NATIONAL BUREAU OF STATISTICS

Nigeria in 2014: Economic Review and 2015 – 2017 Outlook

NATIONAL BUREAU OF STATISTICS

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Table of Contents

Executive Summary: Crises and Opportunities **4**

Introduction **6**

PART A: Review of the Nigerian Economy in 2014 ..... **6**

1.1 Quarterly Growth **6**
1.2 Oil Sector Growth **7**
1.3 Non-Oil Sector Growth **8**
1.4 Agriculture **9**
1.5 Industry **11**
1.6 Services **12**

2.0 Inflation **13**

2.1 Headline Inflation **13**
2.2 Core Inflation **14**
2.3 Food Inflation **15**

3.0 International Trade **16**

3.1 Imports **16**
3.2 Exports **20**
Total Quarterly Merchandise Trade **23**
3.1 Trade Balance **23**

SECTION TWO: 2015 to 2017 Economic Projections **25**

2.1 Introduction and Overview of Methodology **25**

2.2 Discussion on the 2015 to 2017 Projections **25**

2.3 Gross Domestic Product **27**

INFLATION **28**

TRADE **30**

Appendix **31**

Executive Summary: Crises and Opportunities

The Nigerian economy is facing challenges which seem to occur just about every decade: a decline in crude oil prices. As the country is an oil exporter, the decline in crude oil prices is a downside to the economy in both the short and medium term. Yet, given that reserves are also down relative level accumulated over the previous years --as of November 2014, Official Adjusted Reserves according to the Central Bank of Nigeria (CBN) were down roughly 23.1 percent relative to January 2013 to 35.2 billion)-- the fact that Nigeria is also an importer of refined petroleum products means that it could do away subsidy payments on such items. This will bode well for the government coffers.

In addition to declining crude prices, the Nigerian economy is faced with other headwinds; as a result of declining crude oil prices, the supply gap in the foreign exchange market is likely to increase as the demand for dollars outpaces supplies, putting pressure on the Nigerian Naira. As in the past, the CBN is likely to intervene to achieve its mandate of price stability, but this will come at the cost of depleting reserves.

Again, while the risks to growth do pose challenges, the Federal Government via its Economic Management Implementation Team had anticipated, discussed, and formulated policies with the view of a negative price shock on crude oil prices some of which had been rolled out by the Coordinating Minister of the Economy during her 2015 budget presentation; shoring up non-oil revenues by increasing the tax base, while cutting back on government expenditures.

The crude oil price shocks, the resulting declining government expenditure and its multiplier effects are likely to impact businesses as well. Nevertheless, prioritization of infrastructure such as roads and power are likely to mean that while growth may slow, it is likely to be stable. While growth is expected to peak at 6.79 percent in 2014, the economy is expected to grow by 5.5 percent in 2015, as the non-oil sector

of the economy is expected to drive growth. Over the 2015 through 2017 period, growth is expected to average 5.7 percent.

	2011	2012	2013	2014e	2015f	2016f	2017f
REAL GDP GROWTH	5.31	4.21	5.49	6.23	5.54	5.78	5.80
INFLATION	10.83	12.22	8.50	8.05	8.78	8.10	7.52
TOTAL TRADE	49.21	-4.30	-24.26	18.40	9.66	2.48	3.01

Some have speculated that there are likely to be increased pressures on prices as a result of the election period, a review of the historical time series in the current democratic dispensation reveals that this is unlikely to be the case. In the previous four elections of; 1999, 2003, 2007 and 2011, only one election year actually had an increase in the inflation index. Lagged effects may however exist as the headline index was higher the year after the election in all cases. Nevertheless, upward pressure on inflation rates are likely to be caused by the recent depreciation of the Naira. While inflation is projected to rise to rise to 8.8 percent in 2015, it is expected to remain moderately stable averaging 8.13 percent over the 2015 to 2017 period.

Finally, although the decline in crude oil prices may weigh on the value of oil exports, the recent depreciation of the local currency is expected to bode well for non-oil exports. The depreciation also means that imports are likely to be more expensive and are likely to slow going forward. The value of Total Trade is projected to increase by 9.66 percent in 2015, and average 5.05 percent over the forecast period.

Introduction

PART A: Review of the Nigerian Economy in 2014

1.1 Quarterly Growth

Gross Domestic Product showed real year on year growth of 6.21% in the opening quarter of 2014, a rate that was 0.56% points lower than that of the preceding quarter, yet 1.76% points greater than that recorded in the corresponding quarter of 2013. At 6.54%, second quarter growth was 0.33% points higher than that of the first and was also over a percentage point greater than the rate of 5.40% recorded in the corresponding quarter of the previous year. The third quarter, relative to the second quarter, saw a slight slowdown in growth, of 0.32% points to 6.23%. Nonetheless, this remained 1.06% points greater than the year on year rate of 5.17% recorded in 2013.

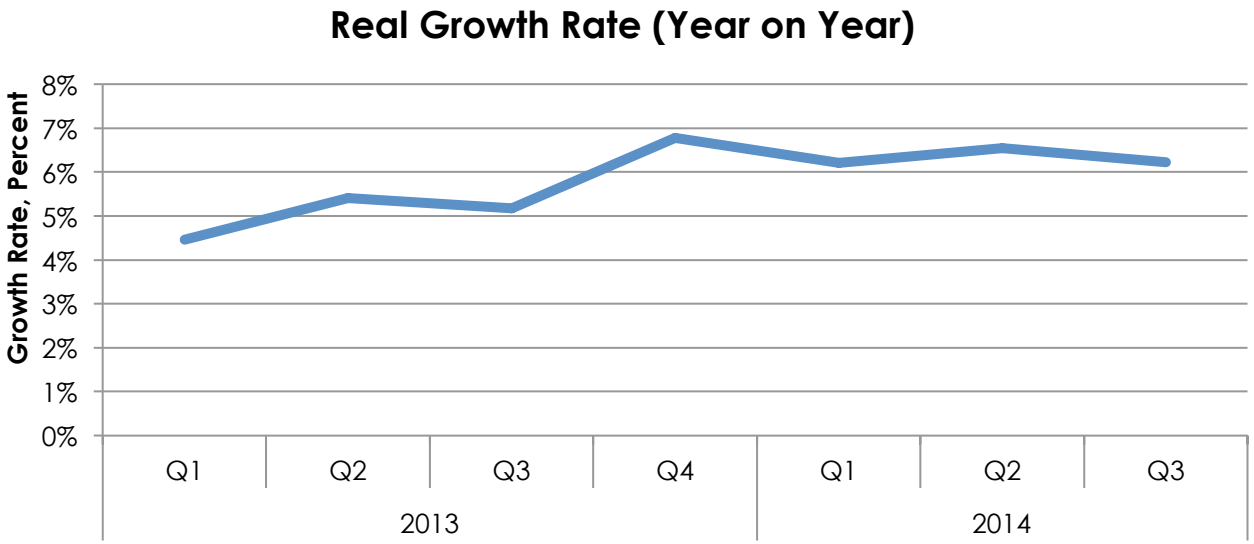


Figure 1: Real Growth Rate (Year on Year)

Quarter-on-Quarter, real GDP stood at N15,438679.50 million in Quarter One of 2014, a quarter on quarter rise of 9.88% from the N17,132,164.77 million recorded in the Fourth Quarter of 2013. The Nigerian economy gained momentum in the Second and Third Quarters, growing by 4.18% and 8.67% respectively.

