



EXTERNAL DEBT MANAGEMENT AND FINANCIAL DEEPENING: A CAUSAL ANALYSIS

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Abstract

This study was an inquiry into uncovering the intercourse between external debt management (signposted by debt stock) and the growth of the nation's financial system (proxied by broad money supply to GDP (M2/GDP)). It was stimulated by the need to contribute to national policy formulation based on the continuing propagation of the debt doctrine from both sides of the divide. Premised on the ex post facto research paradigm, domestic time series data covering 36 years were obtained and carefully considered. The observation in the study is that borrowing temporarily increases the volume of available funds, but when not properly managed, it takes its toll on the financial system in the long run. Hence, the study concluded that external borrowing had not benefited the development of the nation's financial system over the last 36 years. Therefore, the paper recommends that foreign credits should be sourced only for productive activities. Also, a deliberate policy thrust should be embraced to insulate borrowed funds from the vagaries of political instability, by providing for a direct assignment of the credit to the project in question, with a non-viament clause in the loan agreement. The nation must also step up its

efforts at enshrining accountability and integrity in the management of public funds, via institutionalising proper governance mechanisms that enhance general financial management, as a way of exploiting the gains of borrowing, given its inevitability occasioned by the reality of resource constraints.

Keywords: Debt Management, Financial Deepening, Growth, Accountability, Probity

INTRODUCTION

The truism of the theory of resource constraints has enshrined borrowing as a way of life at the individual, corporate and national levels. While, some nations have developed deep pockets (financial depth), and therefore have a higher capacity to provide for its citizens, others do not. However, this difference in resource capacity, have not deterred citizens from the various nations from clamouring for an improvement in their standards of living. This expectation is a global one, as is barometer for benchmarking the growth of nations. Meanwhile, some of these nations over-time have taken concerted efforts, which have resulted in their current financial strength, while the story is different for others, who are trailing behind in the advancement aspiration and race. This developmental aspiration accounts for the quest for external credit (due to low domestic credit capacity), which has become a global phenomenon amongst development aspiring nations. Thus, leading to frantic efforts by various nation-states to attract non-national fund owners to their domain as a preferred investment haven.

Though, credit can be sourced domestically (internally) or from outside sources (externally), nations and businesses prefer external credit to domestic credit, because the interest rate charged by international financial institutions, like the International Monetary Fund (IMF), is about half, of the price charged by domestic financial institutions (Pascal, 2010). However, whether the credit sourced will be helpful to the borrowing nation, depends on how the borrowed funds will be used. That is, whether it will be used in the productive segment of the economy or for consumable goods or diverted to unproductive activities.

Scholars have argued that external credit accelerates economic growth, provided they are channelled to boost the productive capacity of a nation, to enable easy repayment of the debt, else the reverse is the case. When not optimally deployed, the country will not be able to generate sufficient income to service its loan and transform its income margin into foreign exchange. Furthermore, anti-borrowing proponents have argued that external credit harms the economy anchored on the preponderance of evidence to the fact that at certain levels, debt

build-up becomes a burden and will no longer stimulate economic growth (Elbadawi, Ndulu and Ndungu, 1996), instead leading to liquidity constraint, arising from the need to service a more significant debt burden, which reduces funds that should have been used for infrastructural development to aid economic growth in the nation.

For an underdeveloped country like Nigeria, with the scarcity of capital (arising from poor economic management, weak industrial base, and corruption), will need to source for credit to supplement budget deficit and bridge the investment/savings gap, to support economic growth and development (Ezenwa, 2012) which has led to massive borrowing at both the domestic and external levels, thus leading to a huge debt profile. In Nigeria, the quest for foreign credit dates back to 1958, when a colonial loan of \$28 million was acquired from the World Bank, to construct the railway and other developmental projects, (Okolie, 2014). Consequently, following the recession of 1977/78, Nigeria raised the first US\$ 1 Billion loan known as 'Jumbo Loan' from the International Capital Market to finance infrastructural projects between 1958 and 1977. The debts contracted were the concessional debts, from mutual and multidimensional sources, with more extended reimbursement periods and lesser interest rates, constituting about 78.5 per cent of the total debt stock (Ude, 2016). Also, the African Forum and Network on Debt and Development (AFRODAD) (2007) noted that Nigeria's external debt increased over time, because of the shortage of foreign exchange to meet the nation's growing necessities.

