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A Rethink of the Impact of Covid-19 on the External Sector of the Nigerian Economy

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Abstract
The external sector is generally regarded as the pivot of the Nigeria macroeconomic condition given the magnitude and the speed at which shocks to the sector transmit to other macroeconomic sectors of the economy. The study therefore examines the impact of the health crisis (COVID 19) on the external sector of Nigeria economy with the overarching objective of identifying and quantitatively estimating the effect on the various components of the sector. Due to paucity of data and the heterogeneous nature of the components of external sector, a combination of approaches was employed in the analysis, including descriptive, trend and econometric technique based on Structural Vector Autoregressive (SVAR) model, with data spanning 1981-2020q1. The descriptive analysis reveals that the major source of shock to the current account during the period emanated from drastic slowdown in export demand, culminating in a plunge of crude oil price by about 80 per cent with the attendant deterioration in current account balances. Other components of current account like net transfers to government and net remittances equally recorded significant decline with the projection showing a decline of 12.9 and 8.8 percent, respectively, in 2020.
The results of SVAR model simulation under different scenarios show that adjustment of selected macroeconomic variables on account of the pandemic would have varying effects on different components of current account. For example, a reduction of interest rate by 0.55 percent would increase the level of import by 0.07 percent while a depreciation of the exchange rate by 2 percent would increase import by 0.26 percent. On the contrary, the reduction of interest rate by 0.55 percent would increase the level of exports by 0.19 percent while depreciation of exchange rate by 2.13 percent would increase exports by 0.19 percent. Although exchange rate depreciation tends to increase level of export, the net effect shows that it worsens trade balance given that the associated increase in imports exceeds the increase in export. This invariably suggests that an optimal mix of policy would be required to achieve a stable macroeconomic environment. Among others, policy measures that would drive lending rates towards a single-digit may be a preferable option in addition to the need to embrace import substitution strategy to sustainably drive down the import bill.

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1. Introduction

When the Coronavirus Disease of 2019 (COVID-19) struck, the external sector seems to be the epicentre of macroeconomic condition in Nigeria on the backdrop of the fact that movements in external position affect key macro-variables like exchange rate, interest rate and GDP including disposable income. Indeed, both empirical and anecdotal evidences have shown that major economic crises in Nigeria have always been preceded by deterioration in the external sector. This phenomenon is attributed to the dominant role of current account in the external sector, largely driven by the dependence of the economy on the export of crude oil.

Unlike most economies where macroeconomic stability is still feasible under a regime of current account imbalances, given that such imbalances could be financed by capital and financial accounts, the Nigeria's case during the period was to the contrary. Imbalances in the current account would rather trigger further weakening in the capital and financial accounts due to waning investors' confidence thereby providing little scope for the external sector to support the economy.

Besides, the relationship between current account and the fiscal sector through savings-investment gap equally transmits the imbalances in the external sector to the macroeconomy. A widening current account deficit normally translates to reduction in the domestic financial resources of the fiscal authority, necessitating a decline in government expenditure. This, invariably, culminated in slowdown of economic activities with the resultant growth dynamics under the new normal becoming sub-optimal. It was against this background that the impact of the current COVID 19 pandemic, being a global scourge, on the external sector deserves a comprehensive diagnosis and holistic response so as to proffer measures to guide the Nigeria economy in future.

The first case of the pandemic was recorded in Nigeria in February 2020, however, the impact on the external sector commenced much earlier as it could be traced to the last quarter of 2019 due to the slowdown in demand of the country's exports. Specifically, China, where the pandemic started, is a major trading partner with Nigeria and consequently, the disease induced slowdown in economic activities in China and other major industrialized countries in 2019Q4, resulting in a free fall in the price of crude oil, reaching an all-time low of about US$15/barrel by 2020Q1. The development, obviously, reduced inflows on exports proceeds while the impact on import demand is yet to be fully ascertained. This notwithstanding, given the price inelastic nature of import demand for Nigeria, it was very likely that the net effect on the current account would be negative. The vulnerability of the external sector is amplified by the subsisting weakness of key macro-financial variables notably the rising external debts and the accompanying debt services. The current external debt-GDP ratio of about 5 percent could be adjudged to fall within the sustainability threshold but the stability of the ratio would be much likely threatened by the pandemic-induced adverse shock to the price of crude oil. In fact, one of the major limitations of debt-stabilizing primary balance is the underlying assumptions that key variables like interest rate and GDP growth rate are determined independently while in reality these variables are jointly determined. Thus, looking forward, as current account imbalances widened, favourable financing conditions from the external environment may likely fade with the implication that the debt/GDP rising trajectory may become steeper, intensifying the vulnerability of the external sector.

On a related note, there was a thesis that suggests some degree of positive correlation between a weakening current account position and capital flight. It postulated that when current account deficit exceeded a certain threshold, capital flights tend to escalate particularly in an environment of uncertainty and global risk aversion. Evolving data from the capital and financial account seems to corroborate this thesis. Similarly, it was expected that the net international investment position must have recorded significant decline in light of the fact that the value of external asset has commenced declining. Arising from the increasing imbalances in capital and financial account as well as current account, the stock of external reserves has recorded negative accretion with far reaching implication on the conduct of monetary policy.

In light of the foregoing and the fact that COVID 19 was a novel pandemic with the effects still unfolding during the period, there was a compelling need to proactively predict the likely impact on the various subsectors of the external sectors in order to develop a robust response framework for the country in future. With this in view, this paper aims at examining the impact of the pandemic on the components of the external sector such as the current account, capital and financial account, and the net international investment position as well as exchange rate stability. The chapter employs simple descriptive analysis to measure the impact while some forecasting techniques are employed to estimate short term forecast of the trend in key subsectors. Finally, policy recommendations are offered on the least cost route to mitigate the adverse impact on the external sector as well as on the entire macroeconomy should there be a reoccurrence of any crisis in future.

2. Literature Review

The impact of shocks on the external sector had received substantial attention from both theoretical and empirical points of view. Some of these works were presented in this section.

2.1. Theoretical Framework

Analysis of the external sector was measured by the overall balance of payments. within macroeconomic models, different techniques have been used in modelling the external sector coming from theoretical support, definition of variables, and accounting systems (Matlanyane, 2005). In principle, the estimation of the external sector should show service flows, trade flows, transfers and direct and portfolio capital flows (Pauly, 2000). Pandit (2000) states that the discussion of the external sector should centre on the analysis of the disequilibrium in the sector and how it impacts the economy, and this could be achieved by integrating the demand and supply analysis in the trade flows.

Matlanyane (2005) showed that international trade in goods and services in the balance of payments (BOP) framework as the main channel that connects the domestic economy with the global economy. The advent of globalization seems to be altering the link between trade and economic development. In view of this, this section reviews the relevant theories of external sector such as the balance of payment (BoP) theory, Mundell-Fleming theory, open economy theory, and foreign balance framework.

Balance of Payments (BoP) Theory

The Balance of payment theory states that BoP position determines the value of a country's currency or exchange rate in a floating exchange rate regime. If the balance of payments is favourable, exchange rate appreciates and when it is unfavourable, exchange rate depreciates. Moreover, the adjustment in exchange rate occurs through the forces of demand and supply of foreign exchange. Unfavourable balance of payments occurs when the demand for foreign exchange exceeds its supply, thereby putting pressure on the foreign exchange market ultimately depreciating the value of domestic currency relative to a foreign currency. In an adverse BoP situation, if exchange rate is below the

equilibrium exchange rate, export of goods and service increases, and equilibrium will be restored. On the other hand, if exchange rate is above equilibrium rate in a favourable BoP situation, exports decline to restore equilibrium in the balance of payments. The theory outlines some key factors that determine the shape of the demand and supply of foreign exchange to include the domestic elasticity of demand for imports, and the elasticity of supply for imports. It, however, added that factors that influence demand and supply of foreign exchange are independent of the exchange rate (Jhingan, 2003).

Mundell Fleming Theory

The Mundell-Fleming model (MFM) was initiated by Mundell (1962) and Fleming (1973) in the early 1960s. The model shows the relationship between the external balance and monetary policy under the pegged exchange rate and capital mobility. The model assumes that capital flows respond to domestic interest rate; monetary policy is related to interest rate. Import is positively related to income; and exports are determined exogenously. Under this theory, an expansionary monetary policy is considered to decrease interest rate and then increases capital outflow resulting in a deficit in the balance of payments. The deficit in the BoP leads to exchange rate depreciation under pegged exchange rate regime, depreciation induces higher demand for domestic goods by the foreign country and thereby increasing domestic output and income. The reverse holds when monetary policy is contractionary in a floating regime with perfect capital mobility (Jhingan, 2003).

Open Economy

An open economy is a type of economy where not only domestic actors but also entities in other countries engage in trade of goods and services. The external sector modelling starts with a simple open economy model, where total spending in the domestic economy is divided into domestic and foreign components.

$$Y = (C - C^*) + (I - I^*) + (G - G^*) + EXP$$

where Y is GDP, C and C* are domestic and foreign consumption of goods and services, I – I* domestic and foreign investment in goods and services, G and G* are government expenditure of domestic and foreign goods and services, EXP of domestic goods and services.

2.2. Empirical Literature

Previous studies have focused on effect of oil price shocks on macroeconomic performances of either oil exporting countries or oil importing countries, with little or no attention to other external shocks sources.

Vamvakidis and Arora (2010) examined the growth spillover of China's economy in recent time employing vector autoregressions approach and they concluded that spillover effects of China's growth have increased in recent decades and long-term spillover effects are also significant and have extended in recent decades beyond Asia and this has serious implication for a developing country like Nigeria that have serious trade relations with china. Array of similar studies by Samake and Yang (2001), Ding and Masha (2012) and Poirson and Weber (2011) have similar results on growth spillover.

Plethora of studies exist on the macroeconomic effect of oil price shocks in oil-producing countries like Nigeria. Abel and Bernanke (2001), observed that increases in oil prices cause the general price level to rise. Thus, they considered the price as transmission mechanism through which oil prices influence the macroeconomic situations in a typical oil consuming country. Other studies that focus on the production function corroborate this assertion. Lukman *et al* (2016) showed that the Nigerian economy is vulnerable to external shocks and such shocks are not limited to oil price shocks. Other form of shocks include growth spillover and financial shocks from developed.

Akpan (2009) argued that there exists a huge impact of oil price fluctuation on industrial output growth in Nigeria. Olomola and Adejumo (2006) concluded that oil price shocks (positive) do not have a direct effect on output and inflation except via real exchange rate and money supply.

Acemoglu *et al* (2016) examined the propagation of supply and demand shocks to the US economy through sectoral interlinkages in the upstream and downstream markets. They found that increased Chinese import penetration to the US economy had negative impacts on value added and employment of the US industry and the impact was larger for industries with higher upstream exposure to Chinese imports. It is notable that unlike Acemoglu *et al*. (2016) who considered both direct (first-order) and indirect (or higher-order) vertical linkages – Giovanni and Levchenko (2010) and di Giovanni *et al* (2018) considered only direct upstream and downstream linkages across industries. Although indirect network linkages can play a role in the transmission of economic shocks, their papers focused on the transmission of shocks through direct vertical linkages, which are likely to comprise a dominant channel in most cases.

Guliyev (2018) used SVAR approach with block erogeneity restriction to identify the effects of external shocks on Azerbaijan economy, using oil prices and macroeconomic indicators of three major trade partners (EU, Russia, and Turkey) of Azerbaijan as the external shocks variables from 2000Q1 to 2017Q4. The paper found that oil price shock is the most important foreign shock for their economy as well as the main determinant of the non-oil sector of the economy. It also discovered that GDP growth of the trade partners is the main determinant of inflation in Azerbaijan.

Jean, Cecile and Cyriac (2012) using a quarterly data from 1990Q1 to 2012Q2 evaluated the impact of external shocks on eight East Asian countries. Using a structural VAR model with block erogeneity (SVARX Model) the paper documented a rising impact of these external shocks on domestic variables (real output, nominal exchange rate and domestic producer price index. The findings also revealed that real oil price and US GDP shock have a significant impact on domestic activity and lead to more symmetric response compared to US monetary and financial shocks.

Onyimadu (2019) examined the effect of specific exogeneous shocks-oil price shock on Nigeria's external sector using structural macroeconomic model (SMM) as it allows for the examination of simulated results under assumptions that are peculiar to exogenous variables with quarterly data spanning from 1981 to 2015. The paper found that oil price shocks do not significantly impact Nigeria's external sector. The over-dependence of the Nigerian economy on crude oil, and the justifiable need to diversify the Nigerian economy away from the oil sector was also reflected from the responses of

imports, remittances, capital financial flows, foreign debt, exchange rate and reserves.

Murach and Wagner (2016) studied the effects of external shocks on the business cycle in China and its agricultural, industrial, and services sectors in terms of real GDP growth using several small dimensional VAR models with Cholesky identification with sample period of 1996 to 2014. The study found a significant positive transmission of foreign real GDP growth shocks from major trading partner countries to China, especially its industrial sector while agricultural and service sectors' real growth remained unaffected by the shocks

Lee (2019) examined the transmission of domestic and external shocks through input-output network using evidence from Korean Industries. The study employed sector-level and industry-level data from Korea's national accounts (1970–2017) and WIOD (2000–2014; 2016 release). The results suggest that industries are more likely to be affected by the seller's growth shocks than by the buyer's growth shocks. It also implies that industries that are highly involved in exports transacted directly with foreign countries are significantly affected by the country's growth shocks.

3. Methodology

In view of the multidimensional nature of the external sector, a combination of models were employed in the analysis with a view to effectively capturing the peculiarities of the various sub-sectors. These methods include descriptive analysis, moving average of relevant macroeconomic variables, and structural VAR Model.

With respect to primary income, secondary income, and debt stock, descriptive statistics were utilized to analyse current developments while moving averages of relevant macroeconomic fundamentals were used for the projections. On debt stock in particular, projections were based on government borrowing plans, while other primary and secondary flows were based on actual/promissory wavers on loan payments and debt services, remittances and aids from international donor agencies and development partners as a result of the pandemic. For other macroeconomic variables, like output and private remittances, projections were based on a simple three-year moving average from 2014 to 2019. The years pre and post 2016 were of interest because they reflect the run-up to and recovery from the 2016 recession which are vital to understanding the expected pandemic-driven pre-recession and recovery periods for the economy. The three-moving simple average (S-MA) and debt sustainability (DS) are specified in equations (1-2) as:

$$(F_t^x) = \left[\frac{X_{t-1}+X_{t-2}\ldots+X_{t-n}}{n}\right] \quad (3.1)$$

where: (F^x) represents the forecasted macroeconomic variable of interest mentioned earlier (real output and primary/secondary income variables), (X) is the observed values of each macroeconomic variable, (t) represents the time variables, while (n) is the moving average horizon (in this case 3).

In terms of debt sustainability, debt-GDP ratio represents Nigeria's debt burden and the probability that the country is within its permissible debt threshold as in equation 2.

$$\delta_{s(t)} = \left[\frac{d_t^k}{y_t}\right] \quad (3.2)$$

where: $\delta_s$is debt sustainability expressed in percentage, while (d^k) and (y) are debt stock and nominal GDP, respectively.

The analysis of the impact of COVID-19 on Nigeria's import, export and the current account was done with the aid of a dynamic model to capture the lags and leads in the import, export and current account relationships. Specifically, the study employed a structural Vector Autoregressive (SVAR) model derived from Keynesian and other macroeconomic theories. The SVAR is, however, restricted to Structural Vector Error Correction Model (SVEC) to account for both the dynamics and non-stationarity in the macro variables of interest. The models employed consist of three behavioural equations, which includes a model for the total import (IMP), another for the total export (EXP), and then for the trade balance.