1.2 Oil Sector Growth

Average daily crude oil and gas output has declined steadily throughout 2014. In Quarter One, Crude Oil production stood at 2.26 mbpd, valued at N2,612,066.21 million in nominal terms. In Quarter Two, this decreased to 2.21 mbpd, valued at N2,633,328.61, due to a 7.6% increase in the average dollar price of oil from $104.31 to $112.25. The third Quarter saw a further decline in production to 2.15 mbpd, with a value of N2,328,257.79 million in nominal terms.

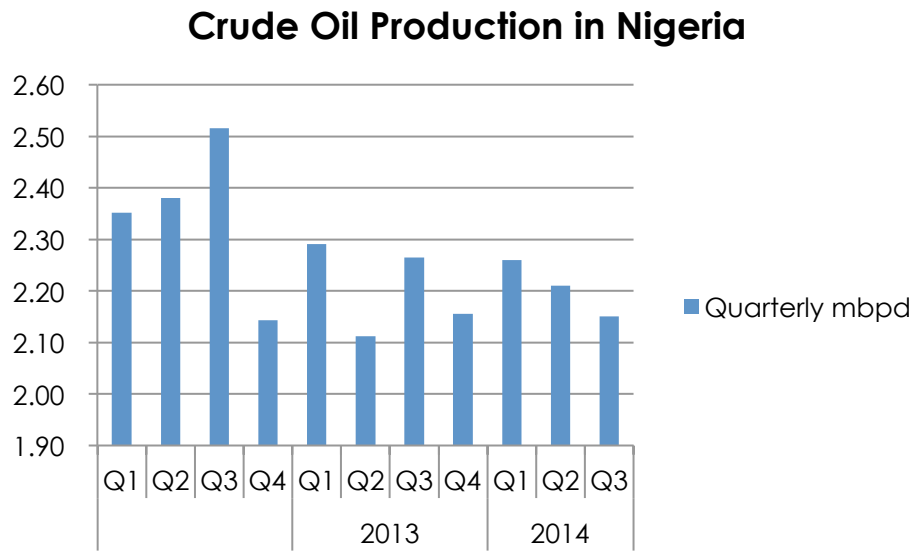


Figure 2: Crude Oil Production in Nigeria

Real growth of the oil sector stood at -6.60% year on year in the first quarter of 2014. This was a 2.76% point increase from the -9.36% growth recorded in the closing quarter of 2013, and 4.79% points greater than the -11.40% recorded in opening quarter of 2013. Oil sector growth picked up in the second quarter, increasing 5.14% in quarter two; up by 11.75% points from that of quarter one and by 21.57% points from the 2013 low of -16.42% recorded in the corresponding quarter of that year. Nonetheless, this growth was short lived and, by the third quarter slipped back into the negative at -3.60%, an 8.74% point decline from that of quarter two, but 11.12% points greater than the value added in Q3 of 2013.

1.3 Non-Oil Sector Growth

The non-oil sector continued to drive growth in the Nigerian economy throughout 2014. The opening quarter of 2014 saw the peak of non-oil growth, at 8.21% year on year. Despite being 0.57% points lower than that of the preceding quarter, it was 0.76% points greater than that of the opening quarter of 2013. The second quarter saw a decline in the growth rate of 1.49% points from the opening quarter of the year, to 6.71%, which was an even greater 2.17% points below that of Q2 of 2013. By the third quarter there was a slight acceleration in real growth, of 0.79% points to 7.51%, yet this was still 0.95% points lower that the 8.46% growth rate of Q3 of 2013, as well as being lower than the 2014 peak of 8.21%. The slower non-oil growth vis-à-vis the corresponding quarters in the Second and Third Quarters of 2014 reflect a slowdown in the growth of the Services sector.

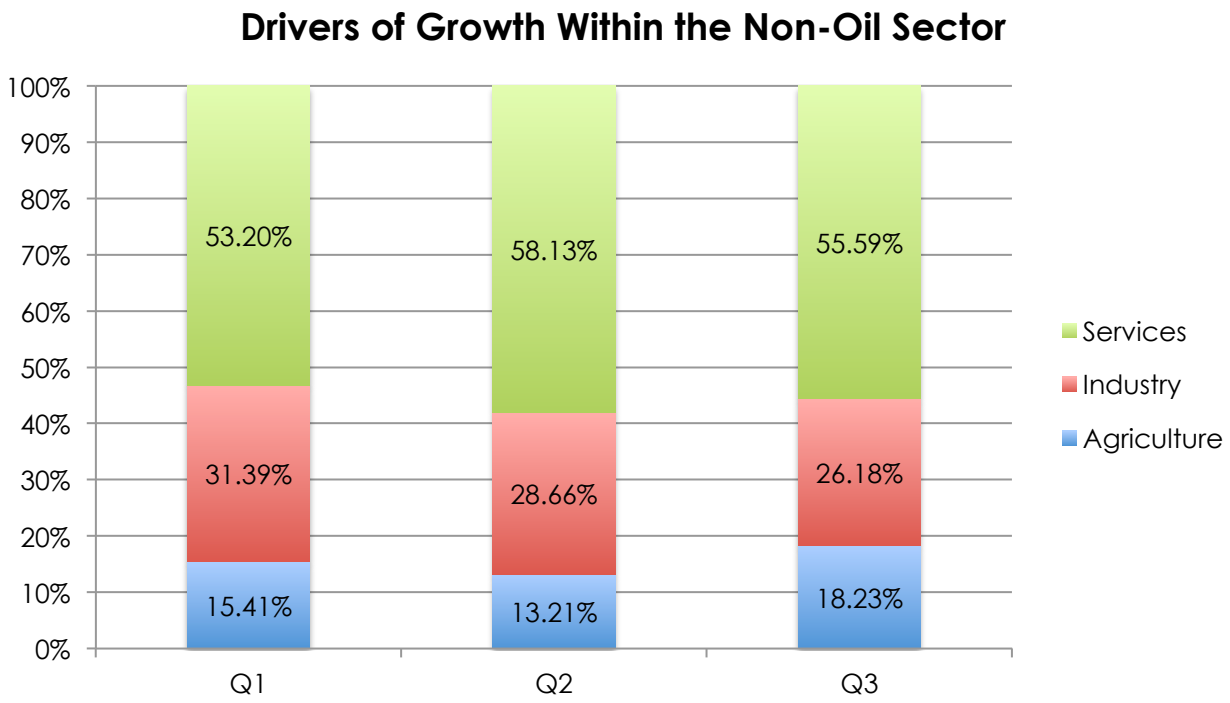


Figure 3: Drivers of Growth within the Non-Oil Sector

Nonetheless, within the nonoil sector, the Services Sector remains the key driver of year on year non-oil growth, with 53.20%, 58.13% and 55.59% of growth in quarters one, two and three respectively attributable to this sector. The industrial sector followed, with 31.39% of growth in quarter one, 28.66% in quarter two and 28.18% in

quarter three. The remainder was driven by agriculture, which peaked in Q3, driving 18.23% of growth

