



External Debt, Capital Flight, And Nigeria's Economy

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Abstract

External debt and capital flight are complex issues that can create challenges for countries in managing their financial stability and economic growth. It underscores the importance of implementing sound economic policies, monitoring capital flows, and managing external debt levels to mitigate the risks associated with both phenomena. The challenge is particularly more severe for a developing country like Nigeria where domestic investment has been adversely affected over the years. This study therefore critically evaluated external debt, capital flight and their relative impacts on Nigeria's economy for a 34-year period (1990-2023). The study anchored on Debt Overhang Theory and in line with its objectives utilized secondary data sourced from the Central Bank of Nigeria and the World Banks. The Auto-Regressive Distributed Lag (ARDL) econometric diagnostic mechanism was employed in the data analysis as the bounds test indicated a long-run relationship among the variables. From the findings of the study, external debt, capital flight, external debt servicing and government effectiveness exert negative effects on Nigeria's economy, while exchange rate volatility has a positive relationship with Nigeria's economy. The post-estimation diagnostic tests affirmed the stability and robustness of the model. The study therefore recommends the following: Government should implement stricter controls on new external borrowing by prioritizing concessional loans with lower interest rates and longer repayment periods as well as developing a comprehensive debt management strategy, combat capital flight through policies that improve the domestic investment climate to encourage local and foreign investors, prioritize productive investments that can generate returns to service debt, a managed float exchange rate as well as strengthening Nigeria's foreign reserves to better manage currency pressures and finally, transparency in government operations, public financial management and comprehensive anti-corruption measures should be prioritized to ensure Nigeria's economic stability.

Keywords: *External Debt, Capital Flight, Government Effectiveness, ARDL*

Background to the Study

The debate on the desirability of public debts as shock-absorber for fiscal deficits financing and also as veritable means of leapfrogging economic growth and development has been on among economists and investment experts for over a century. According to Eichengreen, El-Ganainy, Esteves, Mitchener (2021), public debt has been linked to the rise of democracy, private financial markets, and modern economic growth. The Keynesian school of thought is the principal proponent of public debt. They believe government interference in the economy's viability and operation is unavoidable. They argue that government borrowing is sacred, especially when money is needed to pump into the economy to create specific amenities and infrastructure that would contribute to fulfilling essential macroeconomic objectives, among other things, in any economy, Efanga, Etim, and Jeremiah (cited in Ofurum and Fubara, 2022). Urama & Ekeocha (2022), contend that the financial reforms launched by the colonial masters' administration in 1958, which resulted in the formation of public financial assets to support fiscal deficits could be traced as the advent of government borrowing in Nigeria. The same year 1958 originated Nigeria's first external debt when a sum of US\$ 28 million was used to finance the Nigerian Railways construction (Omagbemi, 2016).

Paragraph 35 of the Central Bank of Nigeria Ordinance 1958, entrusted the apex bank with the responsibility of issuing and managing federal government of Nigeria's loans on such terms and circumstances as the government and the central bank may agree (Ajayi & Edewusi, 2020). Therefore, to boost economic growth and development, developing countries like Nigeria borrow to cover budget deficits, which imply they will have more investment opportunities with more excellent rates of return than countries in developed economies that do not borrow as much. Thus, borrowing is effective as long as borrowed money and some organically ploughed back funds are used appropriately for productive investment (Ofurum and Fubara 2022).

Nigeria's external debt remained low until the middle of 1970s (US\$ 1.5 billion in 1970), more than half of which was short term; and US\$ 2.5 billion in 1975, of which US\$ 1.35 billion represented short-term debts. The situation began to get out of control in 1977 when an outstanding growth rate in the country's debt became manifest. The outstanding debt tripled, reaching US\$ 7.5 billion in 1979 and 8.9 billion in 1980, 3.55 billion of which represented short-term debts (Chevillard, 2001). According to the World Debt Tables of the World Bank (2022), Nigeria's external debt reached US\$ 19.55 billion in 1985 and US\$ 23.40 billion in 1986.

A dramatic drop in Nigeria's external debt was witnessed in the early 2000s when the Obasanjo Administration engaged in debt renegotiation which led to debt pardon and refinancing by creditors who were either members of the Paris Club (governments), London Club (banks) or independent creditors. Contrariwise, Nigeria's debt portfolio has witnessed a consistent increase from 2012 (N1,026.90 trillion) reaching an all-time high at N32.72 trillion (USD\$42.50 Billion) by the end of 2023. Debt servicing obligation on Nigeria's

external debt as at 3rd quarter of 2023 was N1,069.13 trillion (CBN, 2023; DMO, 2024). Notably, Nigeria's external debt is the biggest in all of sub-Saharan Africa in absolute terms and has already been rescheduled several times.

Table 1: Components of Nigeria's External Debt stock as at December 31, 2023 in USD

Nigeria's External Debt Stock as at December 31, 2023 in Millions of USD		
Category	Outstanding Debt	Percentage of Total
MULTILATERAL		
International Monetary Fund	2,469.90	
World Bank Group		
International Development Association	14,960.20	
Int'l Bank for Reconstruction and Devpt.	485.54	
African Development Bank Group		
African Development Bank	1,652.72	
Africa Growing Together Fund	23.35	
African Development Fund	1,002.64	
Arab Bank for Economic Development in Africa	5.15	
European Development Fund	34.30	
Islamic Development Bank	238.17	
Int'l Fund For Agricultural Development	277.40	
SUB-TOTAL	21,149.37	49.77%
BILATERAL		
China (Exim Bank of China)	5,167.14	
France (Agence Francaise Development)	580.13	
Japan (Japan International Cooperation Agency)	58.33	
India (Exim Bank of India)	25.94	
Germany (Kreditanstalt Fur Wiederaufbau)	125.90	
SUB-TOTAL	5,957.44	14.02%
COMMERCIAL		
Eurobonds	15,118.35	
SUB-TOTAL	15,118.35	35.58%
SYNDICATED LOAN		
Syndicated Loan	270.00	
SUB-TOTAL	270.00	0.64%
GRAND TOTAL	42,495.16	100.00%