The drop in crude prices in the late 1970s had an upsetting effect on government revenue; resulting in the necessity to borrow to support the balance of payment and finance projects and this amplified the country's debt profile to US\$2.2 billion in 1980 (Ajisafe, Nassar & Fatokun, 2006; Ndekwe, 2008). However, in 1991, it increased to \$33.4 billion, and rather than decrease, it was on the increase, particularly with the unbearable regime of debt servicing and the unquenchable desire of political leaders to obtain foreign loans, for the execution of plans (Essien & Onwuoduokit, 2009). The external debt stock now stands at \$27.1 out of a total debt of \$83.8 at the end of 2019. Other elements that led to this sharp increase include; the entrance of state administrations into foreign loan commitment, decline in the share of loans from bilateral and multilateral creditors, the consequent proliferation in borrowing from reserved sources at unyielding rates and the inability to manage external debts prudently, due to corruption and misapplication of oil revenue (Winberger & Rocks 2008; Abrego & Ross, 2001). As a country, this inability to manage the stock of external debt led to a near-total collapse of the economy, leading to various reforms. Through purposeful leadership and engagement, the country under the guidance of President Olusegun Obasanjo came out of the debt trap. However, following his exit, the country has gone back to dangerous levels of borrowing.

It is against these premises that, the current study sought to interrogate the effect the management of the nation's external credit stock on financial deepening. In essence, how has the administration of the nation's foreign credit stock heightened the country's financial depth given, that the spirit of borrowing is to ensure domestic availability of funds for national development?

LITERATURE REVIEW

External Debt (Credit) Management

The centrality of credit to an economy is well documented in development studies. Its perversity cuts across, individual, corporate and national levels, thus necessity borrowing as a means of augmentation, arising the reality of the theory of capital constraints, which is an integral part of the resource constraints theory domain. As a result of varying degrees of resource endowment and management capacity, no nation-state is sufficiently endowed with all the capital requirements for its development, thus leading to borrowing. While, some have overcome the poverty trap and have developed massive domestic capacity (which limits their level of external financing), others have severe internal capacity constraints which compel them to rely heavily on external sources of funds. Thus, Arnone, Bandiera, and Presbitero (2005) described external credit, as that part of a country's debt, that is borrowed from foreign lenders, including deposit money banks, governments or international financial institutions, to finance public goods and services that will increase welfare and engender economic growth. They are funds, sourced from outside the nation's border by the federal or state governments, usually in foreign currency and is interest-bearing to finance the specific project(s), to be paid back in the currency in which it was borrowed. Example are, funds obtained from foreign commercial banks, international financial institutions like the International Monetary Fund (IMF), World Bank, etc. and from the government of foreign nations.

Usually, these types of debts are in the form of tied loans, meaning they are used for a predefined purpose as determined by a consensus of the borrower and the lender. Government and companies are eligible to raise credits abroad. These are in the form of exterior commercial borrowings. The interest rate on foreign loans is linked to LIBOR (London Interbank Offer Rate), and the actual price will be LIBOR plus applicable spread, depending upon the credit rating of the borrower.

External Credit management is the establishment of conditions of issue and redemption of foreign loans or public securities. It entails the process of administering external public debt, that is providing for payment of interest and arranging the refinancing of maturing bonds and debt. It is a carefully planned schedule, toward the acquisition and allocation of externally

borrowed funds to support the balance of payments. And again, it requires the estimates of foreign exchange earnings, sources of external finance, repayment schedule and the assessment of the country's capacity to service external debt (Bhatia, 1987).

The goal of external credit management is to remove the shortcoming connected with shallow financing, to enhance the depth of the financial system thereby raising the ratio of private domestic savings to income, to increase (deepen) the size of the monetary policy to generate profit opportunities for investors and more importantly, to beef up the process of mobilisation and allocation of savings to displace the fiscal operation of inflation. Also, to allow a better distribution of savings by increasing and diversifying the financial markets and capital market, where investment opportunities compete for savings flow, thereby increasing the availability of credit/capital for those who need them more.

The influence of foreign credits on a state's economy, has been a matter of consideration among scholars, with the view that external debt accelerates economic progress (Hameed, Ashraf & Chandhary, 2008). There was a confirmation of the above issues concerning the significant evolution experienced by the Asian Tigers (Malaysia, Singapore, Indonesia, and Taiwan) and South American countries (Brazil). These countries were able to renovate their economy using foreign credits (Momodu, 2012).