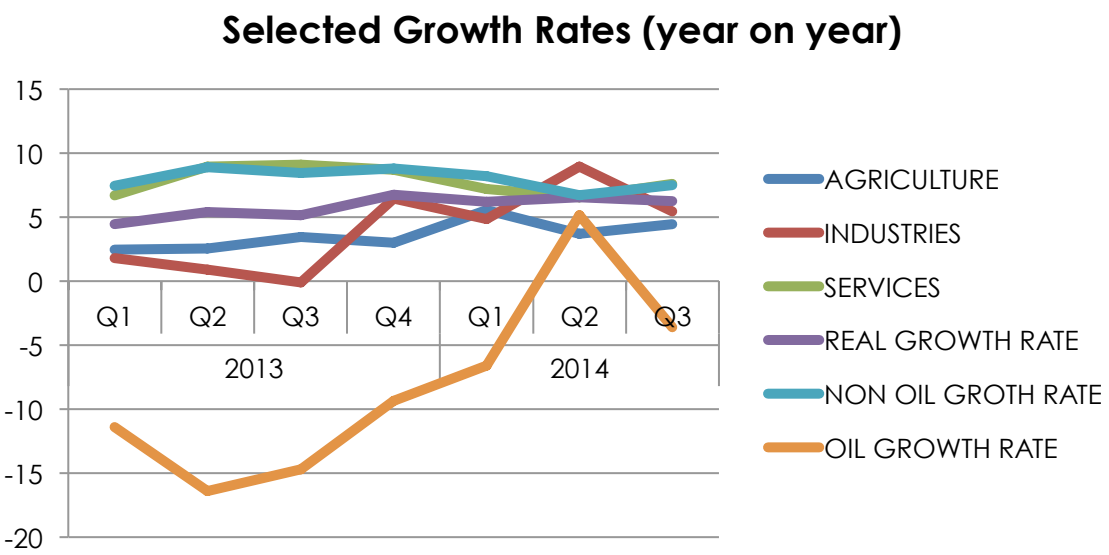


Figure 4: Selected Growth Rates (Year-on-year)

1.4 Agriculture

Despite the unrest in the North Eastern part of the country, Agricultural output remained strong in 2014,

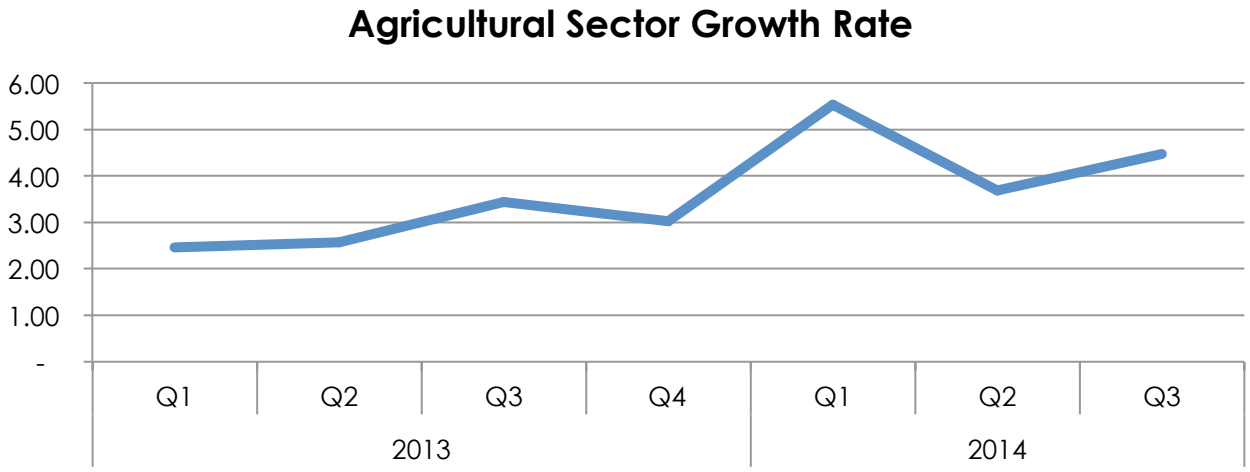


Figure 5: Agricultural Sector Growth Rate

Agriculture contributed N3,033,970.43 million to real GDP in the opening quarter of 2014, making up 19.65% of the quarterly total. As is consistent with the cyclical nature of Agricultural production, output increased to N3,360,450.48 million or 20.89% of the total in quarter two, peaking at 4, 655,322.16 million in quarter three, 26.63% of Nigeria's third quarter real GDP.

Year on year growth adjusts for this cyclical pattern, showing a clearer picture of how output has increased relative to that of 2013. As shown in fig 5, the opening quarter growth rate of 5.53% is the highest recorded in since the Fourth Quarter of 2014. Growth slowed in the Second quarter, a decline in the rate by 1.85% points to 3.68%, before picking up to 4.47% in Quarter Three.

Agriculture is comprised of the four sub-activities of Crop Production, Livestock, Forestry and Fishing. The largest activity in the Agriculture sector is Crop Production. It was also the main driver of growth of the agricultural sector, contributing 85.39%, 85.91% and 90.13% to growth in quarters one, two and three respectively. The fastest growing of the sector activities however was fishing, which exhibited growth of 8.40% in the opening quarter of 2014, dipping 3.52% points to growth of 4.89% and increasing to 6.72% growth in quarter three.

1.5 Industry

Figure 6: Industry Sector Growth Rate

The industrial sector had a more erratic output than the other sectors, partially due to electricity output, and the need to import key manufacturing inputs. The growth rate in 2014 largely reflects the irregular output in 2013, which became much more consistent in the following year.

Analysis of growth year on year shows ups and downs in industrial output during the year; from a rate of 4.84% in the opening quarter, there was an increase of 4.13% points to 8.97% growth in Q2, followed by a decline of 3.53% points to 5.43% growth in the third quarter. Yet, average growth in quarters one to three in 2014 was 6.41% as against 0.87% in the same period of 2013.

The largest component of the Industry sector is Crude Petroleum and Natural gas (see Section 1.2 for Oil Sector Growth). Other prominent components of the Industrial sector were Food, beverages and Tobacco, which at N748,292.32 million, N760,290.77 million and N808,191.78 million represented 17.72%, 18.21% and 19.10% of the total in Q1, Q2 and Q3 respectively and Construction, with output on N627,286.61 million or 14.85% of the total in Q1, N695,565.83 million, 16.66% of the total in Q2 and N579,913.75 million or 13.71% of the total in Q3. Interestingly, it is the fourth largest contributor, Textiles, Apparel and Footwear that is the main driver of

positive growth over the period. In Q1 of 2014 it stood at N96,323.72 million, with a year on year growth rate of 34.49%. Despite being lower by 5.29% points, growth remained high in Q2 at 29.20%, accelerating to 30.22% in Q3. Crude oil and petroleum weighted on growth, most significantly in quarter one and also in quarter three, with negative year on year growth rates in these quarters. Construction was also a significant driver of growth, with high rates of17.88% year on year in quarter one, declining to 10.70% in Q2, and 1.32% in Q3.