Source: Debt Management Office (DMO, 2024)

Table 1 above presents the composition of Nigeria's external debt stock as at December 31, 2023. The grand total for the year ended stood at USD 42,495.16 billion. Consequently, the arrears of this debt has been accumulating inexorably and remains one of the major reasons why Nigeria is in the bad books of the international financial community. This has also strained relations between Nigeria and her international partners, especially members of the European Union, and in particular her major creditors. It is generally believed that public external borrowing and capital flight are related. While countries that found foreign borrowing relatively very easy are more likely to be relaxed in controlling capital flight, capital flight are generally rational responses to fundamental mismatches among domestic and foreign macroeconomic variables and social conditions. According to Aderoju (2017), between 1991 and 2004, the African continent lost US\$13 billion annually to capital flight while Sub-Saharan Africa (SSA) lost US\$186.8 billion to capital flight between 1970 and 1996 (Okoli & Akujuobi, 2009). Furthermore, capital flight is a major factor responsible for the low rate of domestic investment and its attendant consequences like increasing unemployment rate, high inflation rate and exchange rate volatility experienced in Nigeria over the years, Ndikumana (2000), argued. Between 2010 and 2015 in Nigeria, domestic investment stood at US\$134 billion while an outrageous capital flight to the tune of over US\$90 billion was recorded in the same period (World Bank, 2015).

The persistent increase in external debt and capital flight has raised concerns about the sustainability of Nigeria's economic growth and development (IMF, 2022). According to World Bank (2022), the country's reliance on foreign borrowing and its vulnerability to capital flight has significant implications for its economic stability, fiscal capacity, and human development. It is against this backdrop that this paper seeks to examine the relationship between external debt, capital flight, and the Nigerian economy.

Objectives

- i. Examine the effects of external debt on Nigeria's economy
- ii. Investigate the consequences of capital flight to Nigeria's economy.
- iii. Evaluate the effect of external debt servicing on Nigeria's economy.
- iv. Analyse the impact of Exchange rate volatility on Nigeria's economy

Review of Relevant Literatures

Conceptual Issues

Over the last few years, many heavily indebted countries have experienced heavy capital outflows or capital flight, and this anomaly has become a major concern in some of these countries. This interest arises, among other reasons, because of the role that external assets stored away in foreign lands could play if left in the domestic economy, to augment the dwindling resources from international creditors. Nigeria, Africa's largest economy, has struggled with external debt and capital flight, posing significant challenges to its economic growth and development. The country's external debt has increased significantly over the years, from \$10.3 billion in 2015 to \$42.5 billion in 2023 (DMO; 2024). Similarly, capital flight has been estimated to be around \$15.7 billion annually (Global Financial Integrity,

2020). The capital flight phenomenon which refers to the rapid outflow of money or assets from a country due to economic or political instability, unfavourable government policies or better investment opportunities elsewhere has undermined Nigeria's ability to finance development projects, maintain economic stability, and reduce poverty.

Nigeria's foreign investment inflows fell by 26.7 percent to US\$ 3.9 billion in 2023 from US\$ 3.9 billion in 2022. The decline was orchestrated by the consecutive drop in foreign investment inflows in the first three quarters of 2023 due to political risks and elevated production costs. Consequently, foreign-owned subsidiaries, including Nestle, Guinness, Airtel Africa, and MTN Nigeria, have lost over N900 billion to currency devaluation. However, the implementation of pro-market reforms fuel subsidy removal and exchange rate harmonization - reverted the trend in the fourth quarter of 2023 as capital importation rose to US\$1.1 billion. Nonetheless, the overall drop in foreign investment inflows reflects the unfavourable investment climate, which has doused investors' confidence in the Nigerian economy (NBS; NESG; 2024).

Meanwhile, FDI fell by 19.4 percent to US\$ 7377.4 million in 2023 from US\$ 46468.1 million in 2022. This is not unconnected with the divestments by major multinational oil and manufacturing companies due to an unfavourable business environment. Specifically, Shell reached a financial close to selling its onshore oilfields in Nigeria at US\$2.4 billion. Similarly, a British Pharmaceutical and Biotechnology Company, GlaxoSmithKline Consumer Nigeria, exited the country after 51 years of operation. The other multinational firms that divested from Nigeria in 2023 include Procter & Gamble (an American multinational consumer goods company), Unilever Nigeria (home care and skin cleansing division), Sanofi, and Bolt Foods (NBS; NESG, 2024). The mass exodus of these firms is expected to have a detrimental effect on the Manufacturing sector, which is currently struggling with growth. The sector expanded by 0.5 percent in the first three quarters of 2023, relative to a 1.9 percent contraction recorded in the corresponding period of 2022. Similarly, the oil and gas sector has suffered prolonged contraction since 2022. Furthermore, the weak inflow of foreign capital has implied a shortage in FX inflow and, by extension, further exchange rate depreciation. (NBS; NESG, 2024).

