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Foreign Exchange Reserve Management Policy in Nigeria: Issues for Legislative Consideration

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Executive Summary

This policy analysis has robustly scrutinized the Nigeria's foreign reserve management with a view to determining its adequacy and better management strategies. Our perspective analysis showed that the rising levels of Foreign Exchange Reserve (FER) have succeeded in infusing basic confidence, both to the markets and policy making. However, data analysis revealed that neither capital inflow to Nigeria nor the size of its FER is excessively large when compared to some other fellow oil producing countries (for example, Saudi Arabia and Algeria). Our analysis showed that Nigeria has the capacity to finance at least Six months import bills as against three months benchmark. The leading sources of accretion to Nigeria's FER is exports of crude oil and not Foreign Direct Investment (which is more stable), as in the cases of China and Singapore. Therefore, Nigeria, which like many other countries, is accumulating FER for precautionary and safety motives, especially given the experience of 2016 economic recession, should avoid utilizing reserves to finance unplanned budgetary items, infrastructure inclusive. Economists frown at such utilization on the ground that they oftentimes yield low or negative returns due to political interference and economic rigidity. Our position is that the use of FER to finance items that yield low or negative returns may lead to more economic problems, including distortions in monetary policy management. Nevertheless, to enhance returns on accrued FER, we recommend the establishment of a separate investment institution like Government of Singapore Investment Corporation (GIC), China Investment Corporation (CIC) and the Kuwait Investment Authority (KIA) among others.

I. Overview

1. Nigeria's external reserves has been characterized by cyclical movements over the last two decades, but has consistently declined since 2008. From an all-time high value of $62.1bn in 2008 to about $23bn by October

2016 (see fig.1). This sharp decline in Nigeria's reserves has been attributed to, primarily, mismanagement of these reserves and the glaring correlations between Nigeria's reserve accumulation and crude oil prices[1]. Clearly, Nigeria's dependence on oil for over 90% of its foreign exchange earnings makes her reserves vulnerable to the fluctuations in crude oil prices (See fig.1).

2. For example, as a result of the recent oil price shocks of August 2014, Nigeria's gross reserves level dropped to $39.6bn. Increased CBN market interventions, lower oil proceeds and capital flight all contributed to the sharp decline in external reserves to a decade low of $23.9bn in October 2016. After remaining between $30-30.9bn in the first half of 2017, the external reserves crossed the $31bn threshold on August 29th, to settle at $32.7bn on October 3rd. This growth in reserves was primarily due to the rise in oil revenues, sustained by fiscal prudence. Additionally, the introduction of the Investor & Exporter Foreign Exchange (IEFX) window helped boost investor confidence and foreign portfolio inflows[2].
3. As in the case of emerging Asian economies, who were associated with high reserve accumulation and savings, leading to the Asian bubble burst of early 1990s, the question of how to manage accumulated reserves have become pertinent. This is even more germane for oil exporting nations and other nonrenewable resource dependent economies. It is on this note, that the current increases in Nigeria's reserves calls for a critical evaluation on what really is the optimal level of her reserves. Should Nigeria continue to accumulate reserves? And how should these reserves be utilized? When measuring the optimum level of reserves for a country, the literature and general convention accepts that there are four important ratios to consider; import cover, reserves to broad money, and reserves to short term debts.
4. The issue on adequate levels of reserves already highlighted is important because, contrary to intuition, reserves above adequate levels are accompanied with economic and social costs which have to be weighed in comparison with the benefits of holding such levels or reserves. However, reserve levels above adequate levels are generally detrimental to the economy. Reserves above the adequate level has the potential of destabilizing the economy's domestic monetary and macroeconomic stability by increasing the monetary base, appreciating the currency and raising prices[3].
5. Issues on reserve adequacy do not bother on nominal relative comparism of reserves among countries, but has to do with the determining if the current level of reserve are adequate given country idiosyncrasies. For

[1] https://www.cbn.gov.ng/intops/ReserveMgmt.asp

[2] https://www.proshareng.com/news/Nigeria%20Economy/Evaluating-The-Adequacy-of-Nigeria%E2%80%99s-External-Reserves-Level/36781

[3]

example, from the trend of reserves for selected countries (See Fig 2), we cannot say that Saudi Arabia's reserves are more adequate than Nigeria's reserves just because Saudi Arabia's reserves are more. Issues on reserve adequacy bothers on benchmarking reserves relative to specific economic variables.