1.6 *Services*

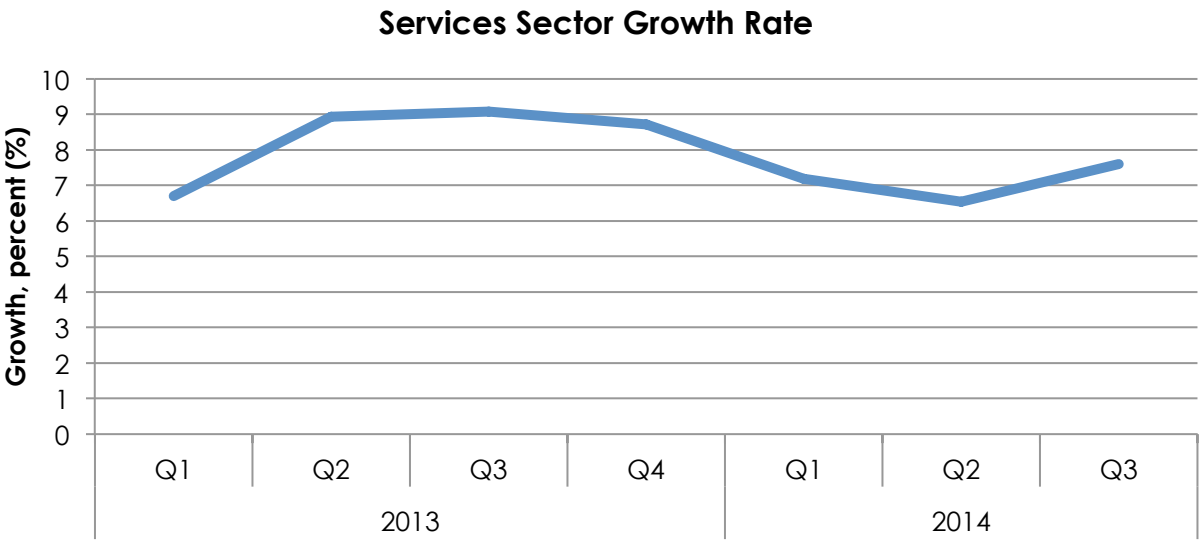


Figure 7: Services Sector Growth Rate

The services sector continued to dominate GDP structure, representing 52.99% of the total with a real value of N8,181,239.94 million in the opening quarter of 2014. This increased by N367,93101 million or 4.50% in quarter two to N8,549,170.96 and by a marginal N43,866.09 million or 0.51% in quarter three to a total of N8,593,037.05 million. Its share of the total increased marginally in Q2, by 0.16% points to 53.15%, yet declined in Q3 by 3.99% points to 49.16% of the total.

Year on year growth was mixed over the period, with the downward trend that was started in Q4 of 2013 being continued until the second of 2014. In the First Quarter of 2014, at 7.20%, the growth rate had already declined by 1.52% points from the 8.72% recorded in Q4 of 2013, which then declined by a further 0.65% points in Q2 to 6.54% growth. In Q3 there was a marginal recovery of 1.06% points, to a growth rate of 7.61%.

Trade was the greatest driver of year on year growth, with rates of 6.28% in Q1, declining by 1.13% points to 5.15% in Q2, yet picking back up to 6.81% in the third quarter. The second greatest contributor and driver of growth was telecommunications, which grew from 4.48% in Q1 to 6.15% in Q2 and 6.25% in Q3.

2.0 Inflation

2.1 Headline Inflation

In 2014 Headline Inflation opened at 8.0%, and remained below or equal to this figure until June. The slowest price increases were recorded in February, where the headline rate was recorded at 7.7%, and peaked in August of 2014 where prices rose by 8.5%; an 80 basis points range over the year. This range was lower than that

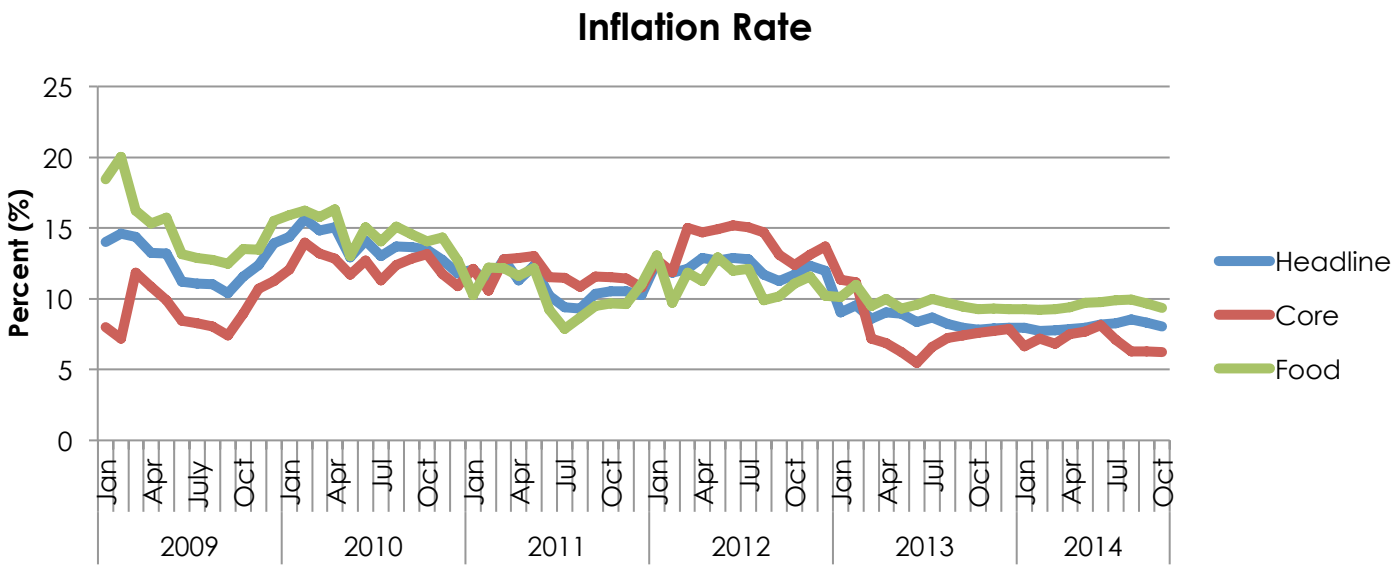


Figure 8: Inflation Rate

recorded in 2013, where the Headline index traded in a 170 basis points range with a maximum of 9.5% headline inflation in February 2013 and a 7.8% minimum in October 2013. Prices rose from 8.0% recorded in May to 8.2% in June and continued at a faster pace in July and August as the Headline index increased by 0.1% point in July to 8.3% and by a further 0.2% points to 8.5% in August. This was the highest value recorded for the year. The pace of price increases began to slow beyond August, as prices slowed by 0.5% points between August and December. This was as a result of slower increases in both the Food prices as a result of the harvest season as a well as a slower increase in items that contribute to the Core Sub-index.