According to the theory of demand and supply, one of the vital determinants of export supply and import demand is their prices. In this model, these will be proxied by domestic and foreign inflation (INF and INF*). In line with the Mundell–Fleming model, a country's currency exchange rate with those of its trading partners is a significant determinant of its volume of export and import to and from those partners. Hence, using the United State as a proxy for Nigeria's trading partner, the Naira exchange rate with the United State Dollar (USD), defined as the price of USD in terms of units of the Naira is a crucial determinant in all the three equations. Following the net export component of the Mundell-Fleming model, the GDP of both the domestic (GDP) and the trading partners (GDP*) constitute a significant determinant of export and import from and to a given country respectively. Also, given that the import is financed using the external reserve, the reserve value determines the volume of import that a country can pay for and this makes external reserve (RES) a determining variable in our model. Other important determining variables gotten from theories and other empirical studies are the domestic and foreign interest rate, proxied by the lending rate; oil price; and inflation.

Given the above information, the estimated model is a three-dimensional SVAR model given as:

$$\boldsymbol{y_t} = A_i \sum_{i=1}^{p} y_{t-i} + \tau_i \sum_{i=1}^{p} x_t + \mu_t \quad (3.3)$$

Where, y_t is a vector of the endogenous variables, namely, total imports (IMP), total export (EXP). Exchange rate (EXR), and Interest rate (INR). On the other hand, $\boldsymbol{x_t}$ is a vector of exogenous variables including the foreign interest rate $(INTR^*)$; the Nigerian and United State of American real gross domestic products, $RGDP\ and\ RGPD^*$ respectively; domestic and foreign inflation; Nigerian foreign reserves (RES); and the Oil price (OILP). Given that the model is a structural VAR, $A_i = A^{-1}A_i^s$, is $k\,X\,k$ matrices of lag structural coefficients estimated, where k is the number of endogenous variables (4) in our model); $\tau_i = A^{-1}\tau_i^s$, is $k\,X\,d$ matrix of structural coefficients of the exogenous variable estimated; and $\mu_t = A^{-1}B\epsilon_t$ is a $k\,X\,1$ white noise innovation process.

Given the above description, the estimated models were given as follows:

$$IMP_t = \alpha_{10} + \alpha_{1i}\sum_{i=1}^{p} IMP_{t-i} + \beta_{1i}\sum_{i=0}^{p} EXP_{t-i} + \gamma_{1i}\sum_{i=0}^{p} EXR_{t-i} + \theta_{1i}\sum_{i=0}^{p} MLR_{t-i} + \eta_{1i}\sum_{i=0}^{p} INF_{t-i} + \pi_{1i}\sum_{i=0}^{1} GDP_{t-i} + \vartheta_{1i}\sum_{i=0}^{1} GDP^{*}_{t-i} + \tau_{1i}\sum_{i=0}^{1} INT_{t-i} + \omega_{1i}\sum_{i=0}^{1} INT^{*}_{t-i} + \varphi_1 RES_t + \mu_1 \quad (3.4)$$

$$EXP_t = \alpha_{20} + \alpha_{2i}\sum_{i=1}^{p} EXP_{t-i} + \beta_{2i}\sum_{i=0}^{p} IMP_{t-i} + \gamma_{2i}\sum_{i=0}^{p} EXR_{t-i} + \theta_{2i}\sum_{i=0}^{p} MLR_{t-i} + \eta_{2i}\sum_{i=0}^{p} INF_{t-i} + \pi_{2i}\sum_{i=0}^{1} GDP_{t-i} + \vartheta_{2i}\sum_{i=0}^{1} GDP^{*}_{t-i} + \tau_{2i}\sum_{i=0}^{1} INT_{t-i} + \omega_{2i}\sum_{i=0}^{1} INT^{*}_{t-i} + \varphi_2 RES_t + \mu_2 \quad (3.5)$$

$$MLR_t = \alpha_{30} + \alpha_{3i}\sum_{i=0}^{p} EXP_{t-i} + \beta_{3i}\sum_{i=0}^{p} IMP_{t-i} + \gamma_{3i}\sum_{i=0}^{p} EXR_{t-i} + \theta_{3i}\sum_{i=1}^{p} MLR_{t-i} + \eta_{3i}\sum_{i=0}^{p} INF_{t-i} + \pi_{3i}\sum_{i=0}^{1} GDP_{t-i} + \vartheta_{3i}\sum_{i=0}^{1} GDP^{*}_{t-i}\sum_{i=0}^{1} INT_{t-i} + \omega_{3i}\sum_{i=0}^{1} INT^{*}_{t-i} + \varphi_3 RES_t + \mu_3 \quad (3.6)$$

$$EXR_t = \alpha_{40} + \alpha_{4i}\sum_{i=0}^{p} EXP_{t-i} + \beta_{4i}\sum_{i=0}^{p} IMP_{t-i} + \gamma_{4i}\sum_{i=1}^{p} EXR_{t-i} + \theta_{4i}\sum_{i=1}^{p} MLR_{t-i} + \eta_{4i}\sum_{i=0}^{p} INF_{t-i} + \pi_{4i}\sum_{i=0}^{1} GDP_{t-i} + \vartheta_{4i}\sum_{i=0}^{1} GDP^{*}_{t-i} + \tau_{4i}\sum_{i=0}^{1} INT_{t-i} + \omega_{4i}\sum_{i=0}^{1} INT^{*}_{t-i} + \varphi_4 RES_t + \mu_4 \quad (3.7)$$

$$BOT_t = EXP_t + IMP_t \quad (3.8)$$

Pre-estimation test with the data used shows that although the variables are not stationary as they are all integrated of order one, I(1), they are cointegrated. In line with econometrics theory, therefore, the SVAR is restricted to Structural Vector Error Correction Model (SVEC) to account for both the dynamics and non-stationarity in the macro variables of interest. The SVEC has cointegration relations built into the specification so that it restricts the long-run behaviour of the endogenous variables to converge to their cointegrating relationships while allowing for short-run adjustment dynamics.

The study employed a Simulated Method of Moments (SMM) econometric technique with quarterly data from 2010Q1-2020Q1. The SMM allows for scenario analysis where changes in the endogenous variables are forecasted for given shocks on the policy variables in the models. In our analysis, the policy variables of interest are the exchange rate and the interest rate. Hence, the scenario analysis simulates the effects of assumed changes in the exchange rate and interest rate on Nigeria's export, import and trade balance.

The shocks were introduced in four quarters out of the initial sample used in the study. That is, the simulated sample is from 2020Q2 to 2021Q1. The shock from interest rate was introduced by assuming 0.55, 1.10 and 1.6 percent decrease in the value of interest rate from the actual value of interest rate in 2020Q1. Furthermore, the shock from the exchange rate was introduced by assuming a 2, 4 and 6 per cent increase in the exchange, respectively. These degrees of changes were motivated by the actual changes in the in-sample data between 2019Q4 and 2020Q1.

4. Shocks from The Current Account

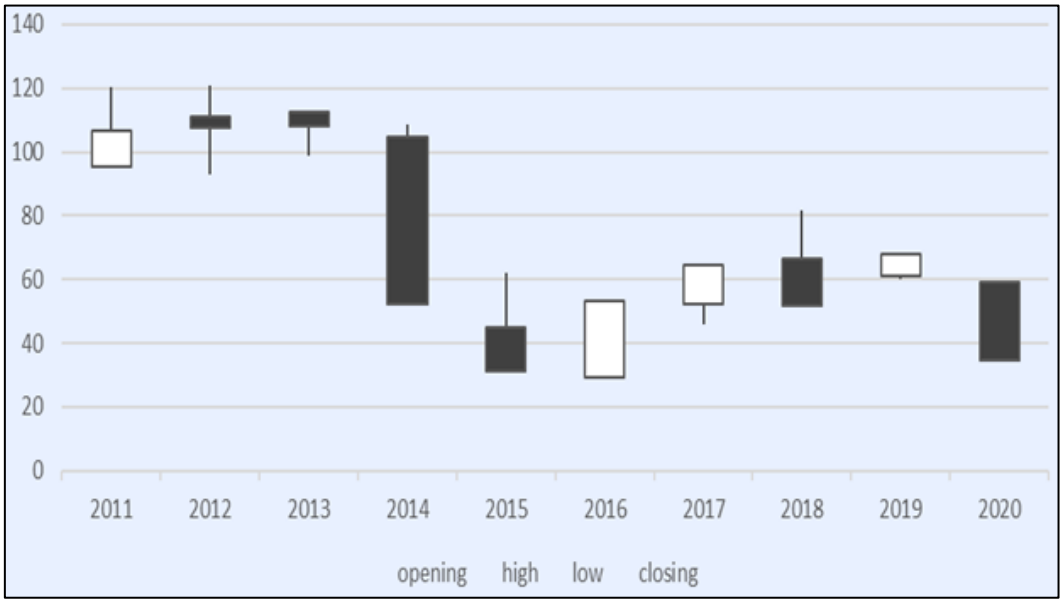
This section examines the impact of the shocks from the pandemic on the various components of current account including imports and exports of goods and services, primary income, secondary income, and the net international investment position.

4.1. Import and Export of Goods and Services

4.1.1. Shocks on Oil Production, Exports and Prices

The outbreak and spread of COVID-19 disease from China to most countries around the world poses a headwind to global economic activities. It led to a massive decline in economic activities across the globe and the subsequent decrease in the demand for oil from over 187 countries that were locked down to contain the pandemic including China, the United States of America, Italy, Germany, the United Kingdom, and Japan. The pandemic together with the trade war between two huge oil-exporting countries constitutes a colossal shock to the global oil demand and price as the market is faced with low demand accompanied by high supply. A forecast from the International Energy Agency shows that the global demand for oil this year would fall by a level not seen before due to the lockdown of economies enforced around the globe to contain the COVID-19 pandemic. A report in the Wall Street Journal shows that global oil demand is expected to fall by a record 9.3 Mb/d year-on-year in 2020. In April 2020, the demand is estimated to be 29 Mb/d below what it was a year ago, and by the 2nd quarter of 2020, the demand is expected to be 23.1 Mb/d below its level a year ago.

The effect of these excess supply over demand as earlier mentioned was a drastic decline in the price of oil. Figure 1 below shows that after the recovery from the global economic crisis of 2008, the crude oil price experienced an uptick from 2011 to 2013, rising to as high as $104 per barrel at the beginning of 2014. It, however, experienced a downward trend to $52 per barrel by the end of the same 2014.



Source: Bloomberg (2020)

Fig 1: Oil Price Movement

The drastic fall, which was majorly caused by the booming US shale oil production persisted until 2017 when the price increased again to $64 per barrel. Within that period of oil crisis, Nigeria suffered a recession due to the low level of oil price which precipitated a drastic fall in its revenue. While the year 2017 to 2020 is regarded as a recovery period for the country, the sudden shock in the oil market due to COVID-19 resulted in an impulsive response by the oil price. The market experienced a drastic fall in oil price by 57 per cent, from $58 per barrel at the beginning of 2020 to $34 per barrel in March 2020. For WTI, this declining price continued to April 21, 2020, when it recorded a price of $11.57 per barrel before gradually picking up to a price of $24.76 per barrel as at May 5, 2020. For the Bonny light, the fall in price continued to April 27 when it recorded a price of $14.67 per barrel before picking up sluggishly to $18.94 per barrel as at May 4, 2020.

Given the continued weak demand, the Organisation of Petroleum Exporting Countries Plus (OPEC+) agreed during their April meeting to cut its member's production to improve the price. By this agreement, Nigeria's daily production would drop by almost 300,000 barrels from the benchmarked 1.7 million barrels per day to 1.4 million barrels per day. With these realities, the IMF expects Nigeria's economy to shrink significantly due to the crisis and loose substantial fiscal capacity with the country keeping up to 50 million barrels of unsold crude oil by May 2020.

4.1.2. Shocks on Trade, Investment and Capital Flows

The Nigerian economy is largely dependent on consumer and capital goods imports from China, the EU, India, the UK and the US, among others. As at Q4 2019, Nigeria's imports from China, India, USA, Netherland, Belgium and the United Arab Emirates accounted for more than 70.0 per cent of the country's total imports. Conversely, Nigeria's exports are mainly to India, China, Spain, Ghana, France, Netherlands, South Africa, the USA, Italy and several other countries confronted by COVID-19 pandemic. The pandemic has slowed down production activities in these countries, hence, exposing the vulnerability of the Nigerian economy to the contraction in the global supply chain. In most of the cases, there has been an outright travel ban to and from such countries, increasing the trade shock associated with the pandemic.

Even on the relaxation of the lockdown and travel ban, it is expected that the pandemic will still be affecting Nigeria's trade with the rest of the World as most of the economies are expected to experience recession in 2020 coupled with slow recovery in 2021. The World Economic Outlook of April 2020 projects that the world economy will contract by 3 per cent of total GDP in 2020. Specifically, Nigeria's top trading partners such as USA, EU, UK, Canada, China, Netherland, Belgium and the United Arab Emirates are projected as follows: USA: -5.9 per cent, EU: -7.5 per cent, UK: -6.5 per cent, Canada: -6.2 per cent, Japan: -5.2 per cent, China: 1.2 per cent, India: 1.9 per cent, and Russia: -5.5 per cent. Given that Nigeria is also projected to have a GDP growth rate of -3.4, there is certainty that of a shock on the country's trade volume (imports and exports) due to the COVID-19 pandemic. In line with this, the April 2020 World Economic Outlook (WEO) projected the World Trade Volume (WTV) to decrease by 11 per cent with the advanced countries imports decreasing by 11.5 per cent and their exports declining by 12.8 per cent. According to the report, the Emerging Market and Developing Economies are projected to have their imports increase by 8.2 per cent while their exports to decrease by 9.6 per cent.

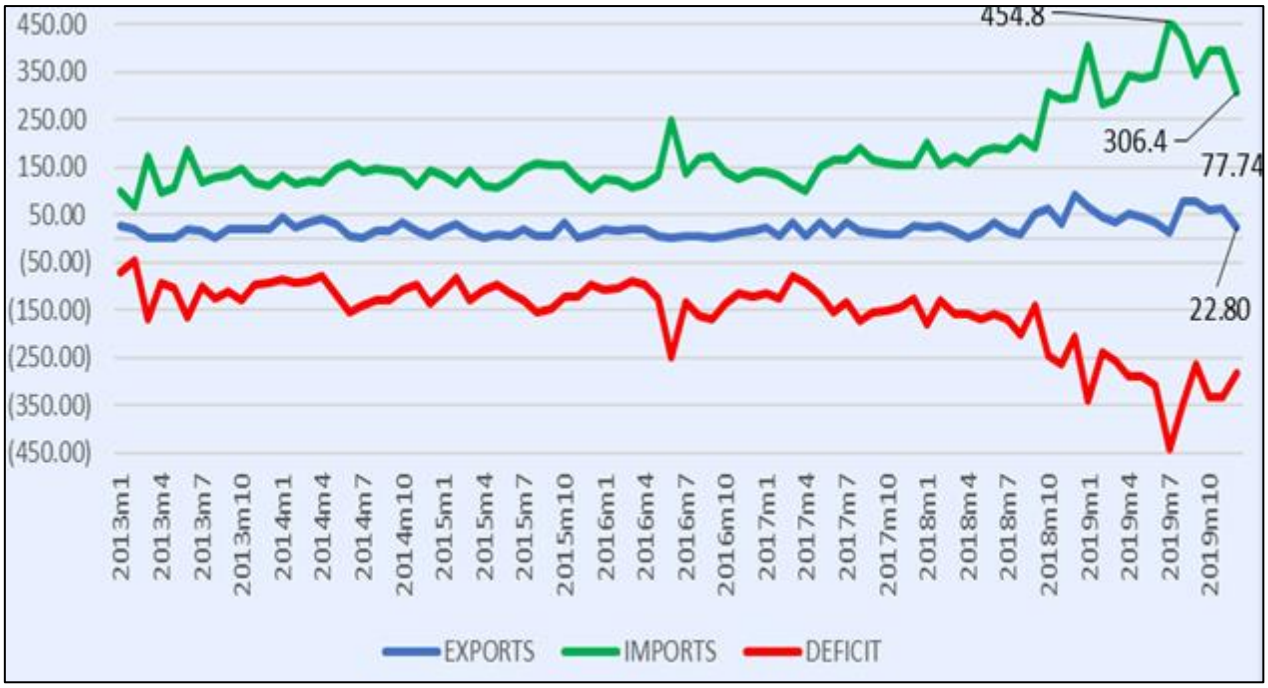
A report from Brookings has it that, "the restrictions on movement of people and border closures foreshadow a decline in exports. Already, countries around the world have closed their borders to non-essential traffic, and global supply chains for exports have been disrupted". According to the report, even though countries like Nigeria that devalued their currency made their export more affordable, the limited markets for non-essential goods and services nullifies the envisaged positive effect on net exports. On the contrary, forecast from the IMF World Economic Outlook of April 2020 shows that Nigeria's current account balance that was -3.8 per cent of the GDP in 2019 will be -3.3 and -2.5 per cent of the GDP in 2020 and 2021, respectively, implying that the pandemic affected the country's import of goods and services more than her export.