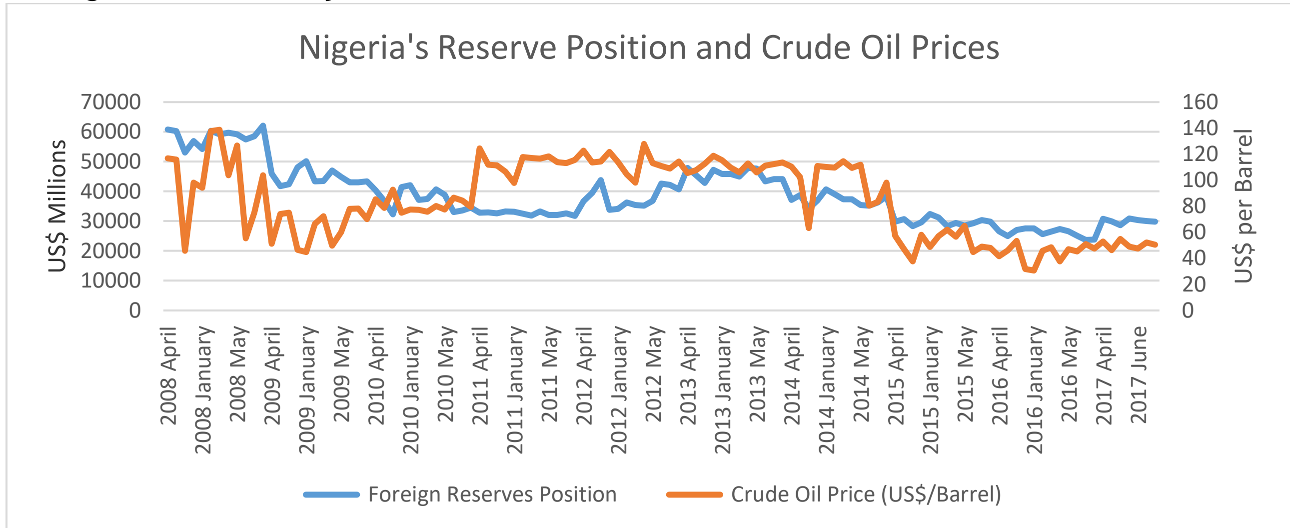


Figure1: Nigeria's Reserve Position and Crude Oil Prices.
Source: CBN Statistics Database, 2017.