Therefore, external credit denotes monies obtained from outside a country's domestic market and represents the amount of external indebtedness of the nation. Whereas, the amount borrowed cum the application of the borrowed funds describes external credit management. This represents the operation definition of the construct as engaged in this work.

Financial Deepening

Modern economic analysis of fiscal policy in developing countries was initiated with the seminal works of McKinnon and Shaw in 1973, where they defined financial deepening as an efficient measurement of capital allocation, by moving available resources to better investment opportunities, which enhances credit availability. In line with there definition, the IMF staff discussion Note (2015:5), further stress that financial deepening increases a country's resilience and boosts economic growth and that it mobilises savings, promotes information sharing, improves resource allocation, and facilitates diversification and management of risk, (Ratna and Hugh, 2015). It also supports financial stability to the extent that, it helps dampen the impact of shocks.

Furthermore, financial deepening is the ability of financial institutions to efficiently mobilise savings for investment purposes (Andele, 2013). It is an increase in the stock of financial assets relative to Gross Domestic Product (GDP), (Falegan,1987) and this is also seen

as an increase in the size of the monetary system and again, as a means of bringing together the informal market into the formal financial system; to enhance the effectiveness of intermediation, efficiency of monetary policy, as well as the availability of funds for investment purposes. The concept, accepts full operations of financial institutions in the financial markets, which involves the supply of quality financial instruments and business services (Nnanna and Dogo,1998). Financial deepening represents a system free from financial repression. That is, a system free from inefficient allocation of capital, high costs of financial intermediation and lower rates of return to savers (Roubini and Sala-i-Martin,1992). It is a system free from government regulations, laws, and other non-market restrictions, that prevent financial intermediaries from functioning efficiently. It is where policies like interest rate ceilings, liquidity ratio requirements; high bank reserve requirements, capital control and limitations on market entry into the financial (commercial) segment, credit upper limit on directions of credit allocation, and government ownership of banks is not or reduced to some extent (McKinnon and Shaw, 1973).

Accordingly financial deepening for our purpose is narrowed to the volume of domestic money supply arising from the incursion of external borrowing. In the context of this work, the other aspects of financial deepening as espoused by McKinnon and Shaw in 1973, are discountenanced. In specific terms, the liberalization dimensions are not included in this empirical work because of accurate measurement statistics. Thus, the ratio of broad money supply in the Nigerian monetary system is used to represent financial deepening for the purpose of empirical analyses.

External Credit Management Strategies and Measures Adopted in Nigeria

Nigerian external debts are typically owed to foreign creditors, such as multilateral agencies (for example, the Africa Development Bank, the World Bank, and the Islamic Development Bank), to bilateral sources (such as the China Exim Bank, the French Development Bank and the Japanese Aid Agency) and private creditors such as investors, in Eurobonds,(Ngozi, 2014). Again other multilateral agencies that issue external credits are Paris Club of Creditors, London Club of Creditors and Promissory Note Holders (Jhingan, 2004 & Salawu, 2005).

According to the Debt Management Office, Nigeria's foreign loan dates back before independence, but remained small or insignificant until 1978. From this little beginning, it moved from US\$ 0.763 billion in 1977 to US\$10.317 billion in 2015 and have continued to increase in 2016, (Debt Management Office). Due to fall in oil price, the federal and state governments have been engaging in massive external borrowing from International Capital Markets, without any conscious effort to address the main problem in the economy or learn from the western

world, where excess loanable funds are resulting from savings, known as Idle 'Petro-dollar'. They are recycled in the form of a loan.

Furthermore, external credit management became a significant responsibility of the Central Bank of Nigeria (CBN) in 1980, due to the problem arising from foreign credits. Since then, the following measures have been used by the Government as guidelines to manage external borrowing: the economic region should have favourable Internal Rate of Return (IRR) as high as the cost of loan (i.e. interest, foreign credits for private and public sectors projects with the shortest rate of return), should be sourced from the international money market, while loans for infrastructure could be sourced from concessional financial institutions, State Government, Parastatals and Private sectors borrowing should receive adequate approval from the Central Command, to ensure that the borrowing conforms to the country's objectives, projects to be financed with foreign credit should be supported with viability studies which include credit acquisition, deployment and retirement schedule, State Governments and other agencies with borrowed funds should service their debts through the foreign exchange market and duly inform the Nigeria Federal Ministry of Finance for record purposes, and defaulters will attract deduction (in Naira equivalents) at source before the release of statutory allocations, Private sector industries that are export oriented are expected to service their debt from their export earnings, while others should utilize the Foreign Exchange Market facilities for debt servicing.