2.2 Core Inflation

Also known as the "all items less farm-produce index", the core inflation measure excludes the goods with the most volatile prices in the basket used to construct the CPI (such as food and energy. Core inflation in 2014 opened at a value of 6.6%, down from a value of 7.9% recorded in December of 2013. The first half of the year, Core prices edged higher, similar to the Food Sub-index and reached the yearly maximum by June of 2014 at 8.1%. Beyond this point prices increased at a slower rate to reach a minimum of 6.2% in December 2014, ranging 190 basis points during the period.

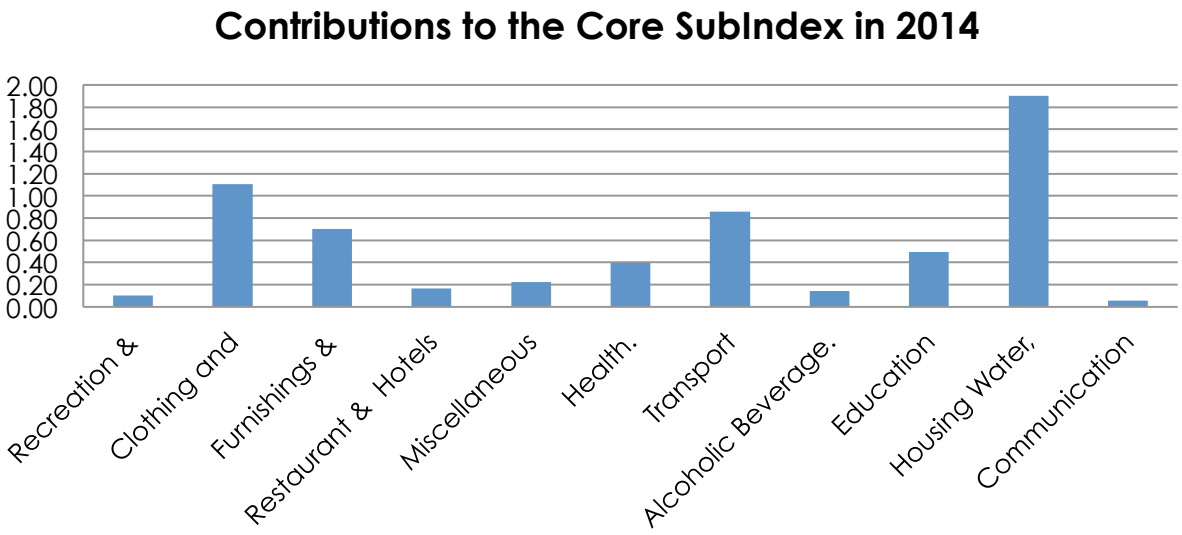


Figure 9: Contributions to the Core SubIndex

According to Major Divisions that contribute to the Core, the fastest prices were recorded in the Recreation & Culture, Clothing and Footwear, Furnishings & Household Equipment Maintenance, Restaurant & Hotels, Miscellaneous Goods & Services Divisions which increased by 7.5%, 7.4%, 7.2%, 7.1% and 6.9% respectively. The largest contributors however were Housing Water, Electricity, Gas and Other Fuels; Clothing and Footwear; and Transport, contributing 1.90%, 1.11% and 0.86% respectively.

2.3 Food Inflation

The food inflation index uses the CPI index for a basket comprising food and processed food items. It is the more volatile of the indices as it responds to domestic and international supply and demand for commodities. Food Prices, as measured by the Food Sub-Index, opened the year by increasing by 9.3% in January, and ended the year at 9.2% in December. During the year, Food prices eased marginally in February to 9.2%, yet increased at a faster pace thereafter as a result of drawdowns on inventory supplies as a start of the planting season as well as supply challenges, to reach a maximum of 10.0% in August. Prices eased thereafter as the impact of the harvest season began to take hold, reaching 9.2% in

December. During the year, year-on-year changes moved within an 82 basis points band, relatively lower and less volatile than 172 basis points band recorded during the 2013 calendar year.

During the year, the fastest price increases were observed in the Bread and Cereals, Meat, Fish, Fruit, Potatoes, Yam & Other Tubers groups, increasing by 10.11%, 9.61%, 9.60%, 9.21% and 9.10% respectively.

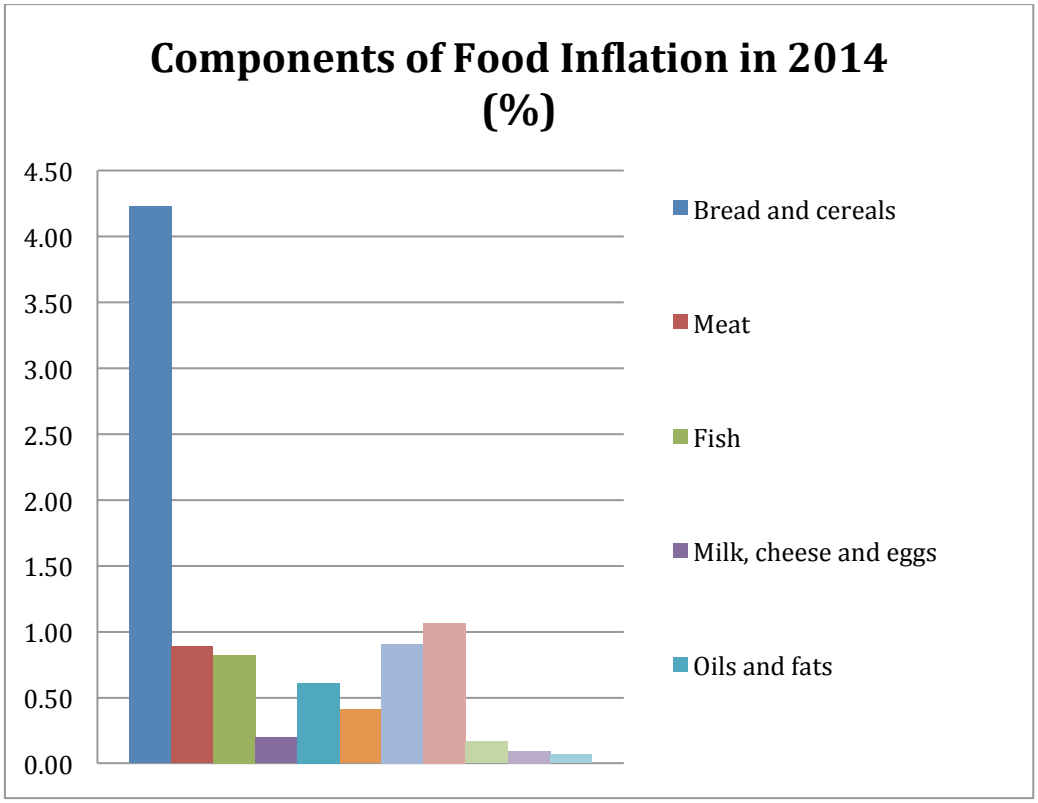


Figure 10: Components of Food Inflation 2014

According to contributors, the largest were Bread and Cereals at 4.23%, Potatoes, Yams and Other tubers at 1.06%, vegetables at 0.90% and Meats 0.89%.