In line with the report, it is projected that Nigeria, being one of the developing economies will have its total import decrease by about 8.2 per cent, with an average of 9.6 per cent decrease in export if the pandemic goes in line with the projection of the IMF. Another report from the Nairametrics.com on April 12, 2020, has it that, "if the current lockdowns across most parts of the world persist for another two months, about N2.23 trillion worth of trade from Nigeria's top 5 import countries would be lost". Another report from the same source on April 20, 2020, predicts that the pandemic will badly hit even the non-oil export sector of the Nigerian economy. From the report, Nigeria is projected to lose over $160 million to cocoa and cashew exports in 2020 due to the COVID-19 pandemic.

The OPEC+ meeting held in April 2020 suggested that the agreed crude oil production cut and a potential improvement in the international price of crude oil will cushion the effect of lost export proceeds. This improvement is, however, premised on the decision of the trading partners to reopen their economies and kick start economic activities in the foreseeable future. As long as these external shocks persist, the domestic economy would continue to face adverse trade and investment conditions, which in turn would portend grave consequences on the country's external position. According to the IMF April World Economic Outlook, many countries as a result of the pandemic face a multi-layered crisis, including, domestic economic disruptions, plummeting external demand, and capital flow reversals.

4.1.3. Performance of Nigeria's Trade with China

China is one of Nigeria's closest business partners through bilateral trade and strategic cooperation. In Africa, Nigeria is China's fourth-largest trading partner after South Africa, Angola and Sudan. The economies are closely knit such that a shock to either economy affects the other due to cross-country contagion. Since 2000, trade relations between Nigeria and China have risen exponentially to over N4.9 trillion (CBN, 2019). The recent outbreak of Corona Virus (COVID-19) has raised concerns about Nigeria's trade position with China and the consequent impact on the economy. Figure 2 shows Nigeria's export to China and the corresponding imports between 2013 and 2019. It also shows the extent of trade imbalance among the two countries with China having a favourable balance of trade over Nigeria.



Source: National Bureau of Statistics

Fig 2: Nigeria's Exports to and Imports from China

Both Nigeria's monthly volume of import from and export to China trended up from January 2013 to ₦458.8 billion and ₦77.74 billion respectively, on October 2019. On an annual basis, the value of Nigeria's import from China grew from ₦1.65 trillion in 2013 to ₦4.3 trillion in 2019 while the export grew from ₦170.75 billion to ₦595.98billion. Nigeria had a total deficit of ₦13.14 trillion in the seven years averaging ₦1.88 trillion per year.

The growth in trade between the two countries notwithstanding, it is projected that the outbreak of the COCID-19 pandemic will continue to have a negative shock on the volume and value of trade between both countries within the year. According to the Guardian newspaper report of March 21 2020, "the Coronavirus impact is huge on the Nigerian market, as major Original Equipment Manufacturers (OEMs) supplying this market are based in China, and have not supplied since the outbreak of the virus". According to the report, over $100 million worth of goods is stuck in China.

4.1.4. Nigeria's Trade with the Rest of the World

Nigeria's exports to the rest of the World (excluding China) witnessed steady growth from January 2016 to December 2019. Nigeria's export flows to its major trading partners including India, Spain, Netherlands, Ghana, France, South Africa USA, Italy, Indonesia and Turkey rose from ₦1,331 billion as at end-January 2013 to ₦2,274 in August 2014 before declining to ₦412.96 billion in February 2016 as a result of the 2016 recession. From February 2016, there was a gradual recovery to ₦1,736 billion as at end-December

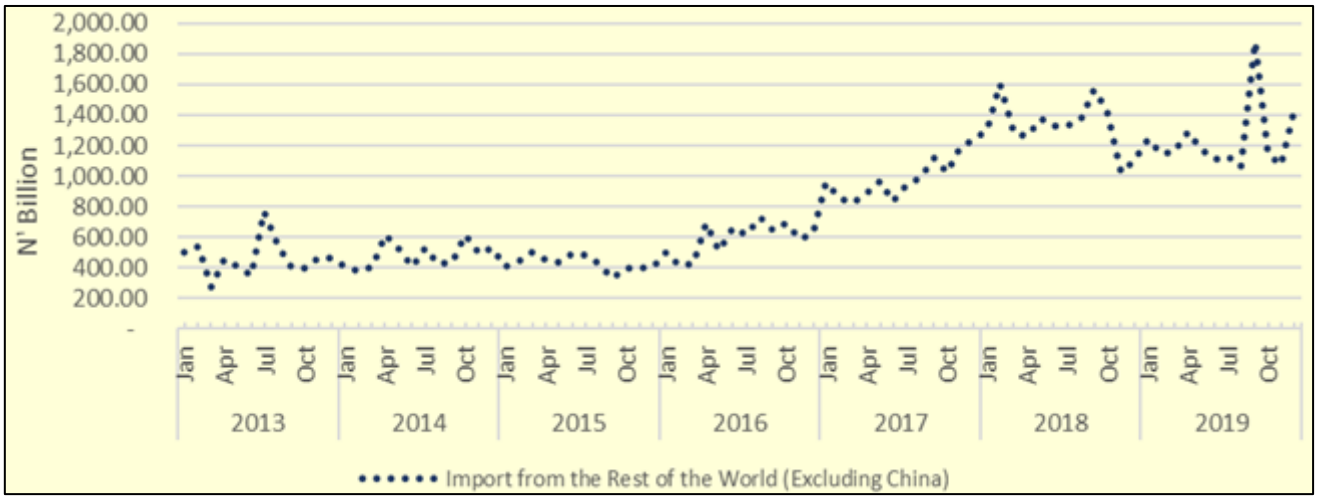
2019 before the outbreak of this pandemic.

Source: National Bureau of Statistics

Fig 3: Nigeria Export to Rest of the World 2013-2019

As a reflection of oil dominance in Nigeria's export basket, its exports follow the trend of international oil demand. Hence, given the significant decline in the demand and price of oil resulting from the pandemic, Nigeria's export has been declining and expected to decrease to about 9.6 per cent in 2020 as indicated earlier.

In the period under review, Nigeria's import flows from its major trading partners, excluding China, experienced a steady rise from ₦499.6 billion at end-January 2013 to ₦1,876 billion as at September 2019 before decreasing to ₦1,452.6 billion at the end of December 2019.



Source: National Bureau of Statistics

Fig 4: Nigeria Import from the Rest of the World (2013-2019)

The leading sources of imports for Nigeria, excluding China, are the Netherlands, USA and India. In recent years, Germany has improved its trade links with Nigeria as imports from Germany to Nigeria recorded a steady rise from ₦233.5 Billion in 2013 to ₦521.5 Billion in 2019, reflecting growth of 123.34 per cent.

The trade projections, when compared to the projections before the outbreak of the COVID-19 pandemic, will help to estimate the projected impact of the pandemic on both the Nigerian and the global trade volume. According to a report by World Trade Organisation (WTO) there is a 14.2 per cent decrease in the global trade volume growth projection before the outbreak of the pandemic and the projection given for the pandemic. For Nigeria as a developing country, the report shows a 12.5 per cent and 13.7 per cent decrease in the growth of import and export, respectively.

4.1.5. Net Transfers to Government and Remittances

In the last decade, net transfers constitute about 8.9 per cent of Nigeria's GDP with net transfers to government accounting for 0.6r per cent, while net remittances accounted for 8.3 per cent. Historically, transfer to government in poor developing countries increases in times of pandemic or global vices to help countries cope with the challenges of such crisis. Given this trend, one expects an increase in transfer to national governments, including Nigeria. Bulk of these transfers are expected to come from multilateral agencies like EU, AfDB, IMF, WB, and some few bilateral agencies like

the US Embassy. Other developed economies that are supposed to contribute to such transfers also facing a more severe challenge. It is, therefore, unlikely that they will increase development assistance to Nigeria. For now, Nigeria is expected to receive over $3.4billion in grants and aid from various international and development partners, including the €3.25 billion aid by EU in partnership with African countries. These were factored in by the Federal government for the projected upward trend in transfers to government in the periods 2020-2021 (Figure 5).

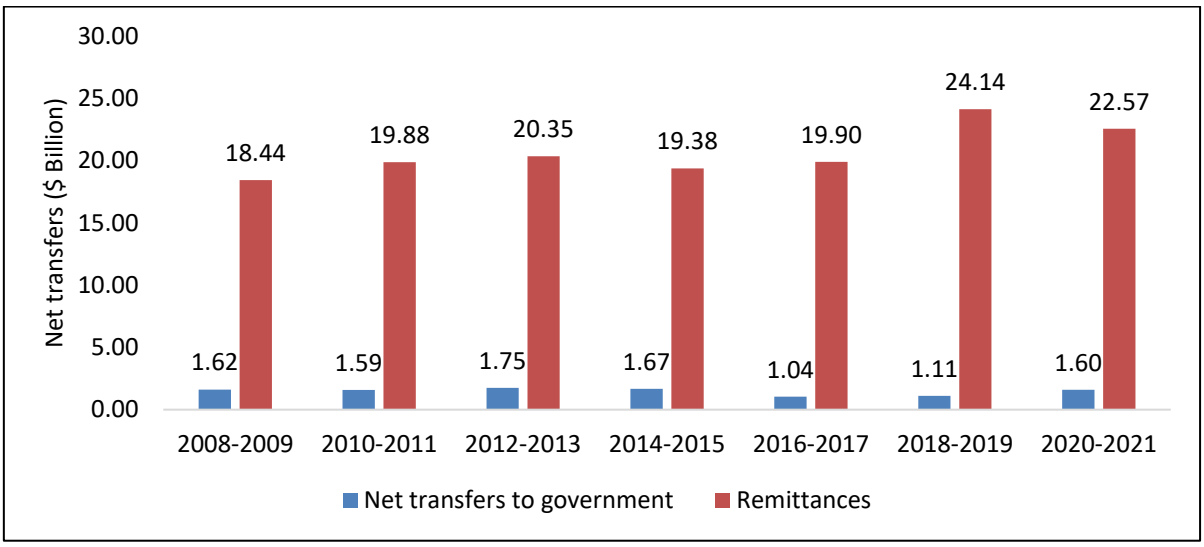


Fig 5: Net Transfer to Government and Workers Remittances

Consequently, net transfers to government is projected to decline by (-12.9 per cent) from $1.8 billion in 2019 to about $1.6 billion in 2020, while net remittances is projected to decline by (-8.8 per cent) from $24.6 billion in 2019 to about $22.4 billion in 2020. Overall, the net transfer is projected to decline by (-9.3 per cent) from $26.4 in 2019 to about $24.0 billion in 2020. This is expected to pick up modestly in 2021 as the global economic recovery commences with compensation to employees rising as well as expected improvement in government receipt from developed countries. If this holds, the net transfers are expected to increase by 1.4 per cent from 2020 to about $24.34 billion in transfers to government and remittances are projected to increase by 2.3 per cent and 1.9 per cent, respectively.

On the average, net remittances is projected to decline by -4.3 per cent between 2020 and 2021 compared with the periods 2018-2019, driven by an average decline in private remittances by -6.5 per cent, while patronage to government will increase by 43.8 per cent, over the same period. Besides the basic pressure on government finances, the projected decline in remittances which has helped in moderating household poverty, will further aggravate the current level of poverty and income inequality which is estimated in 2019 to be in the neighbourhood of 40.1 per cent and 31.1 per cent, respectively (NBS, 2019).

4.1.6. Investment Inflow

During the period and especially in 2020, the United Nations Conference on Trade and Development (UNCTAD) projected investment flows globally and Africa to decline by 5 per cent and 15 per cent, respectively because of the pandemic. However, it is also true that some significant macroeconomic changes in the economy will reduce capital reversal relative to other countries. Firstly, the depreciation of the naira by 15 per cent and the near-zero global interest rate, will make Nigeria a hub for FPI inflow relative to other countries, hence increasing net investment income repatriations from Nigeria. Secondly, Nigeria responded early, and fatality rate and the associated economic impact will be relatively minimal, hence making the macroeconomic environment attractive for foreign investment. Moreover, similar to Nigeria, the pandemic is likely to pose further security challenges to other African countries, as many of them are vulnerable due to conflicts which have generated massive displaced populations. These factors contributed in the forecast that tends to suggest that investment flow to Africa will be worse hit, of which some of the control parameters do not capture Nigeria peculiarity in the management of COVID-19 (AU, 2020).

4.1.7. Net income

Nigeria has maintained a negative net investment inflow in the last decade thereby, having a negative impact on the overall primary balance. As shown in Table 1, a sharp plunge was recorded between the 2010 and 2015 with the deficit rising from $23.1 billion in 2011 to $25.9 billion in 2013. Although still in the negative, it rose temporarily in 2014, reaching all time high of $8.8 billion during 2016 recession. Given this historical trend in the run-up to the 2016 economic recession, it is projected that the net investment deficit will rise by 9.6 per cent from 12.7 billion in 2019 to $13.9 billion in 2020. We, however, expect a relative moderation to $14.5 billion in 2021, representing an increase of 4.1 per cent compared with 2020 and 14.1 per cent over the 2019 figure.

Table 1: Net Investment Inflow by Classification ($ Million)

Year	Income	Portfolio	Debt (Interest)	Equity	Loans (Interest)
2008	(15247.2)	(207.2)	1995.6	(16955.4)	(80.3)
2009	(14683.7)	(141.7)	559.9	(15079.3)	(22.5)
2010	(19824.2)	(323.9)	554.6	(20015.6)	(39.2)
2011	(23110.7)	(402.2)	274.3	(22937.0)	(45.8)
2012	(22432.1)	(585.9)	285.8	(22101.0)	(31.0)
2013	(25897.7)	(908.8)	160.0	(25085.3)	(63.7)
2014	(19345.0)	(513.1)	519.4	(19311.8)	(39.5)
2015	(12912.5)	(531.7)	(218.7)	(12115.4)	(46.7)
2016	(8795.8)	(488.5)	27.4	(8267.3)	(67.6)
2017	(11739.1)	(684.2)	188.4	(11152.3)	(91.1)
2018	(14891.5)	(971.3)	272.1	(14090.7)	(101.6)
2019	(12711.5)	(1016.0)	539.5	(12092.7)	(142.3)
2020/1	(13930.6)	(1122.0)	622.7	(13270.1)	(161.3)
2021/2	(14504.2	(1249.8)	776.3	(13845.5)	(185.1)

1/2: Are projected Figures

4.1.8. Foreign Portfolio Investment Inflow

In terms of FPI which is the most volatile component of foreign investment (Figure 6), Nigeria has always been a net receiver of FPI with a net inflow of about ($17.2) million in the first quarter of 2009, which was the country's lowest inflow in the last 10 years before increasing to an all-time high of $359.4 million in the second quarter of 2013. On annual basis (Table 2), the inflow decreased to $141.7 billion in 2009 from $207.2 million in 2009 to a 10 year high of $1.02 billion in 2019, which could be used to gauge investors optimism or confidence, three years after the 2016 recession.