From 1990 to the early 2000s, Nigeria struggled with a heavy external debt burden. Throughout the 1990s, debt servicing consumed a significant portion of government revenues, limiting funds available for development (UNCTAD, 2024). By 2004, Nigeria's external debt had grown to about \$36 billion, with Paris Club debts accounting for about 85% of this amount. A major turning point came in 2005-2006 when Nigeria secured a debt relief deal with the Paris Club. This resulted in the cancellation of about \$18 billion in debt, with Nigeria paying about \$12 billion to clear the remainder (IMF, 2012). After this debt relief, Nigeria's external debt dropped significantly, reaching a low of about \$3.73 billion in 2006. However, in the years following, Nigeria's external debt began to grow again, but at a slower pace initially until 2015 when borrowing began to increase rapidly. According to the Debt Management Office (DMO, 2024; IMF, 2023), with the rapid growth of external

debt, debt servicing costs increased as a proportion of government revenue, especially given global economic challenges and fluctuations in oil prices (a key source of Nigeria's foreign exchange).

Theoretical Framework

Many theories on external debt and capital flight nexus abound but the Debt Overhang Theory proposed by Myers (1977) with later modifications by Krugman (1988) and Sachs (1989) has a direct and specific application to the current situation of Nigeria. The theory presupposes that when a country accumulates too much external debt, it reaches a point where the expected repayment is so high that it disincentivises investment. Gruber (2015), argued that the result of having excessive debt is that any earnings generated by new investment projects are partially appropriated by existing debt holders. This results in lower investment and slower economic growth. Amaefule (2018) has postulated a negative link between public debt and economic performance. Accordingly, the uncertainty associated with high debt, low likelihood of debt relief, and high chances of default (in that regard) reduce investors' incentives and economic growth; as a result, high debt service may crowd out private investment (Cohen 1993).

Empirical Review

Chukwu (2023), examined the impact of external debt on economic growth in Nigeria (1981-2020). The study was built on a multiple regression. The focus variables are real gross domestic product as the dependent variable while external debt, exchange rate, inflation rate and domestic debt are the independent variables. The Ordinary Least Square (OLS) technique was used in estimating the relationship between the dependent and independent variables. From the result from the analyses indicates that external debt has no significant impact on economic growth in Nigeria and thus insignificant variable in determining economic growth in Nigeria. The result also shows that external debt has negative relationship with economic growth in Nigeria. The granger causality test result also shows that there is no causality relationship between external debt and economic growth in Nigeria. In view of the results of this study, the study recommends that the cost of governance should be reduced so as to enable proper utilization of the available funds for development purposes and an enabling environment must be created to enhance investment in the Nigerian economy.

Ezu & Oranefo (2023), evaluated the effect of capital flight on foreign investment in Nigeria. The study obtained financial data from Central Bank of Nigeria Statistical Bulletin. The study made use of exploratory survey tools. Secondary data was used for data collection. The empirical method which adopts regression analysis was used to test the stated hypotheses. The findings revealed that the relationship between capital flight and investment is insignificantly negative. High exchange rates do not significantly increase capital flights out of the economy nor reduce Foreign Investment. This shows that Nigerian investment process is not significantly benefiting the RGDP or there is insufficient investment to significantly affect the RGDP. The work recommends that Capital flight management and reactions to

capital account restrictions be factored into the management of external reserves position of developing countries. Removal of the exchange rate misalignment and the premium will be a good start to reduce flights of capital out of the economy. The monetary authorities should begin to look seriously into how to reduce the unresolved statistical discrepancies that are posted into the Balance of Payments with a view to finding out what make up such figures and how they came about.

Abbah, Oloja-Ojabo, Sule & Udi (2021), examined the moderating influence of the leadership system (LS) on the nexus between capital flight (CAPF) and domestic investment (DI) in Nigeria from 1981 to 2018 within the auto-regressive distributed lag (ARDL) framework. An inverse relationship was found between LS and DI both in the short run and long run. Furthermore, the interactive influence of capital flight and leadership system (CAPF*LS) revealed a positive and significant (at ten per cent) influence on DI. This study, therefore, recommends that concerted effort should be made to improve the quality of governance through the provision of basic infrastructure and the formulation and implementation of policies that will increase domestic investment and mitigate the level of capital flight from Nigeria.

Orji, Ogbuabor & Kama (2020), investigated the impact of capital flight on economic growth in Nigeria. In carrying out the analysis, data from CBN statistical bulletin was used for the period 1981 to 2017. The Autoregressive Distributed Lag (ARDL) bounds test approach was adopted for the study. The study showed that capital flight significantly decreases economic growth in both short run and long run. Other variables found to have significant effect on economic growth include money supply, credit to private sector and domestic investment. The study therefore recommended proactive policy measures that will curtail capital flight and make the economy competitive and attractive for domestic investment that enhances economic growth. Expansionary monetary policy should also be adopted to improve money supply whenever the policy environment is ripe for such.

Ighodalo (2020), examined the dynamic relationships between foreign debt and economic development in 43 African nations from 2001 to 2018. They utilised the Johansen Cointegration test and the system Generalised Method of Moments (sysGMM). The research explains how the impact of foreign debt might be overstated owing to its misapplication. The findings support a long-run equilibrium link between foreign debt and African economic growth. The result shows that, above a certain capacity, the short-run converges to equilibrium in the long run, and foreign debt begins to influence African economic growth negatively.

Didia and Ayokunle (2020) disaggregated total public debt into external debt and domestic debt, to investigate whether these two forms of debts had a varying impact on the economic growth in Nigeria. Utilizing the Vector Error Correction Model (VECM) and data covering the period of 1980–2016, the study revealed that domestic debt had a statistically significant positive relationship with economic growth in the long run, while external debt exhibited a

negative relationship with economic growth, which was not statistically significant. Obayori, Krokeyi and Kakain (2019) investigated the impact of external debt on economic growth in Nigeria for the period 1980 to 2016 using Generalized Method of Moments (GMM). The GMM result revealed a positive and significant relationship between external debt and economic growth in Nigeria.