3.0 International Trade

3.1 Imports

Year on year, imports moved in a without any clear direction in 2014. Imports decreased in the First Quarter by 6.15%, yet rebounded in the Second Quarter,

increasing by 23.71%. By the Third Quarter, imports declined again by 12.69%. Year to date, Imports of goods totaled N5,343.0 billion, marginally lower by 0.25% from levels recorded in 2013.

Classified by Section, the structure of Nigeria's import trade in 2014 was dominated by the imports of Boilers, machinery and appliances, which accounted for N366,719.0 million or 23.7% of the total value of import trade in Q1, N422.4 billion or 21.4% in quarter two and N426,784.4 billion or 23.4% in quarter three.

The Sections of *Mineral Products* consistently ranked second, accounting for N246,976.4 million or 16.0% of the Q1 total, N380.6 billion or 19.2% of that for quarter two and N278,431.2 million15.3% of the total in quarter three. The section with the third highest import value was *Vehicles, aircraft and Associated Parts* with N200,653.8 or N13.0% of the total, N232.8 billion or 11.8% of the total and N185,944.6 million or 10.2% of the total in Quarters one, two and three respectively.

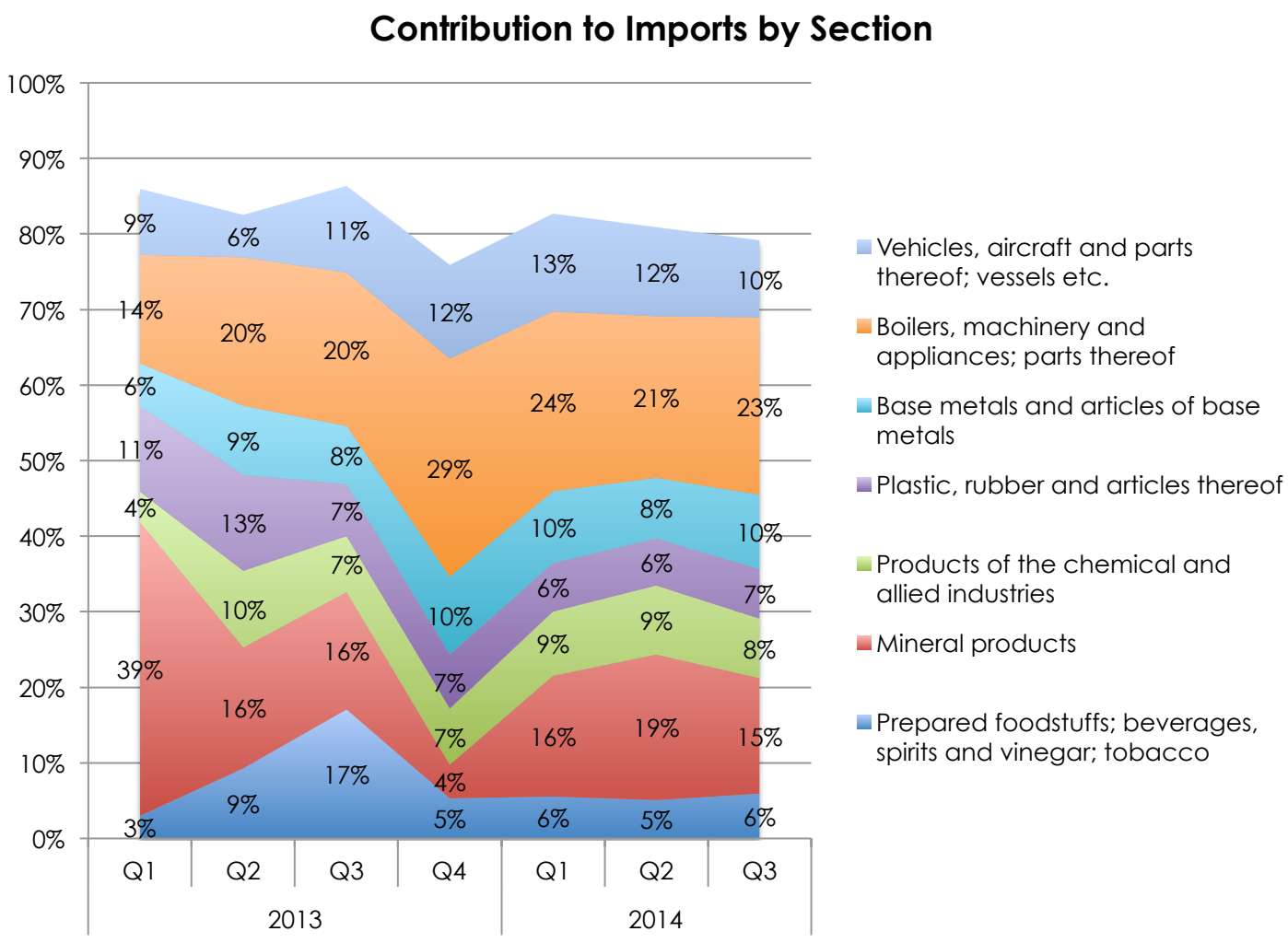


Figure 11: Contribution to Imports by Section

Classified by Broad Economic Category, Industrial supplies not elsewhere classified consistently claimed the greatest import value in 2014, with N435.3 billion or 28.2% of total imports in quarter one, N536.8billion or 27.2% in Q2 and N510.2billion or 28.0% in Q3. This was followed by Capital goods and parts, with a value of N344.4billion or 22.3% of quarter one imports, N396.7billion or 20.1% for Q2 and N378.9billion or 20.8%

of the total in quarter three. For the third ranking Broad Economic Category there was more variation, with Transport equipment and parts taking the place in the opening quarter with N222.6billion or 14.4% of the total import value, Fuels and Lubricants in the second quarter at N343.6billion or 17.4% of the total import value and Food and beverages in the third quarter at N323.8billion or 17.8% of total import trade for the quarter.

At the product level, motor spirit consistently holds the greatest value of imports, at N192.5billion or 12.5% of total imports for the first quarter of 2014, N315.7billion or 16.0% of the total in quarter two and N227.8billion or 12.51% of the total in quarter three. This was followed by Spelt, common wheat and meslin with N54.2 billion or 3.5% of the Q1 total, N85.8 billion or 4.3% of the total in Q2 and N64.4 billion or 3.54% of the total imported in Q3. In quarter one and two, Machine tools for working stone, ceramics, concrete etc ranked third, with N46.5 billion, or 3.0% of the total value of imports and N37.5 billion or 1.9% of the Q2 2014 total respectively. However, in the third quarter this was taken by Imported Motorcycles and Cycles at N36.8 billion or 2.02% of the Q3 import total, whilst Machine Tools for working stone, ceramics, concrete etc ranked fifth, with N16.0 billion or 0.88% of the quarterly total.