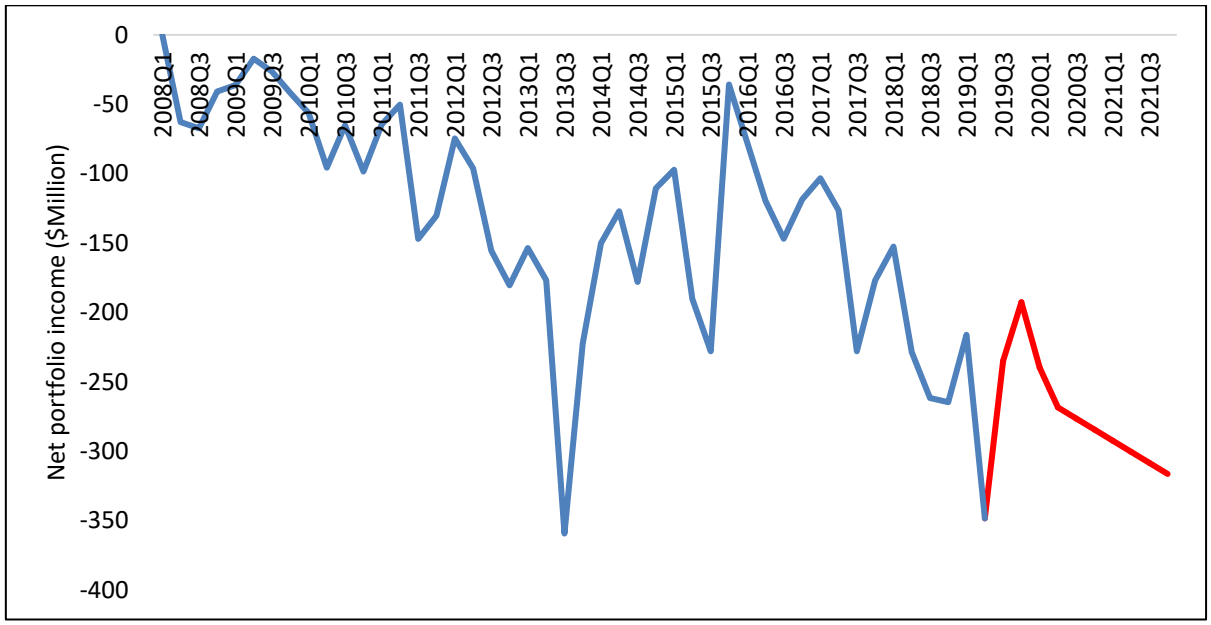


Fig 6: Portfolio Investments (Net)

With the foregoing seemingly business attitude, one does not envisage quick capital reversal because 'the would be' destination markets are meshed into interest rate cuts and the level of unemployment in the developed countries are expected to spike. Implicitly, to drive up employment, it is possible that there will be further interest rate cut that will decrease interest rate deferential (in favour of Nigeria). Consequently, a worst-case scenario in the case of Nigeria is for the volume of FPI to stagnate as in 2019 rather than pull the investment to other economies with worsening interest rate cuts. As a result, the outlook is for FPI inflow to increase to 10.4 per cent and 11.4 per cent from 2019 and 2020 – up from N1.02 trillion to N1.12 and N1.25 trillion in 2020 and 2021, respectively.

4.1.9. Income on Foreign Direct Investment (Equity)

Income on equity is made up of streams of income inflows from business interests where the share of ownership is more than 10 per cent. It consists of inflows from investment fund shares (such as dividends, profits from reinvested earnings) and direct investment loans (such as interests). This source is the major driver of the net investment inflow, hence, can be used to gauge countries vulnerability to net inflow from FD investment as shown in Table 1.

Figure 7 shows the actual and projected quarterly trend in FDI net inflow, while the annual figure is in Table 1. As it is, the outlook will not be different from the other sources of inflow and one does not envisage new investment at least during the crisis or even immediately a year after the crisis,

unless in the health sector. Unlike the FPI, this source of inflow is less volatile but takes a higher decision-incubation period because of the fixed nature of the investment, which is irreversible in the immediate and short run. As it is, FDI inflow is expected to decline, particularly that of oil FDI.

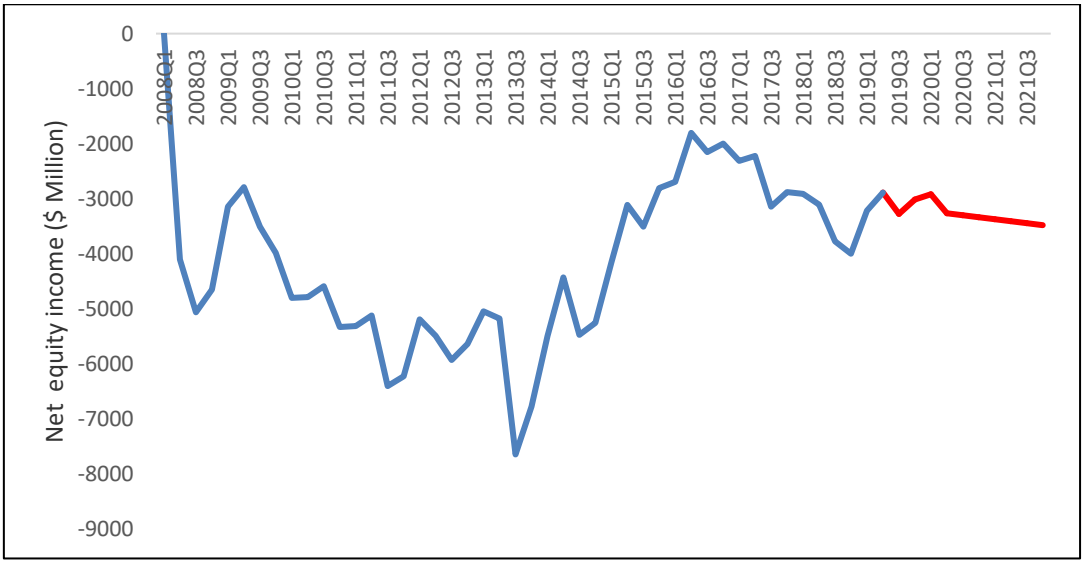


Fig 7: Investment Income on Equity

The FDI inflow has been trending upwards from 2008 up to 2015. Since then Nigeria has recorded some significant improvement (though still negative) particularly during and post 2016 economic recession where it declined from $4.1 billion in the first quarter of 2008 to $1.8 billion in the first quarter of 2016, representing about -56.1 per cent year-on-year decline in net equity inflow. Similarly, net equity inflow declined in 2019 showing a significant improvement of about -7 per cent decline year-on-year from $3.1 billion in the first quarter of 2018 to $2.9 billion in the first quarter of 2019 and further by -9.2 per cent in the fourth quarter of 2019 relative to fourth quarter of 2018.

We assume that FDI inflows into Nigeria will decline but the Nigeria macroeconomic environment will be more favourable to attract foreign investors, since we expect that the crisis will be more severe in other countries than in Nigeria. Based on this, the outlook is bleak as the country's investment inflow increased the deficit by 13.1 per cent in year-on-year from $2.9 billion in the first quarter of 2019 to $3.3 billion in the first quarter of 2020 – representing about 11.5 per cent increase in the first quarter of 2020 compared to the fourth quarter of 2019. The upward trend is expected to continue in 2021, though moderately to about $3.4 billion in the first quarter of 2021, representing about 3.3 per cent year-on-year increase relative to the first quarter of 2020 (Figure 7).

On annual basis, Table 1 shows that Nigeria achieved 14.2 per cent decline in net equity inflow in 2019 compared to 2018. The net inflow (equity) in 2018 was about $14.1 billion but declined to $12.1 in 2019. Given the distortion in the economy, equity inflow is expected to rise by 5.8 per cent i.e. from $1.2 billion in 2019 to $1.3 billion in 2020 which represents a decline of -5.2% compared to 2018 figure. This is, however, expected to decline to 4.8% in 2021 representing about -1.71 per cent compared with 2018.

4.1.10. Inflow from Net Debt Interest

Nigeria's debt obligation is expected to moderate temporarily because of the delays in servicing the debt which was approved by the multilateral lending institutions, of which Nigeria will face a higher borrowing cost after the pandemic because of the S&P and Fitch degrading, resulting from low oil prices (Fitch, 2020; and Adams, 2020) [3, 1]. The outlook for net gains from countries debt obligation to Nigeria will continue to increase as in the previous years. However, a decline in net receipt is expected (though still in positive). Compared with the 98.3 per cent increase in net receipt between 2018 and 2019, the pandemic is expected to affect net inflow negatively thereby decreasing net receipt by 15.4 per cent and 24.7 per cent for 2020 and 2021, respectively. Table 1 shows that net interest inflow from loan debt increased from $272.1 million in 2018 to $539.5 million in 2019. While Nigeria is projected to have surplus in net debt (interest) receipt to an average of $700 million between 2020 and 2021, it represents a shortfall of 82.4 per cent and 73.6 per cent for 2020 and 2021, respectively, compared with net gain in 2019 against 2018.

5. Developments in Capital and Financial Account

5.1. External Debt Stock

Thirteen years after Nigeria's debt forgiveness in 2005, Nigeria's external debt stock rose continuously by over 680% from $3.54 billion in 2006 to $27.7 billion as at end 2019. This is equivalent to an increase in debt sustainability burden of 4.2 percentage points i.e., from 1.6 per cent debt-to-GDP ratio in 2006 to 5.8 per cent debt-to-GDP ratio in 2019. Though this is still significantly below the sustainability threshold for low-middle income countries like Nigeria, its debt servicing burden suppresses the country's economic growth and development. Table 2 and Figure 8 show actual and projected external debt stock outstanding, debt burden indicators, and real GDP growth rate.

Table 2: External Debt Stock Obligations and Economic Consequences

Year	External Debt Stock Outstanding (Billions)		External Debt Stock Burden and Growth Indicator %		
	($US)	(NGA)	Debt-to-GDP	Real Growth	Induced growth/3
2008	3.72	523.25	1.32	6.76	6.72
2009	3.95	590.44	1.37	8.04	7.99
2010	4.53	689.84	1.26	9.13	9.24
2011	5.63	896.85	1.42	5.31	5.15
2012	6.53	1,026.90	1.43	4.21	4.20
2013	8.82	1,387.33	1.73	5.49	5.19
2014	9.71	1,631.50	1.83	6.22	6.12
2015	10.72	2,111.51	2.24	2.79	2.38
2016	11.41	3,478.91	3.43	-1.58	-2.77
2017	18.91	5,787.51	5.09	0.83	-0.83
2018	25.27	7,733.95	5.99	1.91	1.01
2019	27.68	8,468.899	5.81	2.27	2.45
2020/1	31.09	11,191.01	6.93	1.70	0.58
2021/2	35.44	12,757.01	7.19	2.00	1.74

Source: Estimated based on DMO (debt stock) and NBS (National account)
1/2: Based on estimated new borrowing and expectations
3/: Induced-growth is the difference between real growth and change in debt-GDP-ratio.

The economic scenario generated by the pandemic on the rising debt profile will drastically deteriorate at least over the next two years, amid the twin shocks of the COVID-19 pandemic and global oil price crash. The lockdown measures imposed in the country's major economic centres will only amplify the impact as the services sector reels from the severe reduction in consumption. First, the virus will generate further debt while the crash in oil price will make loan repayment more difficult. For example, several borrowing plans which Nigeria is expected to undertake will further truncate the original provisioning of $850 million in the 2020 appropriation bill. These include the $3.4 billion emergency financial assistance under the rapid financing instrument by the IMF, the expected $2.5 billion from the World Bank, and $1.0 billion from the African Development Bank (AfDB). On the other hand, the external debt relief package of €22.4m by Germany, will moderate the expected spike in the outstanding external debt stock.

The expected deterioration in the debt outlook accounted largely for the initial idea by S&P Global Ratings and Fitch Ratings to cut Nigeria's credit rating into junk territory, before shelving the proposal, given the suspension of debt service obligation of indebted countries by multilateral lending agencies (World Bank, 2020) [5].

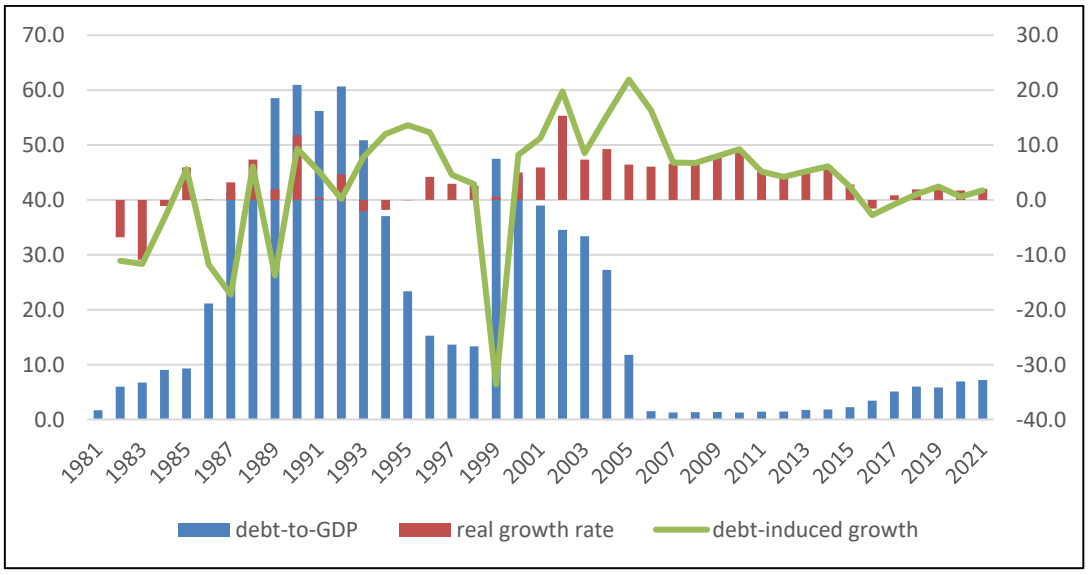


Fig 8: Debt-Burden Indicators (%)

In projecting for the 2020 and 2021 debt stock and the associated debt-induced burden, we relied on the principle of expectation: when economic agents expect that an economic phenomenon will change in a certain direction, agents behave as if the phenomenon has already changed hence, they allocate resources to realize the objective. The outlook of Nigeria's external debt stock, debt burden indicators and real output growth rate is in Table 2. It is projected that Nigeria will have new borrowings of about $7.76 billion by end 2021, bringing the external debt stock to about $35.4 billion, equivalent to 7.2 % of the gross domestic product, using the adjusted official exchange rate of N360/dollar for 2020-2021. Therefore, the outlook is that Nigeria's outstanding debt stock will be in the neighbourhood of $31.1 billion and $35.4 billion in 2020 and 2021, respectively, while debt-to-GDP ratio will increase from 5.8 per cent in 2019 to about 6.9 and 7.2 per cent for 2020 and 2021. This is also under the assumption of a moderated growth from the 2.3 per cent in 2019 to about 1.7 per cent and 2.0 per cent in 2020 and 2021. Implicitly, growth will be moderated but with a rebound in

2021.