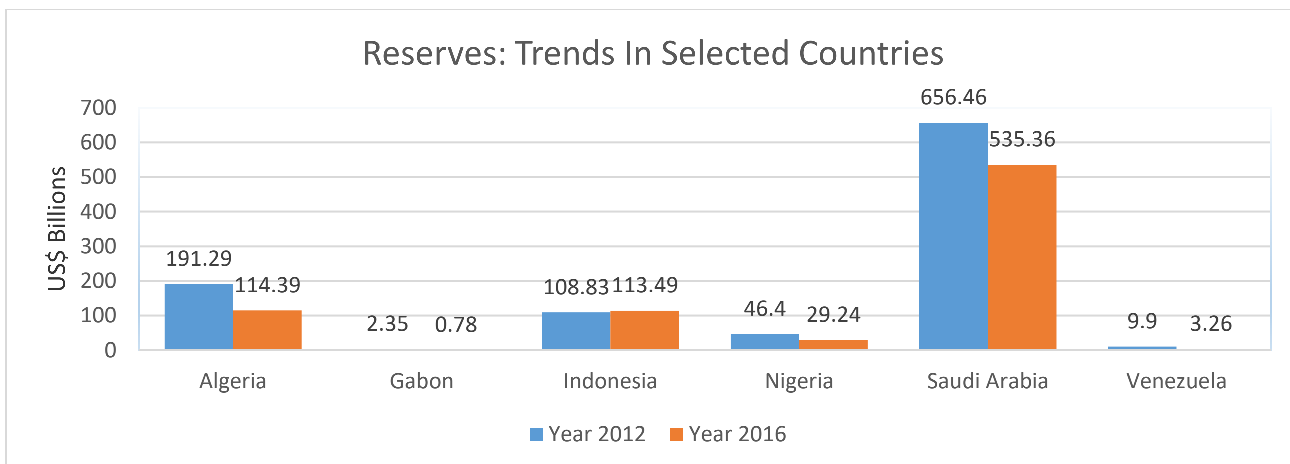


Figure 2: Reserve Trends in selected countries.
Source: World Band Development Indicators (WDI), 2017.

II. The Need for Foreign Reserves Accumulation.

6. Foreign reserves are assets held in different reserve currencies, mostly the US dollar by the Central Bank, and used to back the country's liabilities, e.g. the local currency issued, and the various bank reserves deposited with the central bank, by the government or financial institutions (CBN 2010). Also according to IMF(2003), foreign reserve is defined as "consisting of

official public sector foreign assets that are readily available to, and controlled by the monetary authorities, for direct financing of payment imbalances, and directly regulating the magnitude of such imbalances, through intervention in the exchange markets to affect the currency exchange rate and/or for other purposes".

7. Nigeria foreign reserve has been on the increase in recent time due majorly to the persistent increase in the price of crude oil in the international market. This phenomenal growth is a reflection of the importance of holding an adequate level of international reserves. The reasons for holding reserves include the following:
    i. To safeguard the value of the domestic currency especially in developing countries. Nevertheless, for most developed countries this is not, at the present time, the prime use of reserves.
    ii. The need to finance international trade gives rise to demand for liquid reserves that can readily be used to settle trade obligations, for example to pay for imports. While this is typically done through commercial banks, the central bank in developing countries actually provides the foreign exchange through auction sessions at which authorized dealers buy foreign exchange on behalf of importers. In industrialized countries where the manufacturing sector produces for export markets, the transaction need for holding reserves is less important.
    iii. External reserve portfolio is also used as a store of value to accumulate excess wealth for future consumption purposes.
    iv. Foreign exchange reserves is used to manage the exchange rate, in addition to enabling an orderly absorption of international money and capital flows. The monetary authorities attempt to control the money supply as well as achieve a balance between demand for and supply of foreign exchange through intervention (i.e. offering to buy or sell foreign currency to banks) in the foreign exchange markets.
    v. To Boost a Country's Credit Worthiness External reserves provide a cushion at a time when access to the international capital market is difficult or not possible as it boost a country's credit worthiness and reputation. Furthermore, a country's foreign exchange reserve is an important variable in the country risk models used by credit rating agencies and international financial institutions.
    vi. To provide a fall back for the "Rainy Day". Economies of nations sometimes experience drop in revenue and would need to fall back on their savings as a life line. A good external reserves position

would readily provide this cushion and facilitate the recovery of such economies.

vii. To provide a buffer against external shocks which may suddenly throw a country's external position into disequilibrium. These may include terms of trade shocks or unforeseen emergencies and natural disasters. An adequate external reserve position helps a country to adjust quickly to such shocks without recourse to costly external financing.

8. Nigeria's external reserves is derived mainly from the proceeds of crude oil production and sales which form over 85 percent of her foreign exchange reserves. Nigeria produces on the average, approximately 2 million barrels per day of crude oil in joint venture with some international oil companies, notably Shell, Mobil, and Chevron. Out of this, Nigeria sells a predetermined proportion directly, while the joint venture partners sell the rest. The joint venture partners pay Petroleum Profit Tax to the Federal Government through the Federal Board of Inland Revenue (CBN 2007).

