such can lead to a proper course for policy which will be clearly suggestive.

### 3. MODEL SPECIFICATION AND ESTIMATION METHOD

With regard to theoretical explanation of short term private capital outflow, Markowitz (1952) argued in his portfolio choice model that economic agents send their capital abroad to invest in a portfolio that maximizes the expected utility of their wealth. To examine uncertainty surrounding current and future direction of macroeconomic policies have any impact on short term private capital outflows in Nigeria, this paper draws on a similar model by Le and Zak (2006); David and Ampah (2018) and Hermes and Lensink (2000) and estimate a dynamic time series data model where short term private capital outflow is a function of macroeconomic policy environment and control variables as:

$$CO = \emptyset + \beta M + \alpha X + \varepsilon \quad (1)$$

Where Co is short term private capital outflow, M represents macroeconomic policy environment, X is a vector of control variables and  $\varepsilon$  is the error term.  $\beta$  and  $\alpha$  are the coefficients of CO, M and X respectively. This study considers inflation rate (*inf*), exchange rate volatility (*vex*), interest rate differentials (*i-i<sub>-</sub>*) and stock exchange development (*stmk*) as macroeconomic policy environment. Also, financial development (*fd*), gross domestic product (*gdp*), short term private capital inflow (*cif*) and internal debt (*dt*) and governance (*gov*) are chosen as the control variables for the study. These variables are chosen as a result of carefully examining the theoretical and empirical literature. Therefore M and X can be re-written as:

$$M = (inf, vex, (i - i_-), stmk) \quad (2)$$

$$X = (fd, gdp, cif, debt_{t-1}, gov) \quad (3)$$

Replacing Equation 2 and 3 into Equation 1 which results to Equation 4, this specifies an extended form of the equation to be the empirical model of the study. The equation is stated as follow:

$$CO_t = \emptyset + \beta_1 inf_t + \beta_2 vex_t + \beta_3 (i - i_-)_t + \beta_4 stmk_t + \alpha_1 fd_t + \alpha_2 gdp_t + \alpha_3 cif_t + \alpha_4 debt_{(t-1)} + \alpha_5 gov_t + \mu_t \quad (4)$$

Equation 5 expresses the empirical model of the in log form as shown be:

$$\log CO_t = \emptyset + \beta_1 \log inf_t + \beta_2 \log vex_t + \beta_3 (i - i_-)_t + \beta_4 \log stmk_t + \alpha_1 \log fd_t + \alpha_2 \log gdp_t + \alpha_3 \log cif_t + \alpha_4 \log debt_{(t-1)} + \alpha_5 \log gov_t + \mu_t \quad (5)$$

Therefore, Equation 6 was estimated using fully modified ordinary least squares in order to account for endogeneity among regressors:

$$\Delta(\log CO_t) = \emptyset + \Delta(\beta_1 \log inf_t) + \Delta(\beta_2 \log vex_t) + \Delta\beta_3 (i - i_-)_t + \Delta(\beta_4 \log stmk_t) + \Delta(\alpha_1 \log fd_t) + \Delta(\alpha_2 \log gdp_t) + \Delta(\alpha_3 \log cif_t) + \Delta(\alpha_4 \log debt_{(t-1)}) + \alpha_5 \log gov_t + \mu_t \quad (6)$$

The estimation began by conducting stationarity test in order to avoid spurious regression. Stationarity test helps to specify the model that correctly approximates the true data generating process. The stationarity test provides a ground to determine the order of integration of the variables employed in the model. If the variables are integrated of different order, then there is a need to check for cointegration. Cointegration tests help to establish if there is long run relationship exists among the variables using Engle-Granger cointegration test.

Prior to Eagle-Granger cointegration test, the data were scanned using augmented dickey fuller (ADF) test so as establish their univariate time series behaviour in order to determine the basic unit of observation. This is to determine whether the sequence estimation should use the level, first or second difference of each time series before conducting the estimations. Thus, the evidence suggests that first differencing is sufficient or that these macro variables do not have two unit roots. Having checked for stationarity test and cointegration test, the study adopted the fully modified ordinary least square which was designed to provide optimal estimates of cointegration regression. This technique ensures modification of least square to account for serial correlation effects and test for the endogeneity in the regressors that result from existence of a cointegrating relationship among the series. It also ensures existence of at least a single cointegrating equation among the variables. Such existence of cointegrating relationship was further used to conduct short run estimation. In addition, error correction model (ECM) provides information about the short-run and long-run relationship as well as the speed of adjustment between the variables in incorporating to estimated equation. The value for volatility of real effective exchange rate was estimated using GARCH and ARCH (1,1) technique.

#### 4. DATA REQUIREMENT AND SOURCES

In order to investigate the incidence of short term capital outflow on the Nigerian economy, monthly time series data for econometric analysis are employed in this study. The variables used are defined and described below and sources are also stated in Table 1.