We also accounted for the suppressing effect of external loan on real output growth rate by netting out debt-GDP-ratio from the real growth rate to derive what we called "actual or debt-induced" growth rate. Figure 8 shows that the growth equivalent of the real output growth rate projected for 2020-2021 is about 0.6 per cent and 1.7 per cent for 2020-2021, implying that the actual effect of the rising debt to the economy will average 1.2 per cent growth rate, while the nominal growth averages 1.9 per cent. Therefore, in a worst-case scenario, there will be an average growth of about 1.9% between 2020-2021.

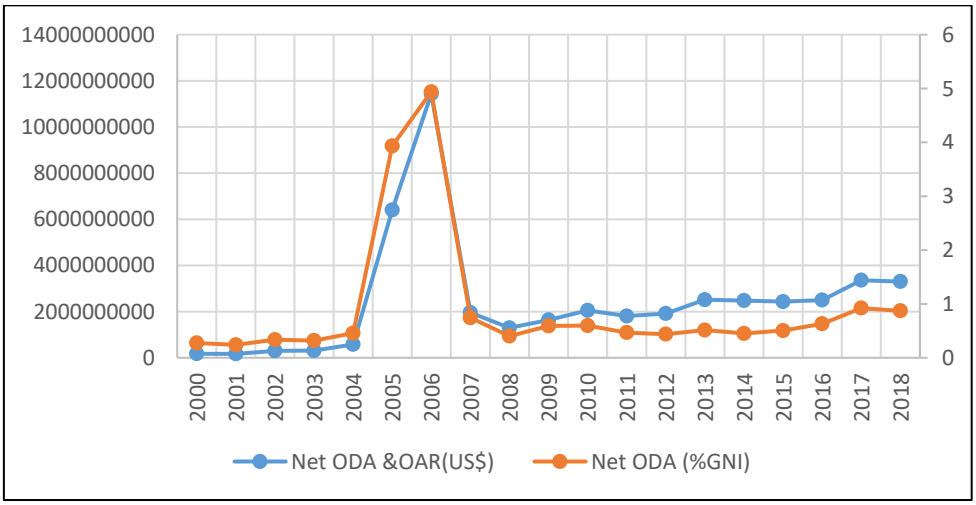
5.2. Grants

Financial assistance given by a government, organization or person (s) for specific purposes qualifies as grant. However, in contrast to loans, grants do not have to be paid back but are expected to be used for the original purpose intended.

Nigeria has enjoyed grants especially from the United State of America through USIAD. At inception, Nigeria received grants to develop its economic capacity by funding specific projects such as building colleges of agriculture in its older generation universities. Between 1994 to 1999, however, receipt of grants declined largely due to sanctions resulting from drug trafficking offences, thus bringing the stock of grants down to about US$7million.

Traditionally, grants are often tied to specific projects to aid the achievement of specified development objectives. Some of such objectives include primary healthcare, child survival, prevention and treatment of HIV/AIDS, population management, support to advocacy groups etc. In the transitions from military regime to democratic regime, donor agencies such as USAID have increased their grants to Nigeria to promote programmes such as conflict mitigation, strengthening government services and institutions, improved livelihood of peoples (USAID, 2019)

Studies have reported that the effectiveness of aid in the recipient economy is dependent on the support it lends to the country's own approach to development and is otherwise less effective when the aid policy and approach is driven in the interest of the donor.



Source: The World Bank, World development indicator (05/28/2020).

Fig 9: Net Official Development Assistance/Official Aid Received in USD and Net Official Development Assistance Expressed as Ratio of Gross National Income.

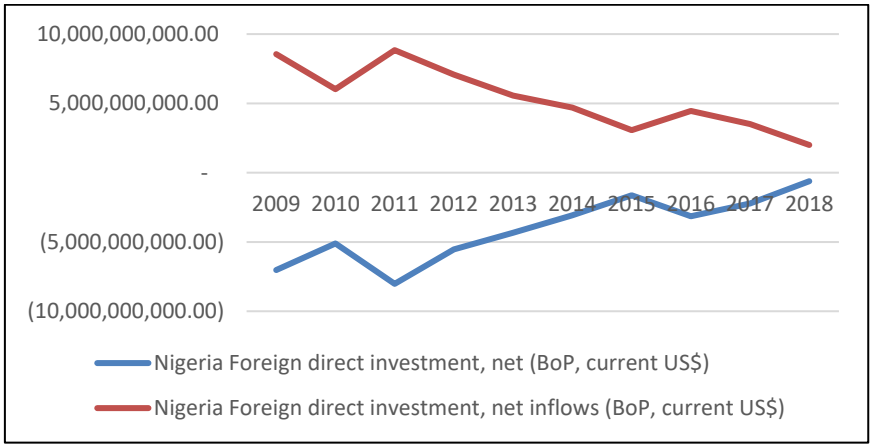
Figure 9 shows the trend in official development assistance inflow into Nigeria and as a ratio of the national income. Between 2000 and 2004, the inflow of aid into Nigeria increased marginally and the contribution of aid to the development of the economy follows the same pattern although with some level of variation in its contribution to the growth of the economy. The trend in aid to the ratio of GNI indicates that aids began to contribute immensely to the development of the economy from 2004, accounting for 0.46 per cent of GNI before increasing sharply to 3.93 per cent in 2005. This trend continued into 2006, rising to 4.94 per cent. In 2007 however, there was a steep decline in aid inflow from about $11.4 billion to about US$2 billion, a decline of about 85% from 2006 to 2007. From 2007 up until 2014 the inflow of official development assistance has been fluctuating but appears to be stable between 2015 to 2017, declining slightly in 2018. There is, however, no available data for yet for 2019. Considering the recent shock to the world economy caused by the COVID-19 pandemic, the outlook for Official Development Assistance in 2020 is uncertain given the need to contain the pandemic and its impact on poorer recipient countries. Although there are fears that the impact on donor countries may mitigate their capacity to provide assistance, it is expected that such donor countries remain committed to their mandate of pursuing an even pace of global development and eliminating distortions caused by challenges to healthcare, clean water etc. In this regard, there is a strong expectation of an increase in the inflow of grants to help contain the pandemic and also increase the pace of recovery from the damages caused by the pandemic.

5.3. Foreign Direct Investment (FDI)

Foreign Direct Investment (FDI) to a developing country like Nigeria, provides domestic investment and creates jobs to ease unemployment through direct funding and through technology transfer. The Nigerian government has, thus, over time, put in place various policies to create an enabling environment for FDI inflow to Nigeria. In the 1997 budget, the government provided a framework to enter into investment protection, agreements with foreign governments or private organizations wishing to invest in Nigeria, as well as open discussions with prospective investors on additional incentives. As a result, the government inaugurated, the Nigerian Investment Promotion Commission (NIPC), which

replaced the Industrial Development Coordination Committee (IDCC), as a one-stop agency to facilitate the inflow of FDI. The establishment of IDCC in 1988 was to enable the fostering of a conducive regulatory environment and serve as the first port of call to potential investors. To further reflect the new enhanced liberal foreign investment policy of the government, it promulgated the Nigerian Investment Promotion Decree No. 16 of 1995. In addition, tax related incentives such as pioneer status, tax relief for Research and Development (which provides for a graduated amount of tax allowance to be deducted from profit); amendment of company income tax rates to encourage potential and existing investors; tax free dividends as well as tax relief for investments in economically disadvantaged local government areas were some of the incentives provided by government to support FDI inflows. The introduction of Debt Conversion Programme (DCP) also played a major role in paving way for FDI inflows. The government's privatization and commercialization programme was also a direct gesture to the investing public of government's desire to empower the private sector through FDI inflows. Similarly, the establishment of the Export Processing Zone at Calabar was a major attraction for would-be investors to provide infrastructural facilities and eliminate bureaucratic bottlenecks by introducing new management techniques. Other government policies targeted at making the investment climate more conducive for foreign investors were the repeal of the Nigerian Enterprises Promotion Decree (NEPD) of 1972, and the Exchange Control Act of 1962.

These measures were, however, observed over time not to have yielded the desired results. In Nigeria, aggregate FDI inflows during the 1970s through existing jointly owned foreign companies, in nominal terms, averaged $562.3 million yearly accounting for 3.6 per cent by proportion of the gross domestic product (GDP). Before the introduction of the Structural Adjustment Programme (SAP) in 1986, total foreign investment inflow in the 1980s averaged 8,178.2 million or 4.3 per cent of GDP. During the period 1987 - 1990, average foreign investment inflow rose to $8,183.6 million, representing 3.0 per cent of GDP, while the average inflow was $15,402.5 million or 1.4 per cent of GDP during 1991 - 1998. As at December 2019, Nigeria has a deficit balance in her current account of $7.0 billion. Foreign Direct Investment (FDI) increased by $495.4 million also as at December 2019 while Foreign Portfolio Investment fell by $6.0 billion with Nominal GDP at $129.1 billion.



Source: World Development Indicators

Fig 10: Foreign Direct Investment (FDI)

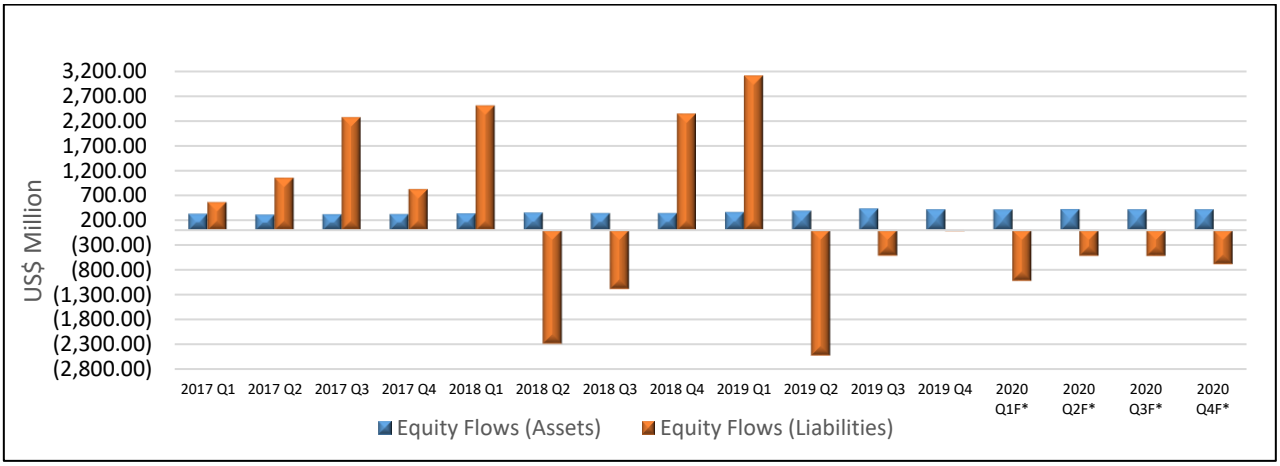
5.4. Equity Flows

5.4.1. Equity Capital and Securities

Equity flows computed in the Financial Account of the Balance of Payments are recorded as equity capital investments (under FDIs) and equity securities investments (under FPIs) on a quarterly basis. In order words, on the assets side of the financial account, an increase in equity capital and securities investment represent the domestic ownership of foreign assets, indicating an overall improvement in the financial account, while an increase in the foreign ownership of domestic assets is represented by a depletion in the Financial Account.

Available data shows that total equity flows (the domestic ownership of foreign assets) as at Q4 2019 stood at $403.62 million, indicating a decline of 3.94 per cent compared with $420.19 million in Q3 2019. The flow is estimated to fluctuate between US$400 and US$408 million throughout the four quarters of 2020. This shows that the novel Corona virus will continue to impact on Nigeria's returns on investments from abroad as yield of securities in most advanced economies continue to dwindle.

On the flipside of the financial account, equity flows emanating from foreign ownership of domestic assets is expected to remain largely through the four quarters of 2020 as investors seek safer assets abroad to hedge against the risk of a global meltdown. Outlook for equity inflow into the Nigerian economy remains bleak and uncertain, considering interplays within the economy. In addition, preliminary reports from some rating agencies suggest that the Nigerian economy may be vulnerable to shocks from the global economy due to the combined impact of an oil price crash and the COVD-19 pandemic, exacerbated by the intense disruptions across the global supply chain.



Source: Statistics Department, CBN

Fig 11: Equity Flows

5.5. Trends in the International Investment Position (IIP)
The International Investment Position (IIP) is a statement of position which shows the composition and value of a country's external financial assets and liabilities. When a country has a positive IIP, it implies that the country is a net creditor while a negative IIP means the country is a debtor.

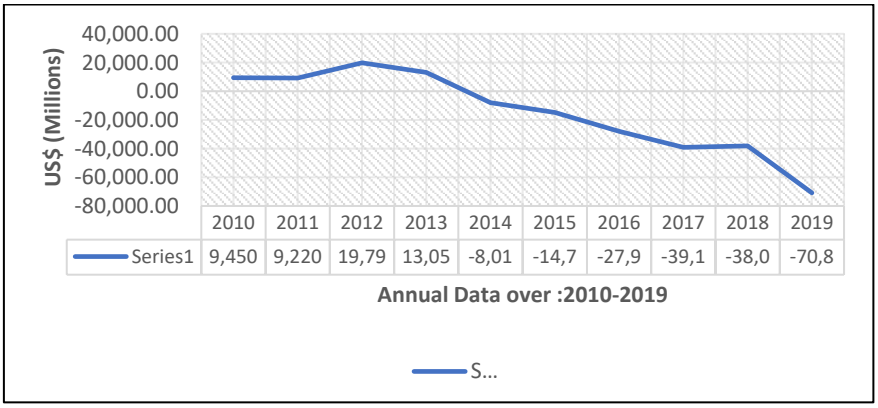


Fig 12: Net International Investment Position (IIP) 2010-2019 (US$ Millions)