9. The five categories of revenue from crude oil production and sales which form the major sources of rising reserves in Nigeria are:

   i. Sale of Nigeria's Crude Oil Equity: The Nigerian National Petroleum Corporation (NNPC) has the responsibility for the sale of Nigeria's crude oil. Receipts from such sales are warehoused into the country's foreign accounts and constitute part of external reserves.

   ii. Royalties: These are funds paid by oil companies to the nation arising from the commercial exploitation of Nigeria's oil resources.

   iii. Petroleum Profit Tax (PPT): This is the tax paid by oil companies on profit arising from their operations. A tax rate of 85% was specified by the Petroleum Profits Tax Act.

   iv. Penalty for Gas Flaring, Rentals, and Signature Bonuses: Foreign exchange is realized from penalties for gas flaring, rental payments from Oil Prospecting License (OPL), conversion to oil mining lease, oil exploration license, and concession block allocation.

   v. Receipt from Gas Sales: Other sources of foreign exchange inflows include: Withholding Tax, Value Added Tax, Company Income Tax, Education Tax, and Rent/interests received from investments abroad personal home remittances.

   vi. Non-oil sources: Export products from non-oil sources such as agricultural produce, processed and semi-processed products, etc.

10. Other sources of external reserves in Nigeria include: Income from investing foreign reserves, grants and other miscellaneous receipts, repatriation of unutilized WDAS, interest on WDAS accounts held by Deposit Money Banks, WDAS Purchases, Inward Money Transfer,

Value Added Tax (VAT), Education Tax, Commission, etc.

III. International Experiences on the Management of Foreign Exchange Reserves.

11. Different Countries of the world have employed different approaches to manage their foreign exchange reserves. Some of the approaches are reviewed and presented below:

Countries	Foreign Reserve Management
Singapore	The reserves are managed by three agencies in Singapore: the Government of Singapore Investment Corporation (GIC), Temasek Holdings (Temasek) and the Monetary Authority of Singapore (MAS). GIC is one of the leading investment management organizations in the world, financing well over US$100 billion in multiple asset classes in more than 40 countries. It was incorporated in 1981 under the Singapore Companies Act. Their responsibility is to preserve and enhance Singapore's foreign reserves.
India	The Foreign Exchange Reserves in India is managed by the Reserve Bank of India in conjunction with the Government of India. The reserves are usually invested in foreign government securities with a maturity not exceeding 10 years. The deposits are placed with other central banks, international commercial banks and the Bank for international Settlement following a multicurrency and multi-market approach. The investment is guided by a conservative framework and regulated by the RBI Act, 1934. The conservative approach results to low direct financial return on investment because of the low interest rates that prevails in the international markets.
South Korea	Korea Investment Corporation (KIC) was launched in 2005 with a capital of US $20 billion with a view to boost sovereign wealth and fund to the development of the domestic financial industry. KIC is assigned to manage assets entrusted by the Government and the Central Bank of Korea. It functions as the main vehicle for overseas investment of excess public funds such as foreign exchange reserves, pension funds, and proceeds from privatization.
China	China Investment Corporation (CIC) is an investment institution recognized as an exclusively state- owned company under the Company Law of the People's Republic of China. It mission is to make long-term investments that maximize risk adjusted financial returns for the benefit of the Government. Their foreign investment portfolio is largely composed of equity, fixed income and alternative assets, in both developed and emerging markets
Kuwait	The Kuwait Investment Authority (KIA) is the oldest sovereign wealth fund in the world. It's accountable for the management and admin of Kuwait's General Reserve Fund (GRF) and its Future Generations Fund (FGF), as well

	as all other funds assigned to it by the Minister of Finance for and on behalf of the State of Kuwait. The GRF is the repository of all of the State of Kuwait's oil revenues and income earned from GRF investments which are comprised of the general reserves of the State of Kuwait
United Arab Emirates	The Abu Dhabi Investment Authority (ADIA) is a worldwide diversified investment organization that is exclusively owned by their Government and it was established in 1976. ADIA manages a diversified world-wide investment portfolio across more than two-dozen asset classes and sub-categories, including quoted equities, fixed income, real estate, private equity, alternatives and infrastructure. The massive quantity of wealth managed by the ADIA is sourced mostly from Abu Dhabi's large oil reserves
Angola	Since 2012, Africa's second-largest crude producer, Angola has launched a $5 billion sovereign wealth fund, Angolan Sovereign Fund (FSA), have invested in domestic and overseas assets while channeling vast oil wealth into infrastructure, hotels, financial securities and other high growth projects.