Subsequently, the following under-listed strategies were used to deal with external credit problems: (i) Embargo on new credits and commands to State Governments to restrict external borrowing to the barest minimum, aimed at checking the escalation of the total debt stock and minimize additional debt burden. Although, these have not been particularly effective, as the indiscriminate quest for external loans have not been efficiently managed. Though loan rescheduling has conferred short term relief on debt service obligations, the debt overhang has not been abated as the debt stock has continued to increase significantly. (ii) Limit on debt service payments, which requires setting aside a portion of export earnings to allow for internal development. (iii) Debt restructuring involves the reduction in the burden of existing debt through refinancing, rescheduling, issuance of collateralised bonds and the provision of new money.

These measures have not been circumspectly followed through, as more external loans are being sourced by the Federal Government. These measures have only succeeded in taming the inflow of foreign loans to the states. This is demonstrated succinctly in the new credit facilities obtained from the Chinese Government within the last couple of years and the ongoing attempts at borrowing additional 30 billion dollars.

McKinnon's and Shaw's Financial Liberalization Hypothesis

The theoretical premise of this article is on the financial Liberalization hypothesis, which is concerned with the efficient mobilisation of credit via financial deepening, as financial deepening tends to increase the ratio of private domestic savings to income. With real growth of financial institutions, credit seekers will have access to borrowing, and there will be incentives for saving with many players and borrowing will become cheaper. Savings also will tend to rise in the government sector. Also, financial deepening permits the economic process of mobilising and allocating savings to displace inflation and foreign aid. It enables a superior allocation of savings through widening and diversifying the commercial market, where investment opportunities compete for savings flow. The savers are offered a more extensive menu of portfolio choices; the market is broadened in terms of scale, maturity and risk (Shaw, 1973).

Furthermore, financial deepening is an essential pre-requisite for a competitive and innovative disposition of savings flows. Thus, financial deepening and its allied policies bring in equal distribution of capital and reduce monopoly rents, arising from import, licenses to few importers, and bank borrowers. With it, there will be the availability of financial information, local capital markets integration and new avenues for pooling savings and specific investments. The theory, argues that financial deepening enhances credit management, leading to positive real deposit rate that raises savings rate, a positive correlation between the degree of financial deepening and growth rate, increased real rate that raises the level of investment and increased real deposit rate that promote economic growth (Oshikoya, 1992; Ozturk, 2008).

According to McKinnon and Shaw (1973), the financial system of many developing countries are branded by high ownership structure, resulting in oligopolistic practices, which encourages privileged access to credit for large companies, but limited access to smaller and emerging companies, as a result of repressed or shallow financial system branded by slow growth of financial assets and economic structure. Financial deepening breaks this barrier by the integration of the formal and informal credit markets, which results in the efficient transfer of funds between savers and investors globally. In support of McKinnon and Shaw, Jao (1976), argued that financial repression is a consequence of inappropriate policies, which imposed ceilings on nominal interest rates, the existence of fixed exchange rates, which overvalue the domestic currency and inhibits the expansion of the economic base. He extended that, these policies reprimand savings, suppress market signals relating to capital scarcities and encourage lop-sided development of capital intensive industries and that to keep interest rate liberalisation on track, it requires close cooperation between monetary authorities and government agencies responsible for structural reforms in the real sector. In the 1950s, governments and international donors subsidized credit delivery to small farmers in rural areas of developing countries, with

the assumption that poor people found great difficulty in obtaining adequate volumes of credit and were charged high-interest rates by monopolistic money lenders. But policymakers were reminded that loan could also be described as a debt and the oversupply of the funded loan without a realistic assessment of people's ability to repay could, result in the impoverishment of the borrowers (Susan & Ben, 2002).