Table 3: International Investment Position

Type of Asset/liability	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
	(US$ Million)	(US$ Million)	(US$ Million)	(US$ Million)	(US$ Million)	(US$ Million)	(US$ Million)	(US$ Million)	(US$ Million)	(US$ Million)
Net IIP for Nigeria	9,450.60	9,220.56	19,793.32	13,051.29	(8,019.21)	(14,742.78)	(27,971.24)	(39,121.25)	(38,099.06)	(70,842.51)
Asset	87,691.94	99,442.58	124,527.58	121,676.31	108,693.69	103,906.69	94,979.93	115,355.60	129,648.41	115,023.55
Direct investment abroad	12,576.43	12,507.77	13,145.29	13,704.07	13,139.49	11,630.16	7,751.31	8,036.64	8,574.19	8,850.65
Portfolio investment abroad	1,485.79	1,479.07	1,476.58	1,469.60	1,462.21	1,471.69	1,366.34	1,487.27	1,495.91	1,498.29
Equities	516.42	511.67	507.00	502.27	497.73	492.71	487.94	481.52	471.56	460.58
Debt securities	969.37	967.39	969.58	967.33	964.48	978.98	878.40	1,005.76	1,024.35	1,037.71
Trade credits	13,989.68	16,083.09	14,452.20	14,831.60	10,923.82	6,738.88	6,519.04	8,585.56	10,951.55	10,349.05
Other foreign assets	41,290.47	52,815.97	66,075.05	63,655.33	64,621.86	62,520.02	58,871.70	66,478.20	76,982.17	66,578.78
Loans	-	-	-	-	86.38	11.44	11.04	1.19	243.15	449.26
Currency and deposits	27,300.79	36,732.88	51,622.85	48,823.73	53,611.66	55,769.70	52,341.62	57,891.44	65,787.46	55,780.47
Reserve assets	32,339.25	32,639.78	43,830.42	42,847.82	29,470.01	28,284.82	26,990.58	39,353.49	42,594.84	38,092.82
Liabilities	78,241.34	90,222.02	104,734.01	108,625.02	116,712.78	118,649.47	122,951.17	154,476.85	167,747.47	185,866.06
Direct investment	50,972.74	59,302.48	65,473.65	73,166.93	77,830.78	81,423.17	85,104.52	88,917.22	95,318.48	98,617.57
portfolio investment	14,001.42	14,211.74	22,043.33	21,355.32	15,332.70	9,630.55	10,536.36	27,769.51	25,328.08	34,257.59
Equities	3,275.13	3,324.32	5,156.24	4,995.31	3,586.53	2,252.72	4,047.65	4,891.81	6,121.81	4,591.48
Debt securities	10,726.29	10,887.41	16,887.09	16,369.01	11,746.17	7,377.83	6,488.71	22,878.23	19,206.26	29,666.11
Other foreign liabilities	13,267.19	16,707.80	17,217.03	14,102.77	23,549.30	27,595.75	27,310.29	37,790.12	47,100.26	52,989.99
Trade credits	-	-	-	-	-	-	-	-	-	-
Loans	13,162.39	15,915.90	16,434.68	13,105.31	21,189.01	25,128.87	25,007.38	34,255.35	42,226.08	45,737.97
Currency and deposits	104.79	791.90	782.35	997.46	2,189.34	2,319.64	1,128.03	2,277.03	3,565.46	5,949.73

Source: CBN statistical Data Base, 2020

Because the IIP is a statement of position, it is traditionally reported on an annual basis. For the period 2010 – 2019, the trend in the IIP has been largely negative and showing a persistently downward slope. This suggests that for 2020, with the combined shock from the oil market and the disruptions to the global supply chain attributed to the COVID-19 pandemic, the IIP will likely move deeper into the negative territory, an indication of increased national debt

A trend analysis shows that the IIP attained a high net position of $19.79 billion in 2012 but declined immediately in 2013 by 34.26 per cent to $13.01billion. The decline continued in subsequent years reaching an all-time low of $-70.84 billion. This increase in net financial liability was largely accounted for, by the decrease in the stock of financial assets by 12.72 per cent to $115.02 billion at the end of December 2019, compared with $129.65 at end-December 2018. This was exacerbated by a simultaneous increase in the stock of financial liabilities by 10.80 per cent to $185.87 at end-December 2019 compared with $167.75 at end-December 2018. The sharp decline experienced in the IIP from 2014 coincides with the oil price crash that commenced in 2014 which tipped the Nigerian economy into a five quarter-long recession ending in the first quarter of 2017. Given the pressing need to exit the recession, the government opened the economy to foreign investment, leading to an increase in financial liabilities and thus widening its already negative IIP until it reached a low of $-70.84 billion in 2019. Nigeria is thus classified not just as a debtor nation but one facing the likelihood of a debt crisis.

The stock of financial assets decreased significantly in 2019, largely due to the slowdown in accretion to reserves and subsequent depletion of the external reserves to manage the emerging pressure on the exchange rate, decreased foreign currency holdings of banks and the private sector; lower trade credits compared to the preceding year 2018; and global rise in trade restrictions and increased macroeconomic uncertainties.

A breakdown of the components of Nigeria's financial assets shows that Foreign Direct Investments increased by 3.27 per cent to $ 8.85 billion compared with $8.57 billion as at end-December 2018. Similarly, portfolio assets increased slightly from $1.495 at end-December 2018 to $1.498 billion as at end-December 2019. Other Foreign Assets however decreased by 13.51 per cent to $66.58 billion as at the end-December 2019 from $76.98 billion as at end-December 2018 possibly due to the decrease in trade credit over the period. Trade credit also decreased slightly from $10.95 billion as at end-December 2018 to $10.35 billion as at end-December 2019. Although the Stock of Loans increased significantly, by 84.77 per cent, from $2.4315 billion as at end-December 2018 to $4.4926 billion as at the end-December 2019, Aggregate Currency and Deposit declined from $65.79 billion as at end-December 2018 to $55.78 billion as at end-December 2019, a magnitude of 15.22 per cent. The stock of Foreign Reserves also decreased by about 10.57 per cent to $38.09 billion as at end-December 2019 compared with $42.59billion as at end-December 2018. Judging as a ratio of Total Stock of Assets as at end-December 2019, Other Investment Assets took the large chunk of 57.9 per cent followed by Reserve Assets (33.12 per cent), Foreign Direct Investment (7.69 per cent) and Foreign Portfolio Investment by 1.30 per cent.

On the liabilities side, the total stock of financial liabilities increased by 10.80 per cent from $167.75 billion as at end-December 2018 to $ 185.87 billion as at end-December 2019. Broken down to its components, Portfolio Investment increased by 35.26 per cent to $35.26 billion as at end-December 2019 from $25.33 billion at end-December 2018 due to the rise in equity flows to $29.67 billion. Other Investment Liabilities which constitute foreign currency and loans increased by 12.50 per cent from $47.10 billion to $52.99 billion between as at end-December 2018 and end-December 2019 respectively. Foreign Direct Investment also increased by 3.46 per cent from $95.32 billion as at end-December 2018 to $98.62 billion at end-December 2019. The analysis of the stock of financial liabilities thus shows that Portfolio Investment accounted for the biggest chunk of financial liabilities followed by Other Investment Liabilities and Foreign Direct Investment liabilities. This huge portion of Portfolio Investment (FPI) thus indicates a weak investment position for Nigeria compared with the rest of the world as portfolio capital is characterized with high levels of volatility and the ability to cause sudden shocks to an economy due to their short tenor.

With the prevailing global challenges characterised by the combined shocks from low oil prices and the COVID-19 pandemic, Nigeria is very likely to be confronted with fiscal pressures, capital flight and exchange rate pressures in the light of a widening current account deficit, slowing accretion to external reserves and depleting external reserve position. The collective impact will result in a greater future negative position of the country's International Investment Position.

6. Responses of Other Jurisdictions to the Impact of Covid-19 on the External Sector

In response to the pandemic, countries all over the world have implemented a wide range of protective measures such as restriction on movement of people through closure of air and land borders, restriction on movements of goods with the exception of some goods such as medical equipments and agricultural products.

6.1. United States

The US is one of the worst hit countries with current statistics showing that COVID-19 has claimed the lives of over 250,000 Americans and infected more than 14,000,000 persons across all the 50 states. As such, the pandemic has adversely affected the macroeconomic condition with the external sector being among the major casualties. The US trade deficit narrowed by 12.3 per cent in February 2020 from an upwardly revised US$45.5 billion in the previous month. It is the lowest trade deficit since September 2016. The Foreign exchange reserves in the United States decreased by about 0.4 per cent in March, relative to the level in February 2020. The Foreign Direct Investment (FDI) and the external debt followed a similar downward trend. External debt in particular decreased by about 0.04 per cent in the fourth quarter of 2019, in relation to the third quarter of 2019.

In response to the aforementioned, the U.S. has implemented a range of measures to curtail the impact of COVID-19 on the external sector. To help ensure well-functioning global agriculture and agricultural food supply chains, the US and committee of agriculture are committed to the following measures: ensure that updated and accurate information on levels of food production, consumption and stock, as well as food prices are widely available, including through existing

international mechanisms; engage in a dialogue to improve the preparedness and responsiveness to regional or international pandemic, including multilateral coordination to limit unjustified agriculture export restrictions, in particular at the WTO.

Actions or measures taken in the US, to reduce the impact of COVID-19 on trade and trade related issues include: temporary exclusion of certain products from additional duty of 25 per cent on a list of 19 products from China imposed in September 2019; initiation of an investigation by the United States International Trade Commission aiming at identifying imported goods related to the response to COVID-19, their source countries, tariff classifications, and applicable rates of duty; temporary postponement of the time to deposit certain estimated duties, taxes, and fees during the national emergency concerning the novel coronavirus disease (COVID-19) outbreak; temporary rule by the Federal Emergency Management Agency (FEMA) allocating certain scarce or threatened materials for domestic use, so that these materials may not be exported from the United States without explicit approval by FEMA, due to the COVID. Pandemic; Presidential Memoranda allocating to domestic use of certain personal protective equipment (PPE).

6.2. United Kingdom (UK)

Coronavirus has been spreading rapidly across the UK with over 1,600,000 confirmed cases claiming more than 60,000 lives. The UK posted a GBP 2.79 billion trade deficit in February 2020, compared to GBP 2.79 billion surplus in the previous month. Exports tumbled by 5.8 percent to a nine-month low, due to a 10.8 percent drop in goods shipments and a 0.1 percent in service export. On the other hand, imports rose to 3.0 percent on the back of a 6.0 percent advance in goods purchases. However, foreign exchange reserves in the United Kingdom increased to $175,121.55 million in March from 172496.65 USD million in February 2020. Due to the coronavirus pandemic, the British pound dropped by 0.4 per cent in April 2020, it's the highest drop since November 2018. The United Kingdom's foreign direct investment (FDI) dropped by 11.6 percent USD in December 2019, compared to an increase of 23.5 USD in the previous quarter.

In response to the above, the government has implemented a range of measures to curtail the impact on the external sector, these include actions relating to COVID-19 trade and trade related nexus measures: temporary elimination of import tariff on medical supplies, equipment and protective garments brought into the UK from non-EU countries; temporary export ban including parallel exportation from the UK of certain medications needed to treat COVID-19 patients in ICU and other settings for the protection of UK public health.

To help ensure well-functioning global agriculture and agric food supply chains in response to coronavirus collectively the United Kingdom and committee of agriculture are committed: to ensuring that supply chains remain open and connected so that international markets can continue to function in supporting the movement of agricultural products and agriculture inputs, which plays an instrumental role in avoiding food shortages and ensuring global food security, and all goods that comes into the country must be disinfected; not to impose agriculture export restrictions and refrain from implementing unjustified trade barriers on agriculture and agri-food products and key agricultural production inputs. Apart from the above measures, the Bank of England (BoE) has also put in place measures to help curb the impact of Covid19 on the external sector.

6.3. China

It is known that China accounts for 30 percent of world output growth, which means they have a major contribution in the growth of the global economy. COVID-19 has impacted on the external sector of China in two major ways which are: United State Tech policy divorce and the deconstructed supply chains with her industries globally. China due to the COVID-19 outbreak had an FDI of $31.2 billion as at the end of the first quarter of 2020. The gold reserve in China due to the impact of COVID-19 in China fell to $100.79 billion at the end of March from $100.85 billion at the end of February. The external debt in China increased from $19,652.14 million in 2018 to $20,573 million in 2019; it is expected to reach $23,000.00 million by the end of 2020. The balance of trade of China fell to $19.9 billion as at March 2020 from $31.5 billion as at March 2019.

In response to the above developments, the government of China has implemented a range of measures to curtail the impact on the external sector, in concrete term, China slowed down acceptance of US equipment (machine parts); they diversified their sources to European Union, Japanese and South Korean Products, which they preferred as better substitutes to the United States products; they also tried to achieve the objective of being self-sufficient in most critical sectors of the market.

6.4. Japan

As at 23rd April 2020, Japan has reported 11,950 confirmed COVID-19 cases and 299 deaths. In response to the outbreak, the authorities have taken several measures to curtail the spread of the virus. Japan's trade surplus plunged to JPY 4.95 billion in March 2020 from JPY 517.29 billion in the same month last year. Export dropped by 11.7 percent year-on-year to JPY 6.36 trillion in March 2020.

Foreign direct investment in Japan increased by 1,214.29 JPY billion in February 2020. Japan foreign external reserve increased to $1,296.7 billion in March 2020 compared with 1,289.3 billion in the previous month, showing an increase of about 0.5 per cent. External debt in Japan decreased by about 1.4 per cent, with 460,580 JPY Billion in the fourth quarter of 2019 from 467,002 JPY Billion in the third quarter of 2019.

In response to this, the government has implemented a range of measures to curtail the impact on the external sector, include the followings: prioritization of customs clearance for relief goods relating to countermeasures to the COVID-19 and other goods that require an urgent clearance to maintain the lifeline; simplified export declaration forms for relief goods relating to countermeasures to the coronavirus pandemic.

To help ensure well-functioning global agriculture and agric food supply chains in response to coronavirus, collectively Japan and committee on agriculture are committed to: exercise restraint in establishing domestic food stocks of agricultural products that are traditionally exported so as to avoid disruptions in international trade; support the efforts of the WTO and other international organizations in analysing the impacts of COVID-19 on agriculture and agri-food trade and production; the exchange rate has been allowed to adjust flexibly, the country has also enacted fiscal and monetary policy measures.

6.5. India

Since the country's first reported case of the novel coronavirus (COVID-19) on the 31st January 2020, over 21,000 active cases have been reported with over 681 disease related deaths. On March 24, the Prime Minister announced the lockdown of the entire country for 21 days, which was later extended to May 3, 2020. Prior to this announcement, several measures to contain the virus had already been imposed ranging from travel restrictions; temporarily shutting down of various institutions such as educational establishments, gyms, museums, and theatres; bans on mass gatherings; and encouraging firms to promote remote work. In addition, The Reserve Bank of India (RBI) has taken several steps to help manage the damaging effects of COVID-19 on their economy. The decisions taken by the apex authority (include: reduced repo rate; liquidity injection to the tune of 3.7 trillion Rupees; cash reserve ratio (CRR) cut; among others) has been in an effort to ease liquidity in the system.

The government of India has implemented a range of measures to curtail the impact of COVID-19 on the external sector. On the front of the external sector, according to the IMF, the apex Bank took some steps to ease the dollar credit crunch in the economy on March 16, by announcing a second Foreign Exchange (FX) swap of 2 billion USD for 6 months to ease the pressure of the rupee. More so, the Bank increased the limit for Foreign Portfolio Investment (FPI) in corporate bonds to 15 percent of outstanding stock for the financial year of 2020 - 2021. Furthermore, restrictions previously placed on non-resident investment in specified securities issued by the Central Government has been removed. India, amongst other countries, has implemented multiple export curbs on medical supplies and medicines associated with the COVID-19 pandemic.

6.6. Egypt

According to the WHO, as of April 23, 2020, Egypt had a total of 3,659 confirmed cases of COVID-19 and 276 related deaths. Owing to the COVID-19 pandemic, Egypt is experiencing a drastic decline in travel and tourism which is a major source of revenue for the Egyptian economy, therefore, putting a damper on the country's GDP. This slowdown in GDP growth may likely lead to reduced employment wages, a decline in domestic activities and an increase in portfolio investment outflows. Consequently, an increase in portfolio investment outflows coupled with a widening current account deficit, might put a downward pressure on the Egypt's international reserves and on the exchange rate.

Concurrently, a weaker demand in the global market will also reduce Egypt's exports as well as earnings from the Suez Canal and remittances from Egyptian's living abroad. The Egyptian authorities are actively implementing measures to contain economic implications of the pandemic.

In response to above development in Egypt, the government has implemented a range of measures to curtail the impact of the pandemic on the external sector. The Egyptian authorities have suspended the export of all types of legumes for a period of 3 months and plan to start increasing strategic food reserves to meet domestic demand. Despite the adverse effects the pandemic would have on the economy especially vulnerability to external shocks, the apex authorities are yet to take any stringent measures to cushion these impacts.