Table-1. Data description and sources.

Variables	Definition and description of the variables	Sources
Short term private capital outflow	It is captured by outflow of foreign portfolio investment from abroad. It is adopted due to lack of data on short term capital outflows in Nigeria.	Nigeria Stock Exchange
Short term private capital inflow	It is captured by inflows of foreign portfolio investment into Nigeria. it is adopted due to lack of data on short term capital inflows in Nigeria.	Nigeria Stock Exchange
Domestic interest rate	It is captured by treasury bill.	Central Bank of Nigeria
Financial development	It is captured by broad money supply of Nigeria.	Central Bank of Nigeria
Stock market development	It is captured by total value of stock market capitalisation on stock exchange market.	Nigeria Stock Exchange
Domestic inflation	It is defined as growth rate of consumer price index of the country.	Central Bank of Nigeria
Effective real exchange rate (ERER)	It is measured as nominal exchange rate naira/US dollar multiply by ratio of Nigeria CPI to Trading Partners CPI.	Central Bank of Nigeria
Foreign interest rate	3-Month or 90-day Rates and Yields: Interbank Rates for the United States, Percent, Monthly.	Federal Reserve Bank of St. Louis, Link: <a href="https://fred.stlouisfed.org">https://fred.stlouisfed.org</a>
Growth rate	It is captured by change in GDP.	Central Bank of Nigeria
Governance	it is captured as quality of institution and was proxy by a dummy characterized by 1 for month of an increase in short term capital outflow and 0 when short term private capital outflow fall.	Author's estimation
Domestic debts stock	It is captured by total domestic debt stock in the economy.	Central Bank of Nigeria

Note: some of the data series only annual and quarterly values are available not monthly from for these and it they are used in that form, it will lead to degree of freedom problem in the analysis to over come that problem, monthly series were generated for growth rate and domestic debt stock using interpolation method. For details see Schlegel *et al.* (2012). On the interpolation of data with normally distributed uncertainty for visualization (Box and Jenkins, 1970).

## 5. EMPIRICAL FINDINGS

Table 2 exhibits the outcome of the Eagle-Granger single equation cointegration test which confirms the existence of a cointegrating vector. As to the tests themselves, the eagle-granger tau-statistic (t-statistic) and normalized auto-correlation coefficient (z-statistic) both reject the null hypothesis of no cointegration (unit root in the residuals) at the five percent significance level. Given the small sample size of the probabilities and critical values, there is evidence of three cointegrating equation at the five percent significance level using the tau-statistic (t-statistic) and evidence of four cointegrating equation at the five percent significance level using the z-statistics.

Table-2. Eagle-Granger cointegration test.

<i>variables</i>	<i>t statistic</i>	<i>prob *</i>	<i>z statistic</i>	<i>prob *</i>
<i>logcof</i>	-7.331	0.0058	-57.11	0.0000
<i>logcif</i>	-7.58611	0.0020	-59.7161	0.0018
<i>logcm</i>	-9.9996	0.0000	-76.23090	0.0000

Source: Author's estimation using e-view package.

It implies that they both rejected the null hypothesis of no cointegration among the variables at the five percent significance level. On balance, using the tau-statistic (t-statistic) the evidence clearly suggests that *logcof*, *logcif* and *logcm* are cointegrated and also *logcof*, *logcif* and *logcm* are cointegrated using z-statistic. It means that there exists a long run relationship or cointegration between short term private capital outflows and some macroeconomic parameters.

Table-3. Result of short run estimate.

Dependent variable: D(LOG(COF))				
Method: Fully modified least squares (FMOLS)				
Variable	Coefficient	Std. error	t-statistic	Prob.
$\Delta \log cpi(-1)$	10.91099	5.533006	1.971982	0.0545
$\Delta \log vex$	0.030184	0.015194	1.986560	0.0528
<i>gov</i>	-0.397666	0.059070	-6.732102	0.0000
$\Delta \log gdp$	1.012610	0.718909	1.408537	0.1656
$\Delta \log fd$	-0.421838	0.907030	-0.465076	0.6440
$\Delta \log cm$	0.618888	0.071304	8.679554	0.0000
$\Delta \log cif(-1)$	-0.061355	0.047111	-1.302345	0.1991
$\Delta(i - i_-)$	0.890739	0.328255	2.713560	0.0093
$\Delta(i - i_-(-1))$	-0.912077	0.328930	-2.772855	0.0079
$\Delta \log dt(-1)$	-3.500618	1.927346	-1.816290	0.0757
$\Delta \log cof(-1)$	-0.142202	0.048529	-2.930258	0.0052
<i>ecm(-1)</i>	-0.548820	0.115627	-4.746457	0.0000
<i>c</i>	0.151431	0.065269	2.320110	0.0247
R-squared	0.871446			
Adjusted R-squared	0.838624			
Long-run variance	0.030083			

Source: Author's estimation using e-view package.