12. There are several lessons that Nigeria can learn from other countries that have successfully and sustainably managed their foreign exchange reserves. The following lessons are relevant:
    i. Incorporation under the companies Act: The Sovereign Wealth Authority that manages Nigeria foreign reserves particularly from oil revenue is largely a state owned enterprise. Historically, State owned Enterprises in Nigeria have not run efficiently over years due to institutional challenges and weakness. Borrowing from the experience of Singapore. Nigeria may incorporated private companies to operate under the companies and Allied matters Act. These companies would then manage Nigeria foreign reserves in an efficient and effective ways using business models that can generate better financial returns for the government.
    ii. Need for Legislation: Borrowing from the experience of India where foreign reserves management is guided by Reserve Bank Act 1934. It is important that specific laws particularly on foreign exchange management should be enacted. The current Establishment Act that created the Sovereign Wealth Authority is not sufficient. Also the Central Bank of Nigeria Act does not clearly state how the foreign exchange reserves should be managed.

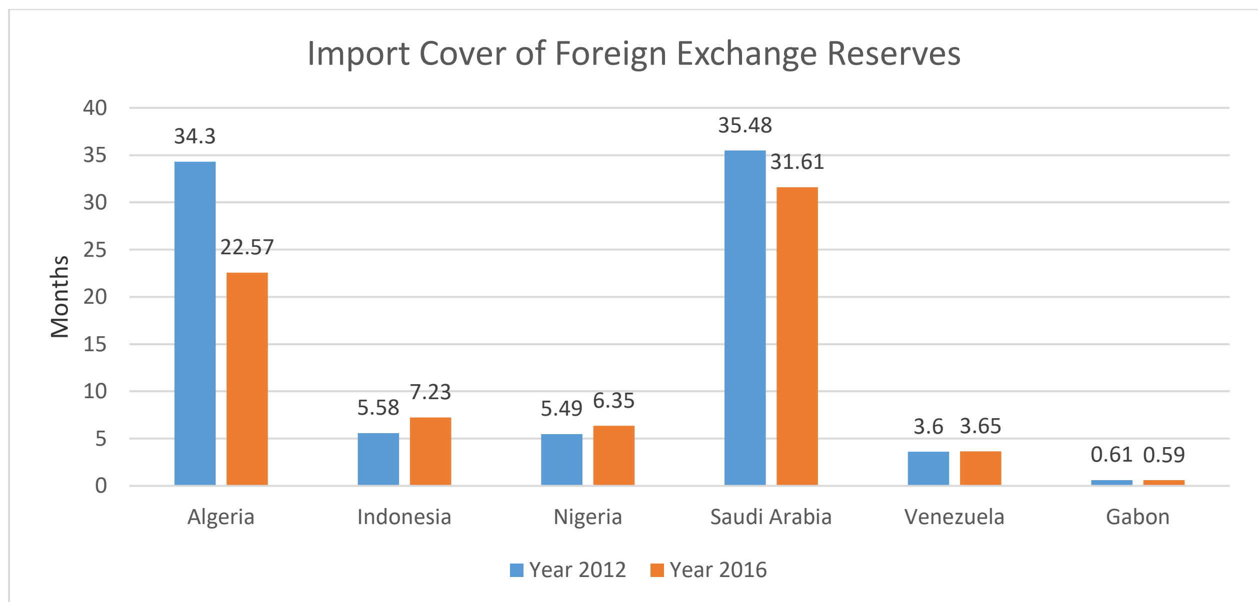
IV. Are Nigeria's Reserves Adequate?