Emmanuel, Mohammed & Mamman (2018), examined with the use of Unit Root, Co-integration and Ordinary Least Square (OLS) method, the impact of Capital Flight on economic growth in Nigeria between 1981 and 2016. Asides capital flight (CAF), Gross Fixed Capital Formation (GFCF), Exchange Rate (EXR), Inflation (INF) and Terms of Trade (TOT) are the other independent variables used. The finding is that apart from the GFCF, the rest of the variables had negative impact on the country's GDP growth during the period under consideration. It is the opinion of the paper therefore, that the government should put in place appropriate policy framework and its implementation to ensure high productivity in the economy. This will not only guarantee availability of enough goods for foreign exchange earnings when exported, reduce inflation in the economy, encourage exports of excess produced goods rather than importing to complement inadequate produced goods. With this, the economy rather than fostering capital flight that leads to low GDP growth will do otherwise.

Methodology

Research design involves the systematic process of collecting, analyzing and interpreting data with a view to finding solutions to the problem being investigated. This study utilizes the *ex-post-facto* research design which is predicated on the fact that it is most suited to research works adopting secondary data approach in the analysis of data. Secondary data on external debt and capital flight are regressed against real gross domestic product and deductions are made from the results based on a-priori expectations. However, the theoretical framework of the study anchors on the debt overhang theory. According to Wilson (2009), structural macroeconomic debt overhang occurs if there is a latent output gap or underemployment in an economy, which is bridged repeatedly by credit creation, the buildup of which results in a debt overhang with the attendant capital flight.

Sources of Data

The study utilized data from Central Bank of Nigeria (CBN Statistical Bulletin), Debt Management Office, and the World Bank.

Model Specification

This study utilized model formulated by the researchers in line with the objectives of the study. The model tested is a multiple regression stated thus:

$$RGDP = f(EXDT, EXCR, EDTS, CAPF, GOVE) \quad (1)$$

The model was standardized by transforming the variables into natural logarithm to curtail the effects of spurious regression. Thus:

$$LN_RGDP = f(LN_EXDT, LN_EXCR, LN_EDTS, LN_CAPF, GOVE) \quad (2)$$

Converting equation (2) into econometric model:

$$LN_RGDP_t = \beta_0 + \beta_1 LN_EXDT_t + \beta_2 LN_EXCR_t + \beta_3 LN_EDTS_t + \beta_4 LN_CAPF_t + \beta_5 GOVE_t + \mu_t. \quad (3)$$

Where:

RGDP = Real Gross Domestic Product, EXDT = External Debt, EXCR = Exchange Rate Volatility, EDTS = External Debt Servicing, CAPF = Capital Flight, and GOVE = Government Effectiveness. β_0 is the intercept of the model while $\beta_1 - \beta_5$ are the structural parameters to be estimated. μ_t is the stochastic disturbance (error term) and LN is the natural logarithm of the variables.

The work is set out to present an Auto-Regressive Distributed Lag (ARDL) model. Therefore, equation (3) is modified into conventional ARDL form as can be seen in equation (4).

$$LN_RGDP_t = \beta_0 + \sum_{i=0}^p \beta_1 LN_EXDT_{t-i} + \sum_{i=0}^p \beta_2 LN_EXCR_{t-i} + \sum_{i=0}^p \beta_3 LN_EDTS_{t-i} + \sum_{i=0}^p \beta_4 LN_CAPF_{t-i} + \sum_{i=0}^p \beta_5 GOVE_{t-i} + \mu_t \dots (4)$$

In order to obtain the co-integrating equation, equation (4) is transformed into equation (5) as follows:

$$\Delta LN_RGDP_t = \beta_0 + \sum_{i=0}^p \beta_1 \Delta LN_EXDT_{t-i} + \sum_{i=0}^p \beta_2 \Delta LN_EXCR_{t-i} + \sum_{i=0}^p \beta_3 \Delta LN_EDTS_{t-i} + \sum_{i=0}^p \beta_4 \Delta LN_CAPF_{t-i} + \sum_{i=0}^p \beta_5 \Delta GOVE_{t-i} + \phi ECT_t + \mu_t \dots (5)$$

$$\text{Where } ECT_t = Y_t - \beta_0 - \sum_{i=1}^p \gamma_1 \Delta Y_{t-i} - \sum_{i=0}^p \beta_i \Delta X_{t-i} \text{ and } \phi = 1 - \sum_{i=1}^p \gamma_1 \Delta Y_{t-i} \dots (6)$$

The bounds test procedure used equation (5) into (7) as:

$$\Delta Y_t = - \sum_{i=1}^{p-1} \gamma_1 Y_{t-i} * \Delta Y_{t-i} + \sum_{i=0}^p \beta_i \Delta X_{t-i} - \rho Y_{t-1} - \beta - \sum_{i=0}^p \delta X_{t-i} + \mu_{it} \dots (7)$$

Then we test the existence of level relationship as $\rho = 0$ and $\delta_1 = \delta_2 = \dots = \delta_k = 0$ where Δ = difference operator, μ = white noise error term.