Hypothesis Development

The idea of financial deepening leading to economic growth was first put forth by Schumpeter as early as 1911 (Schumpeter, 1912). Since then other economists have investigated this relationship and hold the view that financial deepening is an unavoidable circumstance for achieving a high rate of economic growth (Goldsmith, 1969; Mckinnon, 1973; and Shaw, 1973). Previous studies have come up with varying conclusions as most of them were based on interrogating the effect of financial excavating on economic development. For instance, Pattillo, Helene, and Luca (2004) investigated the channels through which external debt affects events (primarily whether debt affects growth through factor buildup or total factor productivity growth). It also tested for the presence of non-linearities in the effect of debt on a different source of growth. The study covered 61 developing countries throughout 1996- 1998 and the results showed that the adverse impact of high debt on growth operates through a strong negative effect on physical capital buildup and on total factor productivity growth.

Furthermore, Catao & Terrones (2005) undertook a study on the trade-off between financial deepening and economic growth. They found out that there is an intertemporal trade-off between financial increases and economic growth, where greater influential openness appears to have short-run adverse but long-run positive effects on output growth, using panel data pooled from developed and developing countries. The data also reveals that financial globalisation has no significant short-run effect, but strongly negative long-run impacts on output growth uncertainty. Whereas, Esen (2008) conduct his study on empirical analysis of the relationship between financial deepening and economic growth in Turkey for the period of 1987-2006, using Granger causality, Co-integration and Vector Error Correction Model economic growth, (VECM) procedures. He came out with the observation that, there is a quarterly time-series data analysis relationship between economic progressions to financial deepening. Similarly, Eatzaz and Malik's work of 2009, on the effect of financial deepening and economic growth using data from 35 developing countries over 33 years (1970-2003), discovered that domestic credit to the private sector is instrumental in increasing output and thereby promoting credit management in the long run.

The effect of financial deepening indicators on macroeconomic performance in Pakistan, using time series econometric analysis from 1972 – 2006 was the focus of the study by Chaudhry (2006). The study made use of bivariate and multivariate models for empirical analysis. The result put a significant positive impact of financial deepening variables on external credit and investment forwards. The finding of the study reveals the long-term and short-term relationship between the indicators of financial deepening and foreign loans in Pakistan. Similarly, Loayza and Ranciere (2004) studied the effects of financial intermediation and financial liberalisation on economic growth and financial crisis. The work employed the pooled mean group estimate or to examine the impact of financial intermediation and financial liberalisation on economic development and financial crisis. Using data for 75 countries over the period 1960-2000, the results of estimating growth regression showed that financial intermediation had harmed economic growth in the short run, but the relationship is positive in the long-run. Using the standard deviation of the growth rate of the ratio of private sector credit to measure financial volatility arising from financial liberalisation, the authors found that financial instability increases the incidence of the banking crisis and this has harmed economic growth. They also concluded that financial liberalisation increases financial instability, and this increases the impact of the banking crisis.

What the preceding literature indicates is that financial deepening does lead to economic growth. However, the effect of external credit or debt stock on financial deepening has not attracted much work. These studies have established the fact that a nation with financial depth would certainly experience growth because of the availability of investment funds, as well as the reversed scenario that economic growth leads to financial deepening. As revealed by the work of Thornton (1996), which focused on the association between economic development and financial excavating, the study investigated the relationship between economic growth and financial deepening. Using Granger causality test for twenty-two developing economies, and the outcome showed in 8 out of the 22 countries that financial deepening and economic growth appeared to be determined contemporaneously, the null hypothesis was rejected in all directions, also that financial deepening causes economic growth was reinforced in five cases at 5% level of significance (the Philippines, the Dominion Republic, El Salvador, Jamaica and Malaysia) and a further 2 cases (Nepal and Thailand) at 10% level of significance. The results further showed a negative unidirectional relationship in the case of Mexico, a unidirectional causality from economic growth to financial deepening in 4 countries (Myanmar, Peru, Uruguay and Paraguay) at 5% level of significance. In Jamaica and Venezuela, there appeared to be feedback effects and as reported in the case of Nigeria between the country's capital market and economic growth (Njiforti, Adama and Kromtit, 2008). Further studies by

(Matthew & Joseph, 2014; Kenourgios & Samitas, 2007; Gine & Townsend, 2004; Aziakpono, 2004; Akanni 1997), arrived at the same conclusion that financial deepening orchestrates economic growth.