13. As already stated, reserves are mainly held for maintaining liquidity and as a means for absorbing shocks in situations of uncertainty in the flow of foreign exchange. Additionally, reserves provide some level of

confidence on the country's ability to meet her external obligations and support the value of her domestic currency. However, the fact that Nigeria's reserves are derived mainly from crude oil revenues (contributing about 90% of total reserves), makes our reserves susceptible to movements in crude oil prices. Thus, unfavorable oil price movements impose a very high cost on Nigeria, because of reductions in reserves and associated liquidity problems.

14. What then is the adequate level for Nigeria's reserves? First, we provide indicators of reserve adequacy which can serve as useful predictors of the incidence and severity of possible reserve related crisis. Secondly, we compare benchmark levels of reserves against our indicators of reserve adequacy. This will serve as a policy guide and give definition to the indicators used.

15. **Import Based Measure of Reserve Adequacy**: this indicator scales the level of reserves by the size and openness of the economy. It provides an indication of the number of months a country can support its current level of imports if all its inflows and outflows of income stop. Traditionally, three (3) months of reserve cover of imports is seen as the minimum level of comfort[4]. Clearly, Nigeria's current reserve levels can cover about six (6) months of her imports as at 2016 (see Fig.3). Though this is above the benchmark, it is marginal compared to those of Algeria and Saudi Arabia. There is a school of thought that has argued for an import cover benchmark of 12 months, as this will ensure non – dependence on any foreign source of income for such countries.



[4] This is according to the IMF

Figure 3: Import Cover of Foreign Exchange Reserves for Selected Countries
Source: World Bank Development Indicators (WDI), 2017.

16. **Money Based Measure of Reserve Adequacy**: money based indicators of reserve adequacy has been used for many decades. Its historic use is based on the need to build confidence in money and as a potential for resident – based capital flight from the currency. As highlighted by IMF[5], an unstable demand for money or the presence of a weak banking system indicates a greater probability of such capital flight. A benchmark of 20% indicates that the central bank is holding more reserves than what the economy requires. On this indicator, Nigeria stands at about 47% and 36% for 2012 and 2016 respectively, which are significantly higher than the bench mark of 20% (see fig 4).

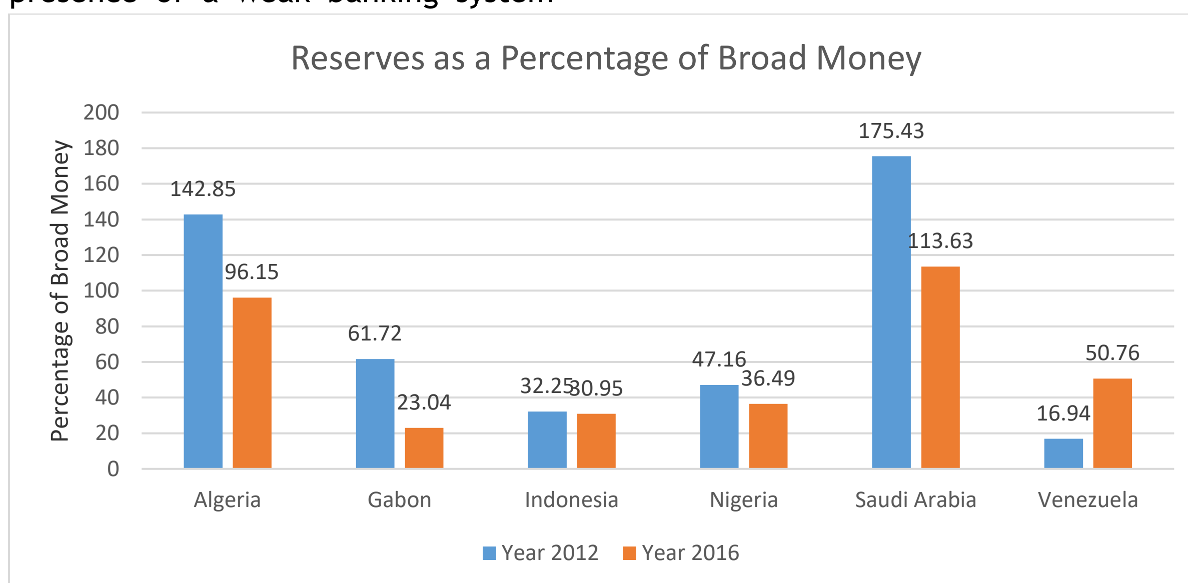


Figure 4: Reserves as a percentage of Broad Money for Selected Countries
Source: World Bank Development Indicators (WDI), 2017.