6.7. Ghana

Ghana before this pandemic had an export that forms 33.6 per cent of her GDP, and an import that forms 34.7 per cent of its GDP. This shows that Ghana is dependent on international trade, because a total of the export and import would be 68.3 per cent of its GDP. It is known that China is Ghana's largest import partner and second largest export partner before India. This made the external sector in Ghana to fall due to trade restrictions among this country especially China due to the lockdown. It is known that the top trading partners of Ghana which are; United Kingdom, Switzerland, United States of America, Belgium, South Africa, Netherlands, India, and China are all victims of the pandemic (COVID-19). COVID-19 also brought about a fall in the foreign direct and portfolio investment in the country and also capital flight, a squeeze in the foreign reserve and there was few funding from foreign sources. All these shocks occurred in Ghana because her trading partners are also a source of her FDI. Ghana would have turned to oil for a source of revenue, but with the fall in the oil price almost approaching negative. Ghana therefore is forced to neglect the oil sector as a form of revenue in the period of the pandemic in Ghana.

The reaction of different variables of the external sector of Ghana's economy due to the impact of COVID-19 pandemic are as follow: there was a decrease in foreign exchange reserve from $8,418.08 million in December to $8,249.57 million in January 2019. It is expected to be at $7,600.00 million by the 2020Q2; an increase in the external debt of Ghana from USD 20100 million in the third quarter of 2019 to USD 20300 million in the fourth quarter of 2019. It is expected to be at USD 20333.00 million by the end of this quarter; the balance of trade in Ghana as at February 2020 was 487.80 USD million and it is expected to be at USD 150.00 million at the end of this quarter.

Measures employed in addressing the issue include request for an external assistance of about $540 million from IMF (International Monetary Fund) and World Bank in order to avoid a balance of payments crisis; the use of drones to scale up testing; and as well as laid off the lockdown on some cities in the country.

6.8. South Africa

South Africa witnessed its first coronavirus from a citizen returning from Italy, on the 5th of March 2020. The government of South Africa issued a lockdown starting from the 26th of March. While on the 23rd of March, the government of South Africa announced that there would be a lowering of the lockdown in phases. These actions have had some impacts on the different variables of the external sectors which are: The highest number of investors in South Africa are from China. With the outbreak of the COVID-19 pandemic there have been a fall in the number of investors from China. In the fourth quarter of 2019, foreign direct investment of South Africa increased by 10528zar billion. There is an expectation that the FDI of South Africa would be 15000.00 ZAR billion by the end of this quarter, due to the impact of COVID-19. The South Africa rand has not been stable. The exchange reserve of South Africa dropped to USD 52.43 billion in March 2020 from $54.71 billion in the previous month, which shows about 4.2 per cent decrease. This contradicts the market expectation of about 54.80 billion dollars. In the month of April, South Africa recorded a trade deficit, due to the COVID-19 pandemic. This was because there was a decrease in items exported hitherto due to the

lockdown effect.

Due to the effect of COVID-19 on the external sector of South Africa, the Trading Economics Global Macro Model forecasts that the external debt of South Africa is expected to be USD 1740.00 billion by the end of 2020Q2. There was a trade surplus of $0.77 billion in February 2020, but by the end of this quarter, it is expected to be at $-7.07 billion.

Measures so far employed by South Africa in Addressing the Issue are as follow: South Africa have to test in masses (over 150000); in the aspect of Balance of Payments and exchange rate, the Central Bank of South Africa (SARB), announced that it would still maintain its practice of not intervening in the foreign exchange market

7. Results of the Structural Vector Auto Regressive Model

As contained in the pre-estimation analysis, the cointegration test reveals that there is at least one cointegrating equation in the model which confirms the long-run relationship in the model despite the short-run disequilibrium. The VEC Residual Serial Correlation LM Tests was estimated, and the result fails to reject the null hypothesis of no serial correlation at all the lags in the model (see Appendix 1). To ensure the stability of the estimated models, the inverse roots of the characteristic polynomial was estimated, and the result is as contained in Figure 1 below. Since all roots have modulus less than one and lie inside the unit circle, it confirms the stability of the VEC, confirming the validity of the impulse responses from the model.

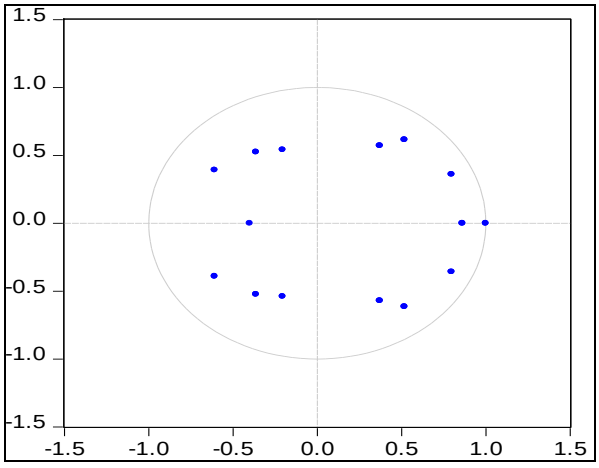


Fig 13: Inverse roots of the characteristic AR polynomial

7.1. Impulse Response Functions

Figure 7.2 below contains the response of the total import to a one standard deviation shock on the policy variables. The result shows that the value of the total import responds positively to a positive shock on exchange rate within the period of the shock, increasing to 60,000 basis points within the first quarter and over 75,000 basis points within the third quarter. However, there will be a drastic decrease in the value of import after the thirst quarter. This signifies that in the short-run, Nigeria's import value do not respond in line with economic theory to changes in the exchange rate, explaining the country's affinity to imported goods. On the other hand, a one standard deviation shock on the interest rate leads to a decrease in import to around 20,000 basis points from the immediate period to the second quarter. After the second quarter, however, the import will start trending up again.

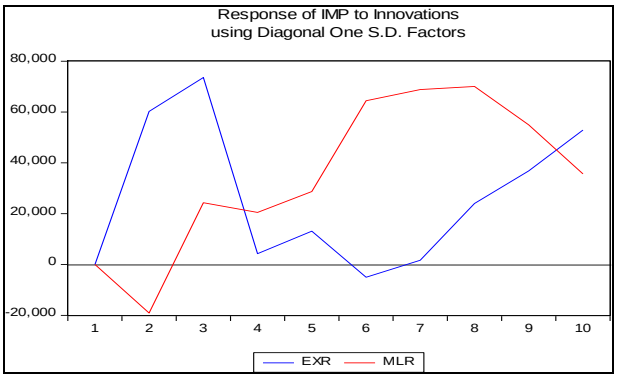


Fig 14: The Response of Total Import to Shocks on the Policy Variables

The response of total export to shocks on the policy variables is as contained in Figure 3 below. The result shows that the value of the total export responds positively to positive shocks on the exchange rate, meaning that increases in exchange rate increase the value of the Nigerian export. This is in line with economic theory as it makes the country's export cheap relative to that of their trading partners and increases its competitiveness.

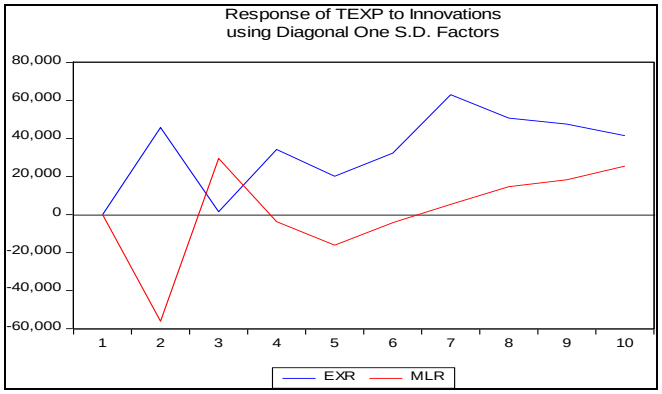


Fig 15: The Response of Total Export to Shocks on the Policy Variables

On the contrary, the value of the total export responds negatively to positive shocks on the interest rate. By implication, a decrease in the domestic interest rate increases the value of the total export from the country. This can be explained based on the impact of the interest rate on domestic productivity.

7.3. Simulation Results Within-Sample Structural Macroeconomic Model (SMM)

The SMM model for the three endogenous variables was solved using the Broyden solver. The process of the in-sample simulation was done by reducing the sample from 2010Q1-2020Q1 to 2010Q1-2019 Q1. This is to aid the comparison of the actual and simulated within-sample values for all endogenous variables against the time series data on all endogenous variables. This will serve as a baseline for further simulations.

The result of the within-sample simulation revealed that the simulated results for the selected components of the external sector perform very well in forecasting the response of the endogenous variables to shocks. (see Table 1)

Table 4: Comparison of Within-Sample Simulation and Actual Values of the Endogenous Variables

	Within-Sample		Actual values	
Date	IMP	EXP	IMP	EXP
2019Q2	15.27958	15.18158	15.34	15.25111
2019Q3	15.4177	15.27262	15.40	15.32448
2019Q4	15.46486	15.30345	15.56	15.48151
2020Q1	15.5752	15.41372	15.35	15.28087

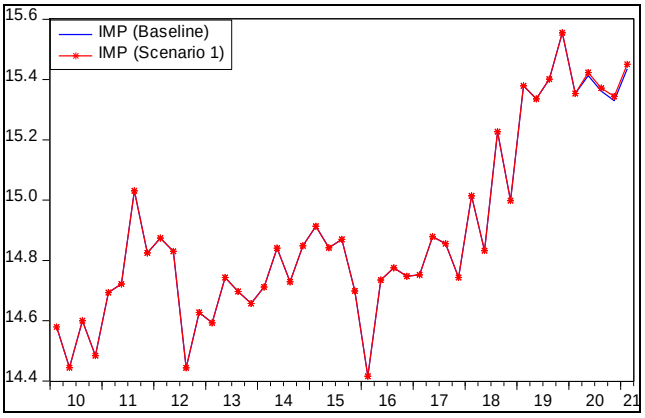
Source: Computed by Authors Using Data from the Central Bank of Nigeria's Monthly Report (2020)

7.4. Scenario Analysis

Between the last quarter of 2019 and the first quarter of 2020, there has a been 0.55 per cent decrease in the interest rate and a 2.13 per cent increase in the exchange rate and these will form the first scenario.

Impact of the Simulations on import

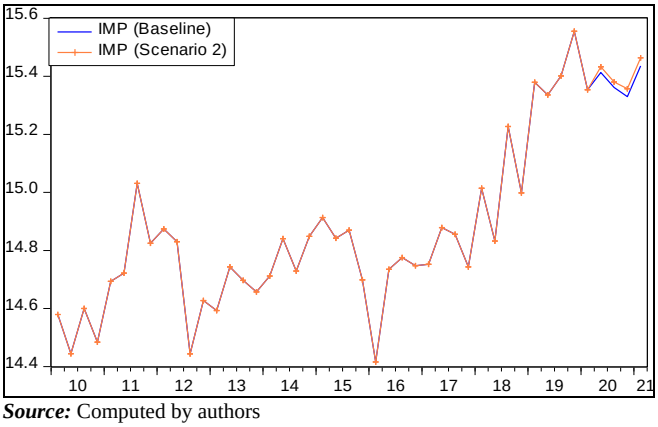
Scenario 1 simulates the effect of 0.55 per cent decrease in the interest rate on imports. The result shows that imports would increase by 0.07 per cent of other things being equal.



Source: Computed by authors

Fig 16: Scenario Analysis of the Effect of 0.55 per cent Decrease in the Lending Rate on Imports

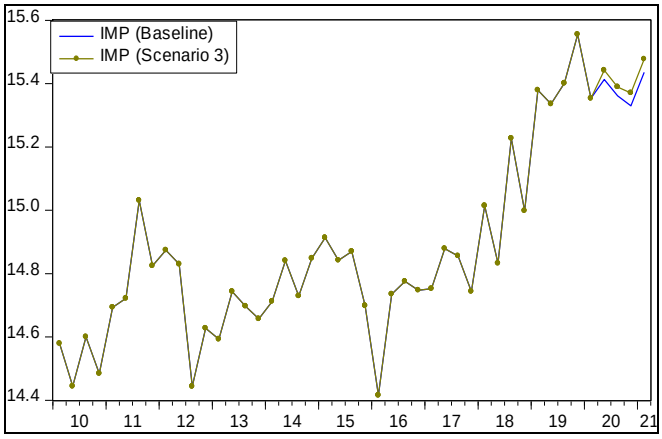
Scenario 2 examines the effect of 1.10 per cent decrease in the interest rate on the level of imports. The result shows that if the interest rate decreases by 1.10 per cent, imports will further increase by 0.195 per cent.



Source: Computed by authors

Fig 17: Scenario Analysis of the Effect of 1.10 per cent Decrease in the Lending Rate on Imports

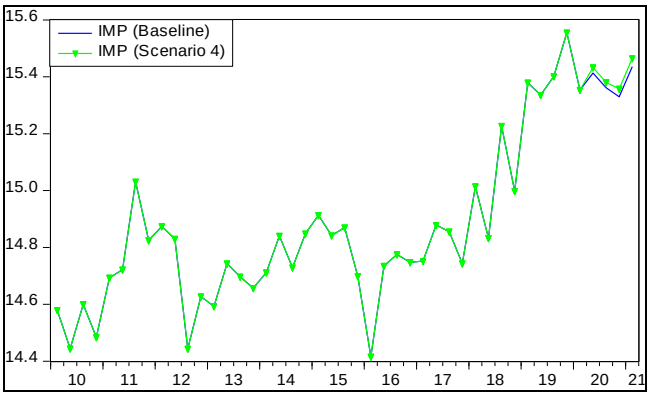
The response of imports to 1.65 per cent decrease in interest rate was simulated in scenario 3. The result shows that in response, Imports will increase by 0.26 per cent.



Source: Computed by authors

Fig 6: Scenario Analysis of the Effect of 1.65 Per Cent Decrease in the Lending Rate on Imports

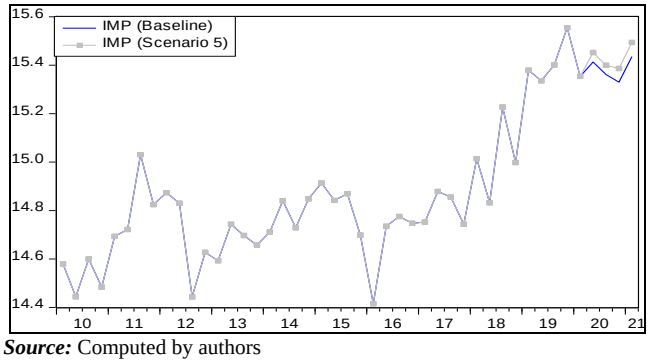
Scenario 4 examines the effect of 2 per cent shock in the exchange rate on Nigeria's import. The result shows that if the exchange rate increase by 2 per cent, imports will increase by 0.18 per cent.



Source: Computed by authors

Fig 18: Scenario Analysis of the Effect of a 2 Per Cent Increase in the Exchange Rate on Imports

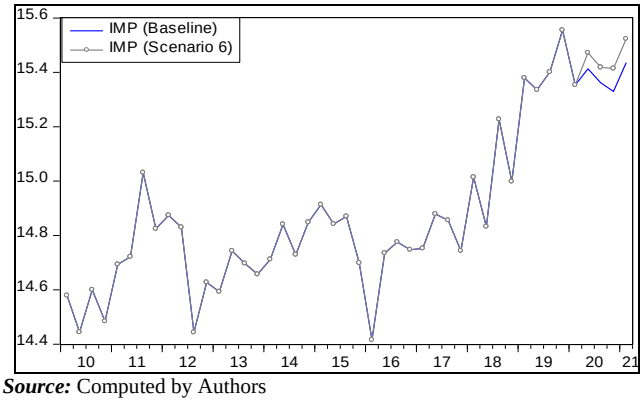
The response of imports to a 4 per cent increase in the exchange rate is examined in this scenario. The result of the simulation shows that imports will increase by 0.32 per cent if the exchange rate increases by 4 per cent.