Other related studies focused on the interface between either external and or domestic debt on economic growth. For instance, the work by Atique and Malik (2012), focused on the influence of local and foreign debt on the economic advancement of Pakistan separately throughout 1980-2010, using Ordinary Least Square approach (OLS) to co-integration. The result showed a significant inverse relationship in both. That is the inverse relationship between domestic debt and economic growth and external debt and economic growth. Also, an earlier study by Pattilo, Ricci & Poirson (2001) assessed the non-linear impact of external debt growth, using a panel data of ninety-three (93) countries over 1969-98, employing econometric methodologies. Their finding suggested that the average effect of debt becomes negative at about 160-170 per cent of the export or 35-40 per cent of Gross Domestic Product (GDP). In the same disposition, Kasidi and Said (2013) studied the impact of exterior debt on an economy of growth in Tanzania using the time-series of 1990-2010. The study exposed that there is a substantial impact on foreign debt and debt service on GDP growth. Whereas, total alien debt stock has a positive effect of about 0.36939, debt service payment has an adverse impact of about 28.517. Also, Cohen (1993) and Clement et al. (2003) assessed the effect of external debt on economic growth. The studies observed that notwithstanding the impact of high debt stock on investment, a foreign loan can also affect growth through accrued debt service payments, which are likely to "crowd out" investment (private or public) in the economy. The crowding-out weight refers to a situation whereby a nation's revenue obtained from foreign exchange earnings, is used to pay up debt service payments and this limits the assets available for use for the internal economy, as most of it is soaked up by external debt service burden which reduces the level of investment.

Furthermore, Bamidele and Joseph (2013) using data from Nigeria, investigated the effect of the economic crisis, foreign debt management on the economic growth of Nigeria. Using GDP as an endogenous variable, while exogenous elements measuring economic development were; foreign direct investment, exterior debt, external reserve, inflating, and exchange rate proxies. The study used the Annual time series of 1980-2010. OLS, Augmented Dickey-Fuller (ADF) unit root tests and employed the Granger causality test in the analysis, and the result showed a positive relationship between FDI and economic development, while the inverse link existed between external debt and economic growth. This conclusion is similar to that of Ezenwa (2012) who studied the effect of foreign credit on economic evolution in Nigeria for the period of (1981-2010). Using OLS, the result of the analyses showed that rising foreign

credit stock inhibits the pace of economic development and growth of Nigeria by increasing the cost of its servicing beyond the debt sustainability limit, while external credit servicing was found not to impair economic growth and also found that foreign debt stock rises speedily due to accrued compound interest and loans were secured for dubious projects and recommended that Nigeria should increase its export base by investing borrowed funds in productive ventures and seek fixed interest payment, varying amortisation schemes and multi-year rescheduling. Similar conclusions were arrived at by (Ejigayehu, 2013; Ezeabasili, Isu, & Mojekwu, 2011; Mojekwu, 2011; Ogunmuyiwa, 2011; Ajayi, 1991). Meanwhile, the study by Sulaiman & Azeez (2010) on the effect of external debt on the economic growth of Nigeria showed that external debt had contributed positively to the Nigerian economy, which is at variance with the general conclusions.

From the preceding, it is clear that there exists a gap in the literature on the effect of external credit on financial deepening. The focus of previous works have emphasised the existence of causality between external credit and economic growth, as well as between financial deepening and economic growth, leaving out the interface between external credit and financial deepening. This gap, is what the current study addresses using Nigeria as the premises. Contingent upon this, we hypothesize that:

Ho₁: *External credit stock management has no significant effect on financial deepening in Nigeria.*

MATERIALS AND METHODS

In this study, the ex-post factor research design was adopted since it is a time-series study. It covers the period of 1980 to 2015. The period was considered because of the wide time horizon, and it represents a period where most of the debts were accumulated and eventually a debt relief was obtained. Therefore, this period had the trajectory of both the astronomical increase in the debt profile, leading to payment default and a decline also of the same. Therefore, secondary data was collected from the annual reports/statistical releases of the Debt Management Office (DMO), the Central Bank of Nigeria (CBN) Statistical Bulletins, Nigeria Securities Exchange (NSE) and the World Bank. The data collected include; the ratios of the broad money supply to GDP (M2/GDP) as the proxy of financial deepening, External Debts stock for the period.

Ordinary least square (OLS) aided the analysis of data. To ensure the robustness of the work, the Augmented Dickey-Fuller (ADF) unit-root test, cointegration and error correction method were used for the analysis.