17. **Debt Based Measure of Reserve Adequacy**: this measure of reserve adequacy is useful in determining the risk associated with unfavourable developments in the international markets. It gives an idea of how quickly a country would be forced to adjust if it were cut off from external borrowing. This measure has been promoted as the most important measure of reserve adequacy in countries with significant but uncertain access to capital markets[6]. A smaller reserve to short term debt

[5] IMF (2000). Debt – and Reserve – Related Indicators of External Vulnerability. Policy Development and Review Department.

[6] Rodrik and Velasco, Short-Term Capital Flows, paper prepared for the 1999 ABCDE Conference at the World Bank, 1999; Anticipating Balance of Payments

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ratio is associated with a greater probability of reserve crisis. The data on Nigeria's short term debts clearly show that Nigeria's component of short term debts is not significant. In fact Nigeria had no short term debts in 2009 and 2010. As at 2016, her short term debts stood at a merger US$221,000. This give a perfect explanation for the high reserve to short term debt ratio for Nigeria.

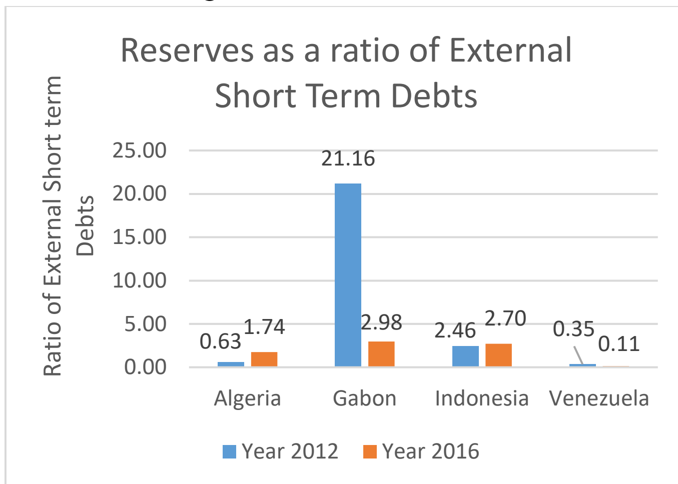

Figure 5: Reserves as a Ratio External Short Term Debts for Selected Countries
Source: World Bank Development Indicators (WDI), 2017.

V. Issues on Foreign Exchange Reserves Management in Nigeria?

18. Economists are of the view that improvements in infrastructure and its related services are critical to the operation and efficiency of a modern economy. However, it is argued that a prudent policy to finance infrastructure is necessary. As contained in the 2017 third quarter Budget Implementation Report (BIR), revenue challenges remain and budget implementation in the last quarter of the year needed to be given greater consideration especially in areas of funding the capital projects and programmes so as to sustain and improve the performances recorded the review period. Legacy factors including infrastructure gap, particularly power supply; general poor business environment; as well as insecurity in parts of the country needs to be addressed. Besides, lack of transparency and public disclosure, inefficiency of service delivery and financial insolvency, as well as kickbacks have been identified as factors hindering the translation of infrastructure into economic revival. These factors need to be considered and addressed before utilizing foreign exchange reserves (FER) to finance infrastructure.