### 5.1. Short Run Estimate of Incidence of Short Term Private Capital Outflow

Having established that the variables are stationary and exhibit long-run cointegration, we now estimate the short run and long-run impacts of the macroeconomic instability or factors on short term private capital outflow indices in Nigeria using the fully modified ordinary least squares (FMOLS) estimator. The result of the short-run analysis is presented in [Table 3](#).

This is reflected through the error correction model (ECM) estimation which is reflected through the coefficient of the short run elasticity estimated and long run elasticity estimated i.e. the co-integration relationship between the dependent variable and the regressors. Having examined the co-integrating relationship, the Eagle-Granger cointegration test implies that our study can generate error term of co-integrating equation which captures both the long and short run dynamics of the impact of macroeconomic factors on short term private capital outflow in Nigeria between 2013/March and 2018/ May periods.

The result from the FMOLS estimates showed a high level of precision and accuracy given the statistical components; the explanatory variables in terms of their explanatory power (adjusted  $R^2$ ) explained 0.84 variation in short term private capital outflow in short run estimate. The long-run variance of 0.030086 was less than unit which indicated that the estimators of the model had minimum variance and hence, efficient, sufficient and best linear and unbiased. Finally, the ECM result from the short-run estimates is negative and significant ( $t = -4.75$  and probability = 0.0000). This implies that if disequilibrium or temporary changes occur to the selected variables, there will always be a convergence back to equilibrium. Although the speed of adjustment is very moderate at 0.55%, however, the result confirms the existence of a long-run equilibrium among the selected variables.

The results of the fully modified OLS (FMOLS) estimate revealed that increase in macroeconomic policy uncertainties such as inflation, real effective exchange rate volatility, interest rate differential and stock exchange development had significant effect in promoting the level of short run private capital outflow in Nigeria. Drawing specific inferences from the short-run coefficient estimates, [Table 3](#) shows the impact of macroeconomic policies or macroeconomic factors on short term private capital outflow in Nigeria. It is evident from the result that first lag of inflation, real effective exchange rate volatility, economic growth, stock market development, and current interest rate differential variables were positively related to short term private capital outflow. A percent increase in first lag of inflation, real effective exchange rate volatility, economic growth, stock market development and current interest rate differential would, other things being equal, result to 10.9%, 0.03%, 1.01%, 0.62% and 0.89% increases in short term private capital outflow respectively. The implication of this result is that an increase in each of these regressors triggers short term private capital outflow to increase at the detriment of the economy. Moreover, with the values of the t-statistic and probabilities, first lag of inflation, real effective exchange rate, economic growth, stock market development and current interest rate differential were the variables that were statistically significant in determining short term private capital outflow. While the variables like governance, financial development, short term private capital inflow, first lag of interest rate differential, first lag of domestic debt and previous short term private capital outflow were negatively related to short term private capital outflow. It suggests that a percent increase in aforementioned variables will reduce short term private capital outflow by 0.4%, 0.42%, 0.06%, 0.91%, 0.35% and 0.14% respectively. With regard to values of t-statistic and probabilities, governance, past short term private capital inflow, first lag of interest rate differential, first lag of domestic debt and past short term private capital outflow were statistically significant in the determination of short term private capital outflow except financial development which is significantly related to short term private capital outflow.

The estimated result presented in [Table 4](#) explains the long relationship between impact macroeconomic factors on short term private capital outflow in Nigeria. It is evident from the result governance, financial development; short term private capital inflow and past domestic debt were negatively related to short term private capital outflow. A percent rise in all the variables will respectively result in 0.2%, 0.58%, 0.12 and 2.8% decrease in short term private capital outflow in Nigeria specifically in the long run period. A look at the t-statistic and

probability values exhibited that all variables are statistically significant in determining short term private capital outflow in Nigeria except financial development and short term private capital inflow. On the other hand, inflation, real effective exchange rate volatility, interest rate differential, economic growth and stock exchange development are positively related to short term private capital outflow in Nigeria. It implies that when these variables are triggered in the long run in Nigeria, they tend to reduce the level of confidence in retaining the wealth and portfolio investment in the economy by looking else to keep their asset for better return and security. The result from the long run FMOLS estimates showed a high level of precision and accuracy given the statistical components; the explanatory variables in terms of their explanatory power (adjusted R<sup>2</sup>) explained 0.80 variations in short term private capital outflow. The long-run variance showed a value of 0.030086 where there was less than unit which indicated that the estimators of the model had minimum variance and hence, efficient, sufficient and best linear and unbiased.

Table-4. Long run estimates.