Data Presentation

Table 2: Descriptive Statistics Table

	LN_RGDP	LN_EXDT	LN_CAPF	LN_EDTS	LN_EXCR	GOVE
Mean	9.925084	7.498866	4.53609	15.07644	4.59663	-1.02735
Median	10.38759	7.316196	4.578699	14.96146	4.869386	-1.005
Maximum	12.51924	10.13277	5.600059	20.78469	6.644779	-0.9
Minimum	6.20383	5.699138	3.624867	9.828697	2.084429	-1.21
Std. Dev.	1.826209	1.271553	0.429853	3.182474	1.167844	0.086631
Skewness	-0.49873	0.463837	0.469815	0.514696	-0.60597	-0.64674
Kurtosis	2.098904	2.043945	3.979002	2.526906	2.401411	2.469964
Jarque-Bera	2.559796	2.514044	2.60858	1.818245	2.588395	2.768219
Probability	0.278066	0.2845	0.271365	0.402878	0.274118	0.250547
Sum	337.4528	254.9614	154.2271	512.5989	156.2854	-34.93
Sum Sq. Dev.	110.0564	53.35598	6.097525	334.2287	45.00737	0.247662
Observations	34	34	34	34	34	34

Source: Authors' Computation with Eviews 10 outcome

The above table shows the descriptive statistics of the variables. As the table reveals, distribution of all the variables used in the model are platykurtic as their kurtosis coefficients are within the range of 3 except for capital flight. However, the Jarque-Bera results and its probability values indicate that the sample data have the skewness matching a normal distribution.

Table 3: Summary of the Unit Root Test Result

		ADF Test statistics			
Variable		At Level	1 st Difference	Decision	Order of Integration
LN_RGDP		-3.928575	-	Stationary at level	I(0)
LN_EXDT		-1.051430	-3.960221	Stationary at 1 st difference	I(1)
LN_EDTS		-0.479547	-6.424768	Stationary at 1 st difference	I(1)
LN_EXCR		-1.327816	-5.171561	Stationary at 1 st difference	I(1)
GOVE		-3.685714	-	Stationary at level	I(0)
CAPF		-1.213040	-6.034192	Stationary at 1 st difference	I(1)
Critical Values	1%	-3.646342	-3.653730		
	5%	-2.954021	-2.957110		
	10%	-2.615817	-2.617434		

Source: Researchers' Computation using E-Views 10

The unit root test above reveals that Real Gross Domestic Product (RGDP) and government effectiveness (GOVE) are stationary at level and are said to be integrated of order zero, $I(0)$. Conversely, external debt (EXDT), external debt servicing (EDTS), exchange rate volatility (EXCR) and capital flight (CAPF) are stationary at first difference and are said to be integrated of order one $I(1)$. Thus, the auto-regressive distributed lag (ARDL) technique becomes appropriate in estimating the relationship among the variables. Using the ARDL method of optimal lag selection, lag one and lag two were found to be optimal. However, we first confirm the existence of a long-run relationship or co-integrating relationship amongst the variables using the ARDL Bounds test.

Table 4: ARDL Bound Cointegration Test Result (@ 5% critical value)

Model	F-Statistics	K	Significance level	Critical Bound Value	
				10 (Lower Bound)	11 (Upper Bound)
	5.368980	5	5%	2.62	3.79

Source: Authors' Computation with E-views 10

Table 5 above summarizes the Bounds Test F-statistics for co-integration. The F-statistic (6.989238) is greater than the critical values $I(0)$ and $I(1)$ bounds at 5%. This entails that we reject the null hypothesis and conclude that there is a long run relationship between external debt, capital flight, exchange rate volatility, government effectiveness and Nigeria's economy. Since there is a long run relationship, we therefore estimate the short run and long run ARDL analysis.

Table 5: Parsimonious Short Run Relationship Result Between External Debt, Capital Flight, Exchange Rate Volatility, Government Effectiveness and Nigeria's Economy

Conditional Error Correction Regression				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
CointEq(-1)*	-0.141912	0.039839	-3.562162	0.0017

Source: Author's Computation with E-views 10

From table 6 above; the coefficient of the error correction term (CointEq(-1)) is statistically significant and carries the expected negative sign at 5% level of significance, revealing that a short run relationship exists between external debt, capital flight, exchange rate, government effectiveness and Nigeria's economy. The speed of adjustment is -0.141912. This implies that the model corrects its lagged period disequilibrium at a speed of adjustment of 14.19%. Therefore, holding the regressors at a constant state of increase by 14.19%, they will bring the desired change on the regressand (RGDP).

Table 6: Long run relationship between external debt, capital flight, exchange rate, government effectiveness and the Nigeria's economy

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LN_EXDT	-0.141283	0.184238	-0.766854	0.4510
LN_CAPF	-2.693592	1.316398	2.046184	0.0523
LN_EDTS	-0.107110	0.116110	0.922492	0.3658
LN_EXCR	0.063732	0.474368	0.134351	0.8943
GOVE	-2.015860	1.829282	-1.101995	0.2819
C	-3.787739	4.662548	-0.812375	0.4249

Authors' Computation with Eviews 10

Interpretation of the Long Run ARDL Result

$$\text{LN_RGDP} = -3.7877(-0.1413 \cdot \text{LN_EXDT} - 2.6936 \\ * \text{LN_CAPF} - 0.1071 \cdot \text{LN_EDTS} + 0.0637 \\ * \text{LN_EXCR} - 2.0159 \cdot \text{GOVE})$$

The long run coefficients from table 6 above show that the joint impact of all the regressors (LN_EXDT, LN_CAPF, LN_EDTS, LN_EXCR and GOVE) on the regressand (LN_RGDP) will amount to -3.7877 units on the basis that they are all held at constant. Put differently, if all the regressors are held at constant, it will amount to -3.7877 units (negative) contribution to Nigeria's economy.