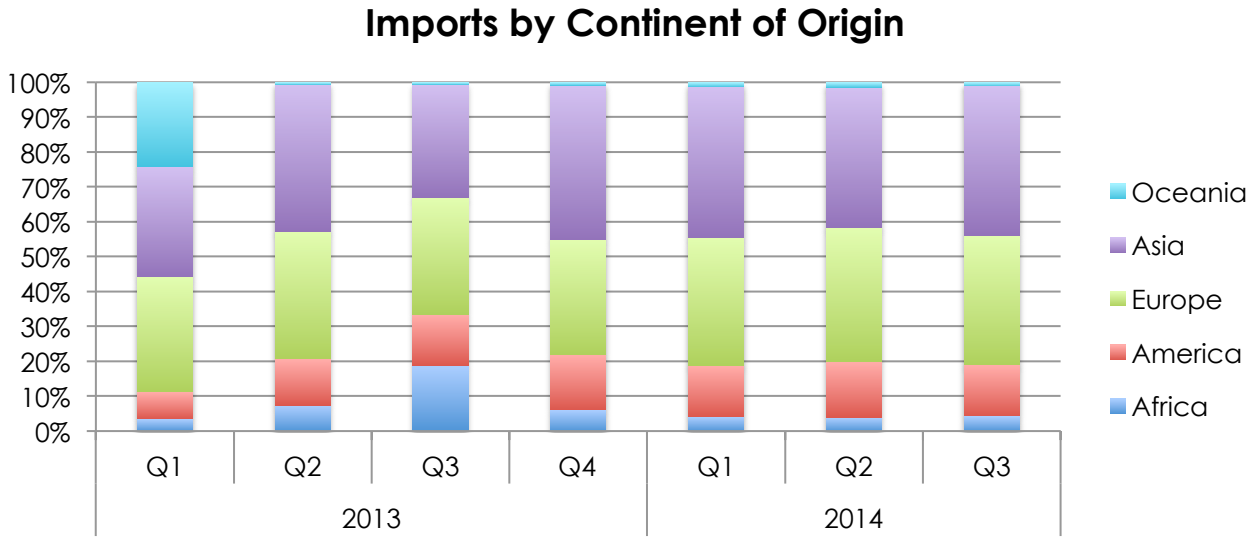


Figure 12: Imports by Continent of Origin

By Continent of origin, Nigeria mainly imported goods from Asia, with import values of N670.4billion or 43.4% in quarter one, N796.1billion or 40.3% of the total in Q2 and

N779.9billion or 42.8% of the total in Q3. Europe ranked second with N563.1billion or 36.4% of the total, N758.1 billion or 38.3% of the total and N676.9billion or 37.2% of the total in quarters one, two and three respectively. The Americas ranked third with N227.6billion or 14.7% of Q1 imports, with N316.1billion or 16.0% of Q2 imports and N266.1billion or 14.6% of Q3 imports. The import trade with ECOWAS amounted to N8.4billion or 13.0% of total imports from Africa in Q1, N12.2billion or 15.7% of the African total in Q2 and N15.5billion or 19.7% in Q3.

By country, China was consistent in providing the highest value of imports to Nigeria in quarters one two and three, with China supplying values of N368.1 billion or 23.8% of the total, N426.1billion or 21.5% of the total and N429.1billion or 23.6% of the total. Next was the U.S. providing N164.7 billion or 10.7% of the total, N235.6billion or 11.9% of the total and N183.3billion or 10.1% of the total in the first three quarters respectively. India ranked third in the first quarter with N93.2billion or 6.0% of the import total, whilst Netherlands took this position in quarter two with N138.7billion or 7.0% of the import total. In quarter three Belgium ranked third with N148.4billion or 8.2% of the total.

3.2 Exports

In the 2014, Nigerian Exports recorded a significant rebound relative to export levels in 2013. Exports declined on a year-on-year basis through all four quarters of the year in 2013, by 30.54%, 34.05%, 39.52% and 41.00% in quarters one to four respectively. Through the first three quarters of the year 2014, Exports increased year on year by 14.99%, 25.09% and 25.36% respectively. Through the first three quarters of the year, the cumulative value of exports totalled N13,131.1 billion, an increase of 21.94% relative to the corresponding period in 2013.

Crude oil continues to dominate export trade, contributing N3,233.6 billion or 81.5% of total export trade value in Q1, N3,268.8 billion or 69.8% and N2,931.0 billion or 65.4% of the totals in quarters two and three respectively. Other than crude exports, the product contributing the second greatest value is Natural Liquefied Gas, which

contributed N330.0 billion or 8.31% of the total in Q1, N309.5billion or 6.61% of the Q2 total and N284.7billion or 6.4% of the total export value in the third quarter.