CrisesThe Role of Early Warning Systems, SM/98/271 (12/17/98); Furman and Stiglitz, Economic Crises: Evidence and Insights from East Asia, 1998; and Turner, Liquidity: Forex Reserves and the Alternatives, note prepared for the Sovereign Debt Management Forum, Washington, D.C., November 13, 1999

19. Nigeria's dependence on oil for over 90% of its foreign exchange earnings makes its capital account vulnerable to the fluctuations in crude oil prices. This, in addition to its high import bills contributed to the fluctuations in the level of reserves over the years and consequently the way the reserves are being managed. Oil boom results in the build-up of reserves which are normally diversified into an array of financial instruments including foreign government bonds and treasury bills, foreign government guaranteed securities, special drawing rights (SDRs), fixed term deposits, call accounts and current accounts. This provides significant investment income as well as liquidity. However, during glut in the global oil market which result into collapse in the crude oil prices and consequently a drawdown in the reserves, the reserves are held mainly in current accounts and treasury bills. The current account surpluses and capital inflows in Nigeria mainly due to high exports of crude oil has never been sustainable. Thus, underscoring the need to understand the dynamics in the international oil price shocks in the management of FER.
20. The primary objective for accumulating FER is the precautionary motive. Economies of nations sometimes experience drop in revenue and would need to fall back on their savings as a life line. A good external reserves position would readily provide this shield and facilitate the recovery of such economies. More so, reserves should provide a buffer against external shocks (events that suddenly throw a country's external position into disequilibrium). These may include, terms of trade shocks (often times arising from oil price volatility) or unforeseen emergencies and natural disasters. An adequate external reserve position helps a country to adjust quickly to such shocks without recourse to costly external financing. Thus, maintaining an optimal FER should be of concern to Nigeria.
21. Further, some important concerns are about to the political economy of Nigeria's federal structure. The state governments may seek for extra-budgetary resources to attend to urgent public work projects or even for economic bail out. In that eventuality, judicious management of the overall government finances, both federal and State, could then become difficult. Little wonder some Nigerians registered their disaffection with the current Federal government over the planned withdrawal of $1b Dollars from the Excess Crude Account to fight the Boko Haram insurgents.
22. Finally, unplanned use of FER to finance budget items, could hinder the operations of the monetary policy and led to higher public debt. The literature has it that, financial engineering that ignores fiscal fundamentals cannot lead to healthy economic growth. For instance, the use of FER to develop infrastructure would expand the money supply (foreign currency assets would be sold for the Nigerian Naira) usually

necessitating sterilization by the CBN to stabilize the price level. Sterilization is costly, as the Naira bonds issued to mop up excess liquidity have to be serviced at the prevailing market interest rates. The supply of the "mop-up" bonds increases domestic debt. The sequential cycle of using FER, sterilization, and issuance of bonds complicates domestic monetary management.

VI. Conclusion/ Issues to Note for Legislative Action

This policy analysis has robustly scrutinized the Nigeria's foreign reserve management with a view to determining its adequacy and better means of management. Our perspective analysis showed that the rising levels of FER have succeeded in infusing basic confidence, both to the markets and policy. However, data analysis revealed that neither capital inflow to Nigeria nor the size of its FER is inexplicably large when compared to some other fellow oil producing countries (for example, Saudi Arabia and Algeria). The leading sources of accretion to Nigeria's FER is exports of crude oil and not foreign direct investment (which is more stable), as in the cases of China and Singapore. Therefore, Nigeria, which like many other countries, is accumulating FER for precautionary and safety motives, especially given the embarrassing experience of 2016 economic recession, should avoid utilizing reserves to finance unplanned budgetary items, infrastructure inclusive. Economists frown at such utilization on the ground that they oftentimes yield low or negative returns due to political and economic difficulties, among which are; upgrading technology, adjusting the tariff structure and introducing labor reforms. Our position is that the use of FER to finance items that yield low or negative returns may lead to more economic difficulties, including problems in monetary management. Nevertheless, if Nigeria continues to accrue reserves and intends to enhance the returns on FER in the future, we recommend that the National Assembly push for the establishment of a separate investment institution like Government of Singapore Investment Corporation (GIC), China Investment Corporation (CIC) and the Kuwait Investment Authority (KIA), among others.

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