Source: Computed by authors

Fig 19: Scenario Analysis of the Effect of a 4 per cent Increase in the Exchange Rate on Imports

Scenario 6 forecasts the effect of a 6 per cent increase in the exchange rate on imports. The result of the simulation shows that if the exchange rate increases by 6 per cent, imports will increase by 0.52 per cent.



Source: Computed by Authors

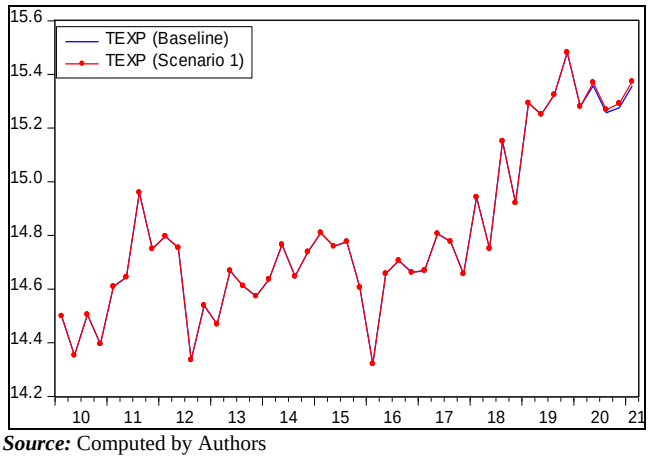
Fig 20: Scenario Analysis of the Effect of a 6 per cent Increase in the Exchange Rate on Imports

The exchange rate scenarios reflect the current import-dependent and nature of the Nigerian economy and Nigerians high affinity for imports. An increase in the exchange rate increases the prices of imports and should normally decrease their demand. On the contrary, the simulations show that this will not happen in the case of Nigeria as the value of imports will still be increasing. This reveals the inelastic nature of Nigeria's imports to both interest and exchange rate changes.

7.5. Exports

This section examines the effects of changes on interest and exchange rates on exports in Nigeria. The first scenario captures the real changes in the variables observed between the last quarter of 2019 and the first quarter of 2020, while the forecast covers from the second quarter of 2020 to the first quarter of 2021. To this effect, the first three scenarios examine the response of exports to 0.55, 1.10, and 1.65 per cent decrease in interest rate (lending rate) respectively, and the last three examines the effect of increases in the exchange rate on exports in Nigeria.

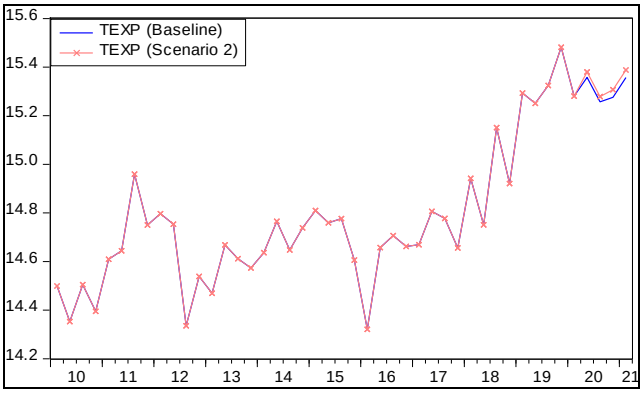
Scenario 7 examines the effect of 0.55 per cent decrease in the interest rate on export in Nigeria within the second quarter of 2020 to the first quarter of 2021. The result of the simulation shows that if interest rate decreases by 0.55 per cent, exports will increase by 0.07 per cent.



Source: Computed by Authors

Fig 21: Scenario analysis of the effect of 0.55 per cent decrease in the lending rate on exports

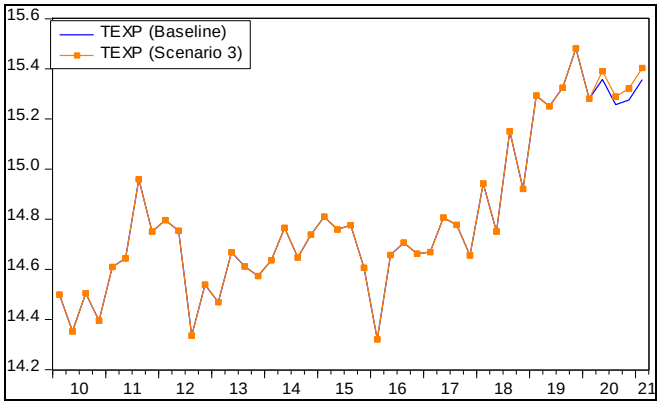
Scenario 8 examines the effect of 1.10 per cent decrease in the interest rate on exports in Nigeria. The result of the estimation shows that if there is a 1.10 per cent decrease in interest rate, exports will increase by 0.19 per cent.



Source: Computed by authors

Fig 22: A Scenario Analysis of the Effect of 1.10 per cent Decrease in the Lending Rate on Exports

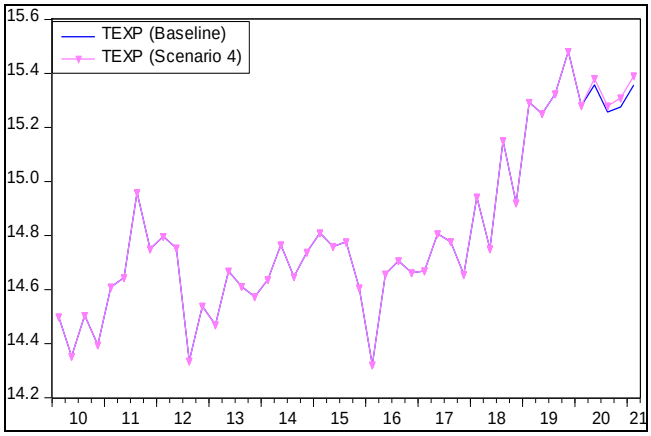
The result of the simulation done in scenario 9 shows that 1.10 per cent decrease in interest rate will lead to a 0.32 per cent increase in exports.



Source: Computed by authors

Fig 23: Effect of 1.65 per cent decrease in the Lending Rate on Exports

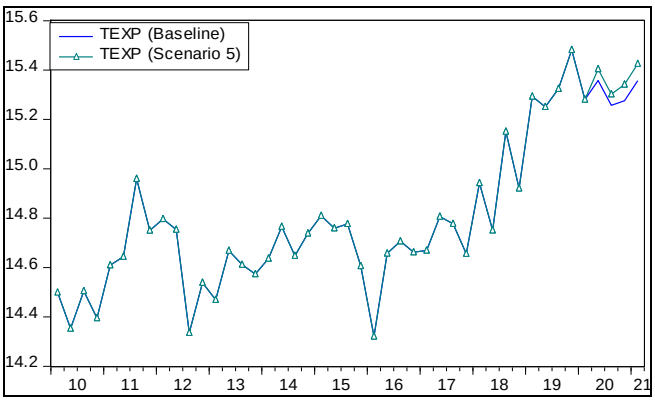
The analysis in scenario 10 shows that if the exchange rate increase by 2.13 per cent, exports will increase by 0.19 per cent.



Source: Computed by Authors

Fig24: A Scenario Analysis of the Effect of a 2 Per Cent Increase in the Exchange Rate on Exports

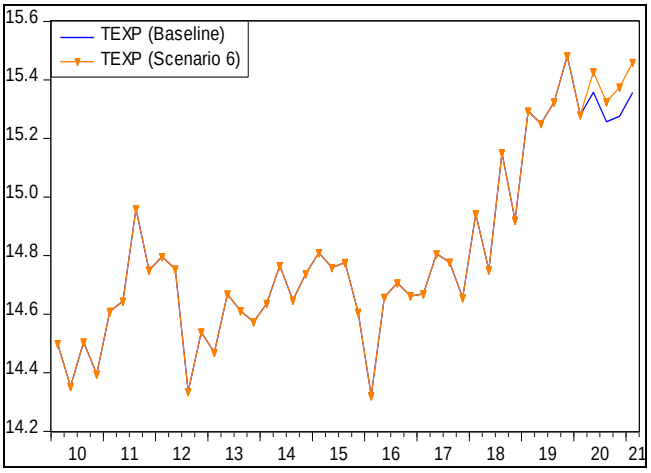
Scenario 11 analyses the response of exports to 4.13 per cent increase in the exchange rate. The result of the simulation shows that exports increase by 0.39 per cent in response to 4.13 persistent increase in the exchange rate.



Source: Computed by authors

Fig 25: Effect of a 4 Per Cent Increase in the Exchange Rate on Exports

Scenario 12 examines the effect of 6.13 per cent increase in the exchange rate on exports. The result shows that if there is 6.13 per cent increase in the exchange rate within the period of simulation (2020Q2 to 2021Q1), exports will increase by 0.39 per cent.



Source: Computed by Authors

Fig 26: Effect of a 6 per cent increase in The Exchange Rate on Exports

Monetary policy tools employed in these analyses are used to simulate the changes in exports if there is a change in both the interest and the exchange rates. The results have all shown that an increase in the exchange rate causes exports to increase. This is quite in line with rational expectations as domestic goods would be cheaper in the international market. Also, the decrease in the interest rate causes exports to increase.

7.6. Trade Balance

In this study, the trade balance equation is treated as an identity whose position is determined by taking the difference between the simulated values of exports and imports. A positive result would imply that there is a positive (surplus) trade balance. However, a negative difference would imply a negative (deficit) trade balance.

Table 4: Scenario Analysis of the Trade Balance

BOT_0	BOT_1	BOT_2	BOT_3	BOT_4	BOT_5	BOT_6
-0.05498	-0.05372	-0.0515	-0.04929	-0.0501	-0.04671	-0.06637
-0.10472	-0.10332	-0.101	-0.09869	-0.09958	-0.09592	-0.11493
-0.05397	-0.05219	-0.04908	-0.04599	-0.04696	-0.04208	-0.07029
-0.07855	-0.07682	-0.07375	-0.07069	-0.07144	-0.06655	-0.09576

Source: Computed by Authors

The result of the analysis shows that for every scenario, the trade balance has been in an unfavourable position. However, it has also revealed that the extent of deficit recorded in the third and fifth scenarios are more accommodative. In other words, when the interest rate decreases by 1.10 per cent, and the exchange rate increases by 6.13 per cent, the trade deficit is lesser than in the other scenarios.

8. Summary, Recommendations and Conclusion

8.1. Summary

In view of the intensity and widespread nature of the pandemic on the external sector, it is not likely that the adverse impacts could be completely eliminated in the short run. Consequently, measures would be in phases: in form of short and medium term basis. With respect to the effect on capital and financial accounts in particular, the success of containment efforts is not only dependent on measures taken by the government but equally contingent on the benevolence of creditor nations in terms of debt obligations. The impulse response from SVAR dynamic model show that the value of the total import responds positively to positive shocks on the exchange rate within the first three quarters and negatively to positive shocks on the interest rate within the first two quarters. Along the same line but at a smaller degree, the value of the total export responds positively to a positive shock on the exchange rate but negatively to a positive shock on the interest rate both within the first two quarters. The scenario analysis confirms this by showing that the effect of a decrease in interest rate is an increase in import. That is, if the interest rate decreases, the value of imports will increase. It further revealed that the import value responds positively to all the three simulations of an increase in the exchange rate.

8.2. Recommendations

As the country is currently enjoying an uninterrupted democracy since 1999 – 2025, stability of government no doubt would hasten the pace of infrastructural development especially the health sector. Based on the analysis above as well as leveraging on experiences from other countries, the following measures are proffered to guide Nigeria policy makers on what to do should such a pandemic happens in future.

Short Term Measures

- A closer look at the results of both the impulse response and the scenario analysis reveals that monetary tightening may not be a policy option for the country as it increases the value total value of import more than it increases the total value of export, worsening the balance of trade. On the other hand, a decrease in the domestic interest rate increases both the value of the total import and that of the total export. Thus, the study, therefore, recommends that reduction in the domestic interest rate is the most vital policy to improve the country's balance of trade. Precisely, policies that would drive the lending

rate towards a single-digit should be employed. This can be achieved by a deliberate reduction of the monetary policy rate or direct intervention in the financial sector to ensure the availability of credit.

- Increase in Nigeria's participation in global value chain that will make impossible for it to import a finished product. This can be achieved by using the WTO rules of origin whereby semi-finished products attract lesser import duty relative to finished product. This will reduce significantly the 100 % income reparation
- There is a need to ensure adequate supply of food within the domestic economy and perhaps to enhance seamless operations of the palliative measures to the weak and the vulnerable. In this regard the government can take a cue from the operation of the Committee on Agriculture in the US by collecting an up-to-date data on levels of food production, consumption and stock, as well as food prices. This should be done in collaboration with NBS and National Strategic Grain Reserve with a view to having accurate information on the stock of grain reserves, rate of depletion, and plan to meet shortages.
- Following from the last point above, there could be temporary import of certain food items to meet supply gap in Nigeria
- Taking a cue from the US Committee on agriculture, efforts should equally be made to moderate food exports during this period except for those food items where the country has sufficient reserves that can outlast the pandemic.
- The Federal Government could temporarily emulate the UK response, of eliminating import tariffs on medical supplies, equipment and protective garments into the country. All imports of goods must be disinfected and refrained from unjustifiable trade barriers

Medium Term Measures

- There is need to stop open-ended loan acquisition that are not project-tied. Project-tied-loans are directly supervised by the multilateral agencies that granted them. In this case loan default is assumed when such loans are used for purposes other than the specific loan out in the agreement.
- In the medium and long-term, government should deliberately identify indigenous comparatively advantaged agro-allied companies in all the six geo-political zones for needs assessment and capital injection on Build, Operate and Transfer public-private partnership agreement. Both the Federal and sub-national governments should work out the modalities of providing farmers with improved quality seeds and fertilisers with the expectation for higher yield in the future. This could also be supported with a good enabling environment for farmers to sell their products
- Nigeria could emulate China's newly adopted rebalancing model by shifting industrialization strategy from export-led model to import substitution model. Beside the fact that this model engenders an all-inclusive growth, the country's large population and favourable demographic profile offers a great deal of prospect for the success of this approach.
- On medium- and long-term basis, dedicating resources to promote technological advancement is important for Nigeria economic sustainability

8.3. Conclusion

The COVID 19 pandemic has far reaching implications on the external sector but the effect created were without opportunities. The analysis revealed that the adverse impact on current account would be moderated by declining import bills and therefore, the country could leverage on the unfolding scenario to embrace import substitution strategy. Among other key recommendations, the Central Bank should consider loosening monetary policy stance as tightening could be counterproductive on the external sector. Indeed, tightening through increase in interest rate could aggravate the import bills without commensurate increase on export, accentuating trade imbalance. To complement the conventional monetary policy tools on the backdrop of the rising challenges in the real sector, it is recommended that the Bank rethink its intervention measures and collaborate with institutions and agencies that have more capacity. On the whole, the challenges inherent in the pandemic were quite novel, and as such suites of policies should be employed in future as no policy has the monopoly of solving all the problems as recommended above.

Appendix 1

VEC Residual Serial Correlation LM Tests
Date: 07/16/20 Time: 11:50
Sample: 2010Q1 2021Q1
Included observations: 38

Null hypothesis: No serial correlation at lag h

Lag	LRE* stat	df	Prob.	Rao F-stat	df	Prob.
1	28.79283	25	0.2727	1.199066	(25, 38.7)	0.2997
2	57.53034	25	0.0002	3.322738	(25, 38.7)	0.0004
3	27.53393	25	0.3298	1.131015	(25, 38.7)	0.3580

9. References

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