External debt (LN_EXDT) has a negative coefficient of 0.141283. This implies that external debt has a negative relationship with Nigeria's economy, entailing that on the long run, an increase in external debt, causes Nigeria's economy to depress by 0.141283 units. However, the test of significance indicates that this increase on Nigeria's economy is not significant at the 5% level. Capital flight (LN_CAPF) has a significant negative coefficient of 2.693592; such that there is an inverse relationship between capital flight and Nigeria's economy. This entails that a unit increase in capital flight significantly causes 2.693592 units decrease on Nigeria's economy. External debt servicing (LN_EDTS) has a negative coefficient of 0.107110. This entails a negative relationship external debt servicing and Nigeria's economy, indicating that on the long run, an increase in external debt servicing, causes a 0.107110 units decrease on Nigeria's economy. However, the test of significance shows that this increase on Nigeria's economy is not significant at the 5% level. Exchange rate volatility (LN_EXCR) has a positive coefficient of 0.063732. This shows that exchange rate has a positive relationship with Nigeria's economy; implying that 1-unit increase in exchange rate on the long run, results in 0.063732 units growth of Nigeria's economy but the growth is not significant at 5% level. Government effectiveness has a negative coefficient. This implies that there is a negative relationship between this intervening variable and Nigeria's economy. A change in

government effectiveness index brings about 2.015860 units decrease on Nigeria's economy. The significance test shows that the decrease on Nigeria's economy is not significant at the 5% level.

Table 7: Post-Estimation Diagnostic Test Results

The post-estimation results show other tests that are necessary in order to ascertain the statistical robustness and predictive ability of the model. They comprise the Breusch-Godfrey serial correlation LM test, Breusch-Pagan-Godfrey Heteroskedasticity test, Fisher's test, Durbin Watson test for autocorrelation, Normality test, CUSUM and CUSUMQ tests, RAMSEY RESET test and the Coefficient of determination (R-squared and Adjusted R-squared), These tests are summarized as follows:

S/N	Test	Probability	Decision
		Model 1	
1.	Breusch-Godfrey serial correlation LM test	F-stat = 0.115223 <i>p-value</i> = 0.8917	No serial correlation.
2.	Durbin Watson Statistic	1.915915	No Autocorrelation
3.	Fisher's Test	F-stat = 1422.968 <i>p-value</i> = 0.000000	The explanatory variables are jointly significant on the dependent variable
4.	Breusch-Pagan-Godfrey Heteroskedasticity Test	F-stat = 0.873092 <i>p-value</i> = 0.5527	No Heteroskedasticity in the model
5.	Normality (Residual) Test	Skewness = -0.619232 Kurtosis = 2.955139 Jarque-Bera = 1.215845 <i>p-value</i> = 0.544481	Model is approximately normally distributed
6.	CUSUM Test	Within the bounds of 5% significance level	Model is stable
7.	CUSUM Sum of Squares Test	Within the bounds of 5% significance level	Model parameter is stable
8.	RAMSEY RESET Test	F-stat = 3.577046 <i>p-value</i> = 0.1694	Model is free from specification bias
9.	R-squared and Adjusted R-squared	0.9980 (99.80%) 0.9973 (99.73%)	High explanatory coefficient

Source: Extracted from E-Views 10 output

The post-estimation tests in Table 6 above show that the joint relationship coefficient of the model is significant given the *p-value* of 0.000000 which is less than 0.05 critical value. The Durbin-Watson coefficient of 1.870032 is within the bounds of 2 than to 0. The normality test shows that model is approximately normally distributed. The serial correlation and heteroscedasticity tests show that the model is free from serial correlation and heteroscedasticity. The CUSUM and CUSUMQ tests indicate that the model is stable and converges within the bounds of 5% significance level, while the Ramsey Reset test indicates

that the model is free from specification bias. The adjusted R-squared is most suitable for gauging the overall fitness of the model and it has a value of 0.997282 indicating that 99.73% variations on Nigeria's economy are accounted for by external debt and capital flight for the period 1990-2023.

Summary of Findings

This study analyzed empirically the effect of external debt and capital flight on Nigeria's economic performance measured by the real GDP for the period of 1990-2023. The study adopted the debt overhang theory as its theoretical bedrock while the ARDL method was employed to analyze the data obtained from various sources including the central bank of Nigeria and the World Bank. The result indicates that external debt, external debt servicing and government effectiveness exert negative but not significant effects on Nigeria's economy. However, capital flight shows a negative and significant effect of the Nigerian economy within the period under review while exchange rate volatility has a positive but not significant relationship with Nigeria's economy. The posttest diagnostic tests show the model is appropriate to achieve the objectives of the study.

Conclusion

This study is an attempt to critically evaluate and provide insight on the situation of Nigeria's external debt and capital flight and their relative impacts on the economy for a 34-year period (1990-2023). Thus, from the findings of our research, external debt, capital flight, external debt servicing and government effectiveness all have negative effects on Nigeria's economy. Conversely, exchange rate volatility has a positive impact on Nigeria's economy. Thus, the study concludes that external debt and capital flight have significant relationships with Nigeria's economy. This suggests the need to improve the conditions that affect the effectiveness of aforementioned variables including improved management and regulations like stricter controls on new external borrowing, better improved domestic investment climate, improved revenue generation measures as well as more effective anti-corruption measures to ensure more effectiveness.

Recommendations

- i. On external debt, government should implement stricter controls on new external borrowing by prioritizing concessional loans with lower interest rates and longer repayment periods as well as developing a comprehensive debt management strategy.
- ii. To combat capital flight, policies that improve the domestic investment climate to encourage local and foreign investors as well as capital repatriation should be promoted. Government should also strengthen anti-corruption measures and financial regulations.
- iii. On external debt servicing, government should improve revenue generation to reduce reliance on external borrowing and more importantly, prioritize productive investments that can generate returns to service debts.