The empirical model was formulated using financial deepening as the dependent variable while the explanatory variable is External Debts Stock as follows:

Mathematically; $GDP = f(EDS,)$(1)

Equation (2) below represent the mathematical expression of the dependent and independent dimensions:

$GDP_1 = b_0 + b_1EDS + e_t$ (2)

Where;

b_0 = a constant

b_1 = coefficient of the independent variable

GDP_t = ratios of the broad money supply to GDP (M2/GDP),

EDS =External Debt Size

e_t =the disturbance term or error term

ANALYTICS AND FINDINGS

Descriptive statistics are presented in table 1.

Table 1. Summary of Descriptive Statistics

Statistics	FD	EDS
Mean	15.44118	19749.14
Median	17.00000	26300.90
Maximum	38.00000	35944.66
Minimum	1.200000	1866.800
Std. Dev.	8.155722	11961.81
Skewness	0.323575	-0.287977
Kurtosis	3.696455	1.399358
Jarque-Bera	1.280458	4.099520
Probability	0.527172	0.128766
Surn	525.0000	671470.6
Sum Sq. Dev.	2195.021	4.72E+09
Observations	36	36

Key: **FD**-Financial dept **ECS**-External credit stock

From table 1, we see that the mean for FD (ratios of the broad money supply to GDP (M2/GDP)), and EDS (External Debt Stock), are 15.44118, 19749.14, respectively. From the table, the median for FD, EDS, is 17.00000, and 26300.90, respectively while the maximum and minimum values for FD are 38.00000 & 1.200000. The values for ECS are 35944.66 &

1866.800, respectively, for the period under review. From the table above the standard deviation for FD and EDS were 8.155722 and 11961.81 respectively. Jarque-Bera, as a test statistic of normality of the distribution, has values of 1.280458 for FD, and 4.099520 for EDS, is quite informative.

Results of the analysis of data using unit root test are shown in table 2 below:

Table 2: Result of Unit Root Test (Augmented Dickey-Fuller)

Variable	AT LEVEL				AT 1 ST DIFFERENCE				Order of integration
	ADF Test Statistic	Critical Value at 5%	Lag	Remarks	ADF Test Statistic	Critical Value at 5%	Lag	Remarks	
FD	-2.463458	-3.544284	0	NS	-7.378229	-3.548490	0	S	I(1)
EDS	-2.737823	-3.548490	1	NS	-3.918438	-3.548490	0	S	I(1)

The a priori expectation when using the ADF test is that a variable is stationary when the value of the ADF test statistic is higher than the acute value at 5%. Neither of the variables used met this a priori expectation, as they were non-stationary (NS) and as such, were differenced once to become stationary (S). The result of the unit root test presented in table 2 above indicates that the variables used in the model have unit root problem when considered at their level forms, but turned stationary after their first difference. We ascertained this when we compared the ADF statistics of each variable with their corresponding critical values. For all the variables used, their ADF statistics in their absolute terms were more significant than the similar critical values at 5 per cent levels of significance. ADF statistics of the variables at their first difference, when equated with that of the indispensable values, were found to be higher at 5 per cent.

Table 3: Johansen Cointegrated Test (E-view output)

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.261256	15.20342	18.39771	0.1324
At most 1 *	0.134420	4.908074	3.841466	0.0267

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None	0.261256	10.29535	17.14769	0.3706
At most 1 *	0.134420	4.908074	3.841466	0.0267

The result depicted in table 3. above shows a long-run impact of external debt management on the Nigerian financial system ,using the ratios of broad money supply to gross domestic product (M2/GDP) as proxy for financial deepening, as both the Trace and the Maximal-Eigen values test identified one cointegration each, at 5% level of significance. This shows a long run relationship among the variables. Based on the above tables 3. we reject the null hypothesis of no co-integrating equations. The presence of at least one cointegrating equation necessitates the analysis of the VECM. The VECM consists of two parts: long-run co-integrating coefficients (used to derive the long-run co-integrating relationship), and the short-run coefficients (for the short-run analysis). The result is presented in table 4 and 5 below.

Table 4. Vector Error Correction Estimates (VECM):

Long-Run Relationship	
FD	EDS
1.000000	0.000871
	(9.9E-05)
	[8.83514]

The result above shows a long-run relationship between financial deepening and external debt in the model.