Dependent variable: LOG(COF)				
Method: Fully modified least squares (FMOLS) long run				
Variable	Coefficient	Std. error	t-statistic	Prob.
<i>logcpi</i>	3.208636	2.114580	1.517387	0.1353
<i>logvrex</i>	0.037663	0.024576	1.532535	0.1316
<i>logdt(-1)</i>	-2.768384	1.667035	-1.660664	0.1029
<i>loggdp</i>	0.971032	0.617768	1.571838	0.1222
<i>logcif</i>	-0.121533	0.097843	-1.242113	0.2199
<i>(i - i<sub>-</sub>)</i>	0.029766	0.013143	2.264732	0.0278
<i>logcm</i>	1.094908	0.122763	8.918892	0.0000
<i>logfd</i>	-0.580678	0.853268	-0.680534	0.4992
<i>gov</i>	-0.210917	0.077227	-2.731130	0.0086
c	0.615382	15.08126	0.040804	0.9676
Adjusted R-squared	0.807301	Long run variance	0.067855	

Source: Author's estimation using e-view package.

### 5.2. Discussion of Findings

Increase in macroeconomic instability motivates the rise in short term private capital outflow which can heighten the danger of growth depression in the economy. Persistent instability in inflation rate triggers a continuous rise in the short term private capital outflow in Nigeria. Uncertainty around price level will mean a higher cost of investing in the country and also show that the portfolio behaviour of private wealth holders is influenced by inflationary tax. In addition, real exchange volatility has positive and significant relationship with short term private capital outflow. It implies that exchange rate volatility further compounded the level of short term private capital outflow. Continuous distortion of exchange rate result in the fall of the value of assets invested or profit expected to be generated. This perceived reduction in the asset value or profit may encourage investors rather shift their resources abroad.

The finding reveals the positive and significant relationship between interest rate differential and short term private capital outflow in Nigeria indicating that increase in real interest rate differential induces the proportion of private real wealth held abroad. This confirms the rational behaviour of private wealth holders to take advantage of relative returns on investments. Stock market development was included among the variables of study which was expected to have effects on investors' decisions. Development of stock market is a sigh of higher than expected current wealth which is a boost to investors' confidence to make more investment. Surprisingly, our findings disclosed positive relationship between stock market development and short term private capital outflow. It

indicates that there is little investors' confidence to own more domestic stock and retain their domestic portfolio which in turn further motivates short term private capital outflows. Economic growth and short term private capital outflow are positive and statistically significant signifying that as gross domestic product increase, short term private capital outflow tends to trigger further. It is expected that higher economic growth is an indication of higher expected returns on investment and saving. It is contrary to existing studies carried out by Lawanson (2007) on capital outflow in Nigeria.

Empirical finding revealed that a period lagged of domestic debt stock significantly motivates short term private capital outflow. It indicates that domestic investors or private wealth holders may consider the acquisition of government debt instruments as an investment opportunity with relative assurance of returns. Chipalkatti and Rishi (2001) argued that when the debt level is lower, the economy is actually suffering from lesser resources and this indicates that the capacity for the economy to grow has shrunk. Such can further have adverse effect on the local economic condition which can lead to greater capital outflows.

Our finding further reveals that current Short term private capital outflow had inverse and significant relationship with both first lag of short term private capital inflow and even itself. It implies that higher level of short term private capital inflow indicates that the country has investment climate perspective. Such is expected to lessen short term private capital outflow as the investment at home offers more attractive and lucrative return as compared to investment abroad. Governance, which was used to explore the quality of institution on short term private capital outflow is negative statistically significant at five percent significance level. The results explain that improvement in governance in Nigeria can reduce short term private capital outflow in both short run and the long-run. This is because good governance has been seen as a pre-requisite for politically stable environment which is friendly for domestic investment. Therefore, this finding suggests that good governance in Nigeria will be a driver of reducing short term private capital outflow.

Finally, there is evidence that financial development showed a negative impact on short term private capital outflow as theory predicted that financial development boosts investor confidence in the economy and expected to decrease the amount of short term capital outflow but it is statistically insignificant in Nigeria.

## 6. CONCLUSION

This study had been concerned with the incidence of capital flight in Nigeria. The outcome from the study indicated the sensitivity of overall outcome to model specification. One result that stood out in the exercise was uncertain structural policy (stock market development) and unstable stabilization policies (inflation-price instability and real exchange rate volatility) were a short run and long run important determinants of short term private capital outflow in Nigeria. The course for policy was clearly suggestive i.e. there is a need for intensified efforts towards ensuring and maintaining sound domestic macroeconomic policy to stem capital outflow in Nigeria and more so, Nigerian capital market should ensure that in the area of domestic investors' protection and confidence, infrastructural development, and accounting disclosure requirements are maintained and sustained.

In conclusion, it should be noted that the study was only concerned with the economic aspect of short term private capital outflow and did not capture non-economic aspect like political factors, corruption, civic right, that might have played significant roles.

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