- iv. While the finding on exchange rate suggests a positive impact, it's important to maintain a balance by implementing a managed float exchange rate and strengthen Nigeria's foreign reserves to better manage currency pressures.
- v. On government effectiveness, anti-corruption measures should be prioritized by the authorities to ensure more transparency in government operations and public financial management.

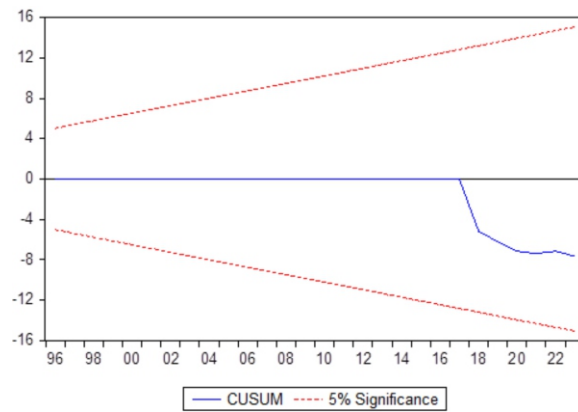
References

- CBN (2024). *Quarterly financial report on Nigeria's sector*, www.cbn.gov.ng
- CBN (2023). *Annual statistical bulletin*, www.cbn.gov.ng
- Chevillard, N. (2001). *Nigeria's external debt: evolution, mix and current issues*, IFRA-Nigeria. <https://doi.org/10.4000/books>.
- Chukwu, C. B. (2023). *Impact of external debt on economic growth in Nigeria (1981-2020)*. <https://papers.ssrn.com/sol3/papers.cfm>.
- Debt Management Office (2023). *Public debt/national debt management framework*, www.dmo.gov.ng
- Didia, D. & Ayokunle, P. (2020). External debt, domestic debt and economic growth in Nigeria, *Advances in Economics and Business*, 8(2), 85–94
- Eichengreen, B. J., El-Ganainy, A., Esteves, R. & Mitchener, K. J. (2021). *In defense of public debt*, Oxford University Press. ISBN 978-0-19-757792-9
- Emmanuel, C., Mohammed, I. & Mamman, A. (2018). Capital flight and economic growth in Nigeria: An empirical analysis, *International Journal of Humanities, Art and Social Studies (IJHAS)*, 3(3).
- Ighodalo, E. (2020). Dynamic relations between public external debt and economic growth in African countries: a curse or blessing? *Journal of Open Innovation: Technology, Market, and Complexity* 6(3)
- International Monetary Fund (2021). <https://www.imf.org/en/blog-global-debt-reaches-a-record-226-trillion>
- Krugman, P. (1988). Financing versus forgiving a debt overhang, *Journal of Development Economics*, 29(1), 253–268. [https://doi.org/10.1016/3878\(88\)90044](https://doi.org/10.1016/3878(88)90044).

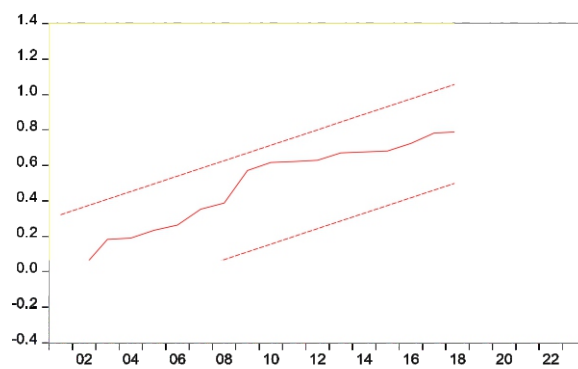
- National Bureau of Statistics (2024). *Annual report on foreign investment inflows into Nigeria*. www.nigerianstat.gov.ng
- National Bureau of Statistics (NBS, 2024). *Nigerian Domestic and Foreign Debt (Q3 2023)*, www.nigerianstat.gov.ng
- Nigeria Economic Summit Group (2024). *Annual publication on foreign investments in Nigeria*, www.nesgroup.org.
- Obayori, J. B., Krokeyi, W. S. & Kakain, S. (2019). External debt and economic growth in Nigeria, *International Journal of Science and Management Studies (IJSMS)*, 2(2), 1-6.
- OECD Data. "OECD General government debt, OECD.org.
- Ofurum, C. & Siminalayi, F. (2022). Public debt and economic development: An empirical evidence from Nigeria, *Archives of Business Research – 10(7)* Publication Date: July 25, 2022 DOI:10.14738/abr.107.12728.
- Omagbemi, C. (2016). *External debt and economic growth in Nigeria*, A Dissertation submitted to the Faculty of Management Sciences, Delta State University, Nigeria.
- Orji, A., Ogbuabor, E. & Kama, K. (2020). Capital flight and economic growth in Nigeria: A new evidence from ARDL approach, *Asian Development Policy Review*. 8(3), 171-184. DOI:10.18488/journal.107.2020.83.171.184
- Paul, N. (2017). Analysis of the Impact of External Debt on Economic Growth in an Emerging Economy: Evidence from Nigeria. *Afrrev*. Vol. 11 (4), Serial No. 48. DOI
- Todaro, M. P. & Smith, S. C. (2015). *Economic development*. 12th edition, Pearson Education Limited, Edinburg. Gate, Harlow, England.
- Wilson, L. (2009). *The put problem with buying toxic assets*, SSRN. com