Short-run Relationship

The table below shows the results of the short-run relationship between the variables. The coefficients of the one-period lagged differences in the table can be interpreted as the short-run parameters representing the short-run effect of external debt management indicators on financial deepening. The result is presented below.

Table 5. Short-run Coefficient

Error Correction:	D(FD)	D(EDS)
CointEq1	-0.754424	93.78206
	(0.27366)	(419.393)
	[-2.75681]	[0.22361]

The result shows that there is an optimistic short-run nexus between financial deepening and external debt stock (EDS). This indicates that foreign debt Stock has a positive effect on financial deepening in the short-run.

From the output of both measures, EDS has a bearing on broad money supply as a proxy for FD. Definitely, an increase in the volume of external credit would lead immediately to more money in the system, but in the long run the burden of repayment will eventually take its toll as the loans begin to be repaid with the accompanying interest.

Table 6. Correlation analysis

	FD	EDS
FD	1.000000	-0.635267
ECS\$	-0.635267	1.000000

The result shows that there is negative relationship between financial deepening and external debt stock. It shows that if external debt stock (EDS) increases financial deepening (FD) will decrease. It shows that an increase in external debt Stock has a negative effect on financial deepening.

Table 7. Result of Pairwise Granger-Causality Test (1980-2015) with 2-period Lag length

Null Hypothesis:	Obs	F-Statistic	Prob.
ECS\$ does not Granger Cause FD	34	2.19692	0.1293
FD does not Granger Cause ECS\$		2.08986	0.1419

The Granger causality investigated the predictive content of one variable beyond that inherent in the explanatory variables itself. The results of the Granger causality test indicate that Financial deepening (M2/GDP) has causality with EDS (External DEBT Stock) Which implies that there is causality between financial deepening and External Debt Management.

Table 8: Result of t-Test for Hypothesis

Variables	Student t-cal (Table value)	Student t-stat. for Financial deepening (Regression output)
Ho ₁ ECS	1.697	2.804075

The result show that the student t-statistics regression outputs for (Ho₁ EDS) is greater than the student t-statistics calculated. Going by the stated decision rule for testing the hypothesis for the study, the implication is that External credit stock (EDS) has significant impact on financial deepening in Nigeria.

CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS

This study set out to interrogate the effect of external debt management (proxied by EDS) on financial deepening (anchored by the Ratio of Broad Money Supply), with focus on the Nigerian Scenario. From the data obtained and analysed using the e-views statistical platform, it was observed that external debt stock (credit management) has a significant positive relationship with the ratios of the broad money supply to gross domestic product (M2/GDP) in short run and a negative association with the coefficients of the full money supply to total domestic product (M2/GDP) in the long-run. This means that in the short-run, as external debt increases, the ratios of the broad money supply to gross domestic product (M2/GDP) increases, while the reverse holds in the long-run due to the inappropriate application of external debt and other unforeseen happenings. The result of the finding showing that external debt harms the depth of the Nigerian financial system, in the long run. Excessive debt has always led to payment default with severe implications for the domestic economy.

The implication from the preceding is that external debt stock is only beneficial if the borrowed funds are judiciously utilized to create domestic capacity. Excessive borrowing is not a recommended financial strategy, because of the burden of debt servicing and the timing of repayments. Also, the weight of a considerable debt servicing on a country's exchange rate calls for cautionary borrowing. Therefore, the study recommends that external credits should be sourced only for productive activities. Also, a deliberate policy thrust should be espoused to insulate borrowed funds from the vagaries of political instability, by providing for a direct assignment of the credit to the project in question, with the non-*viament* clause in the loan agreement. The nation must also step up its efforts at enshrining accountability and integrity in the management of public funds via institutionalising proper governance mechanisms that enhance general financial management, as a way of exploiting the gains of borrowing, given its inevitability occasioned by the reality of resource constraints.

The basic limitation of this work is that, it adopted a narrow operational definition of FD to mean, only the volume of broad money supply, excluding the liberalization dimensions. This was informed by the difficulty with obtaining empirical measures of liberalization dimensions in real figure terms, to support the deployment of the OLS tools. Nevertheless, this does not invalidate the output of the study, as it has contributed to the sock of knowledge in exposing another dimension of the external credit construct, as well as narrowing down on an empirically measurable dimension of FD in an emerging African markets.

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