Appendices

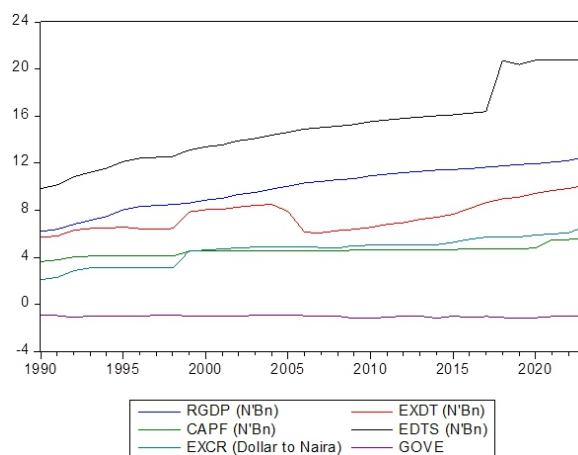
Cusum Graph



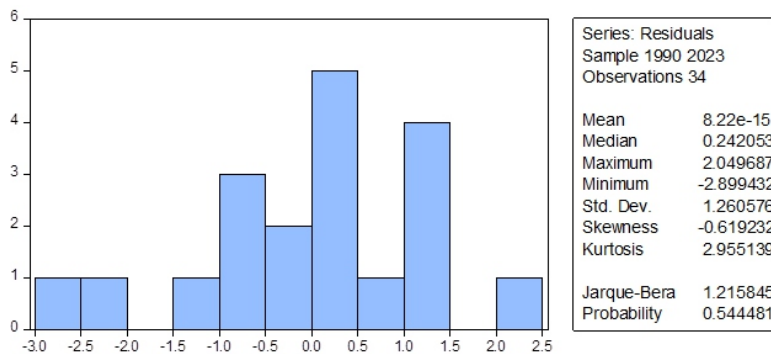
Cusum-Q Graph



Graphical Illustration of the Movement of the Variables over the period



Normality Test



Serial Correlation Test Result

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.115223	Prob. F(2,21)	0.8917
Obs*R-squared	0.347344	Prob. Chi-Square(2)	0.8406

Heteroskedasticity Test Result

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.428843	Prob. F(8,23)	0.8916
Obs*R-squared	4.153637	Prob. Chi-Square(8)	0.8430
Scaled explained SS	5.243524	Prob. Chi-Square(8)	0.7313

Ramsey Reset Test

Specification: LN_RGDP C LN_EXDT LN_CAPF

LN_EDTS LN_EXCR GOVE

Omitted Variables: Squares of fitted values

	Value	df	Probability
t-statistic	1.891308	27	0.1694
F-statistic	3.577046	(1, 27)	0.1694
Likelihood ratio	4.230033	1	0.0397

F-test summary:

	Sum of Sq.	df	Mean Squares
Test SSR	0.468422	1	0.468422
Restricted SSR	4.004132	28	0.143005
Unrestricted SSR	3.535710	27	0.130952

Table Showing RGDP, External Debt, Capital Flight, Exchange Rate, Government Effectiveness, and External Debt Servicing Variables (Annual)

EXTERNAL DEBT AND CAPITAL FLIGHT VARIABLES

YEAR	RGDP (N'Bn)	EXDT (N'Bn)	EXCR (Dollar to Naira)	CAPF (N'Bn)	GOVE	EDTS (N'Bn)
1990	494.64	298.61	8.04	37.5197235	-0.92	18558.756
1991	590.06	328.45	9.91	43.5773426	-0.95	25713.2468
1992	906.03	544.26	17.3	55.5887768	-1.12	50365.0994
1993	1257.17	633.14	22.07	60.3372748	-0.98	75854.2118
1994	1768.79	648.81	22	60.2753278	-0.97	106614.397
1995	3100.24	716.87	21.9	60.1864894	-1	186592.562
1996	4086.07	617.32	21.88	60.1686731	-1.02	245853.41
1997	4418.71	595.93	21.89	60.1775833	-0.92	265907.289
1998	4805.16	633.02	21.89	60.1775833	-0.92	289162.916
1999	5482.35	2577.37	92.34	90.5095483	-1	496205.022
2000	7062.75	3097.38	101.7	92.4405461	-0.97	652884.467
2001	8234.49	3176.29	111.23	94.2320026	-1.02	775952.483
2002	11501.45	3932.88	120.58	95.8462687	-1.02	1102371.07
2003	13556.97	4478.33	129.22	97.2303276	-0.92	1318148.63
2004	18124.06	4890.27	132.89	97.7904344	-0.94	1772359.7
2005	23121.88	2695.07	131.27	97.5451254	-0.9	2255426.68
2006	30375.18	451.46	128.65	97.1419108	-0.97	2950703.03
2007	34675.94	438.89	125.81	96.6954566	-1.03	3353005.85
2008	39954.21	523.25	118.57	95.5100701	-0.99	3816029.4
2009	43461.46	590.44	148.88	100.062812	-1.2	4348875.91
2010	55469.35	689.84	150.3	100.252666	-1.17	5560950.22
2011	63713.36	896.85	153.86	100.720862	-1.1	6417264.54
2012	72599.63	1026.9	157.5	101.188509	-1	7346248.33
2013	81009.96	1387.33	157.31	101.164368	-1	8195321.37
2014	90136.98	1631.5	158.55	101.3214	-1.19	9132805.01
2015	95177.74	2111.51	192.44	105.195688	-1	10012287.9
2016	102575.4	3478.92	253.49	110.706487	-1.12	11355762.2
2017	114899.3	5787.51	305.79	114.457972	-1.04	13151140.8
2018	129086.9	7759.23	306.08	114.47693	-1.12	1014777472
2019	145639.1	9022.42	306.92	114.531743	-1.21	716680300
2020	154252.3	12705.62	358.81	117.65586	-1.14	1018148687
2021	176075.5	15855.23	401.15	243.969452	-1.03	1042957043