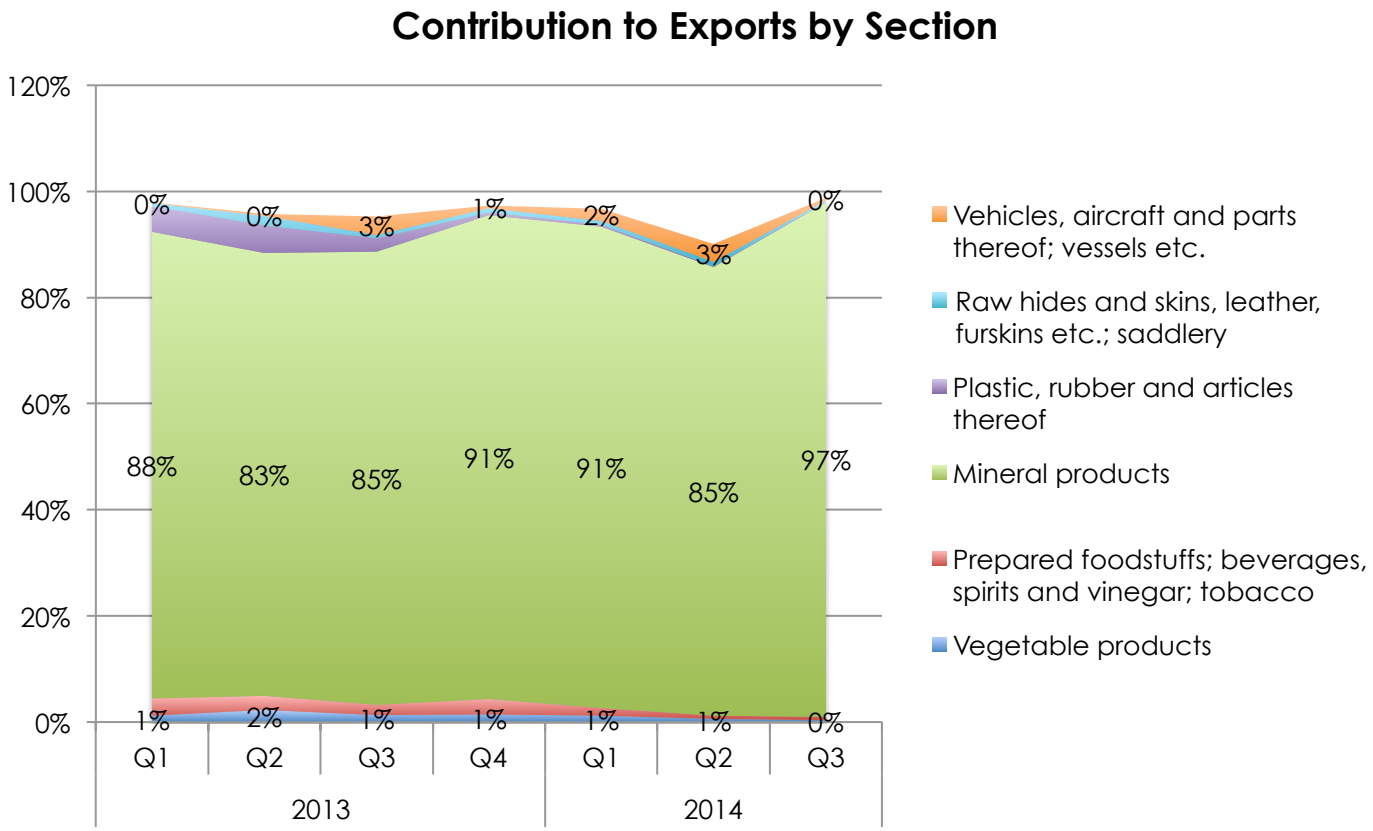


Figure 13: Contribution to Exports by Section

Classification of Exports by Section revealed that *Mineral Products* accounted for Nigeria's largest export value, with N3,599.5billion or 90.7% of the total in quarter one, N3,956.9billion or 84.5% of the total for quarter two and N4,340.4 billion or 96.9% of the total in quarter three. Boilers, machinery and chemical appliances, valued at N92.2billion or 2.3% of the total in quarter one was the second largest contributor, whilst in quarter two this was Textiles and other articles, with N132.9 billion or 2.8% of the total. The third quarter saw the Section of Prepared foodstuffs take second place, with N30.7 million or 0.7% of the total.

Classified by continent of destination, Nigeria mainly exported goods to Europe, with N1,727billion or 43.5% of total exports, N2,083.7 billion or 44.5% of total exports

and N 1,742.1billion or 38.9% of the total in quarters one, two and three respectively. This was followed by Asia, with N1,187.5billion or 30.0% of the total in quarter one, N1,076.4billion or 23.0% of the total in quarter two and N1,416.3 or 31.6% of the total in the third quarter. Nigeria exported goods valued at N424.4billion or 10.7% to the continent of Africa in quarter one, N410.7 billion or 8.8% in quarter two and N672.1 billion or 15.0% of the total in quarter three. Exports to the ECOWAS region increased over the period, totalling N171.2billion or 40.3% of all export trade to Africa in quarter one, N174.6 billion or 42.5% of the continent total in quarter two and N376.0billion or 55.9% of the total for the African continent in quarter three.

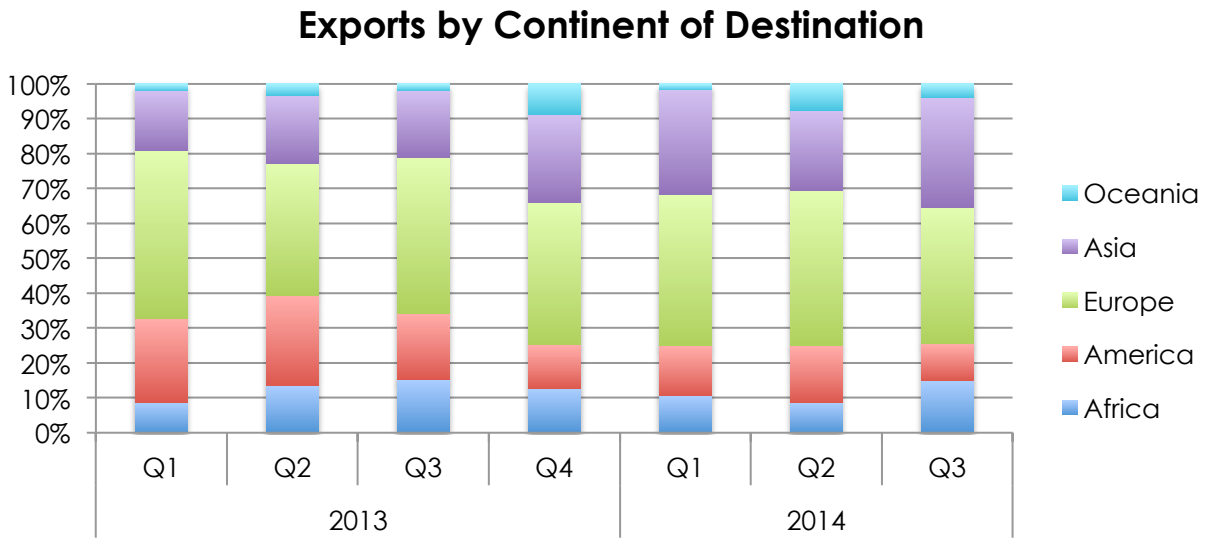


Figure 14: Exports by Continent of Origin

India was the top country of destination for Nigerian exports in all three quarters of 2014, with the country claiming N544.0 billion or 13.7% of the export total in quarter one, N553.2billion or 11.8% of the total in quarter two and N685.0billion or 15.3% of the third quarter total. Netherlands took the second place in quarter one, with at N461.5billion or 11.6% of the total, whilst Spain took this place in quarters two and three, with N514.1billion or 11.0% of the total and N393.3billion or 8.8% of the total in each quarter respectively.

Total Quarterly Merchandise Trade

In 2014, total merchandise trade showed a general upward trend. At N5,514,923.19 million, the total trade recorded in the opening quarter of 2014 was N352,017.38 million or 6.82% greater than that of the preceding quarter and N416,046.24 million or 8.16% greater than that of the opening quarter of 2013.

Figure 15: Total Merchandise Trade

The Second quarter saw an even greater quarter on quarter rise, of N1,144,470.35 million or 20.75% to reach N6,659,393.54 million. Year on year this was an increase of N1,138,247.80 million or 24.68% from the N5,341,145.74 million of Q2 of 2013. Contrary to the previous two quarters, the third quarter saw a decline in total trade, of N359,648.52 or 5.40% quarter on quarter to N6,299,745.02 million. Year on year however, trade recorded during the quarter was N641,587.23 million or 11.34% higher from the N5,658,157.79 million recorded in the corresponding quarter of 2013.

3.1 Trade Balance

The opening quarter trade balance in 2014 stood at N2,424,034.06 million, representing an increase of N633,254.54 million or 35.36% from the N1,790,779.53 million of preceding quarter and N618,645.24 million or 34.27% from the

corresponding quarter of 2013. This was as a result of declines in the value of imports, both quarterly and year on year, coupled with rises in exports. In quarter one of 2014, imports declined by N140,618.58 million or 8.34% from the preceding quarter, whilst exports increased by N492,635.96 million or 14.17%. Year on year, there were declines in imports of N101,299.89 million or 6.15% and rises in exports of N416,046.24 million or 8.16%.

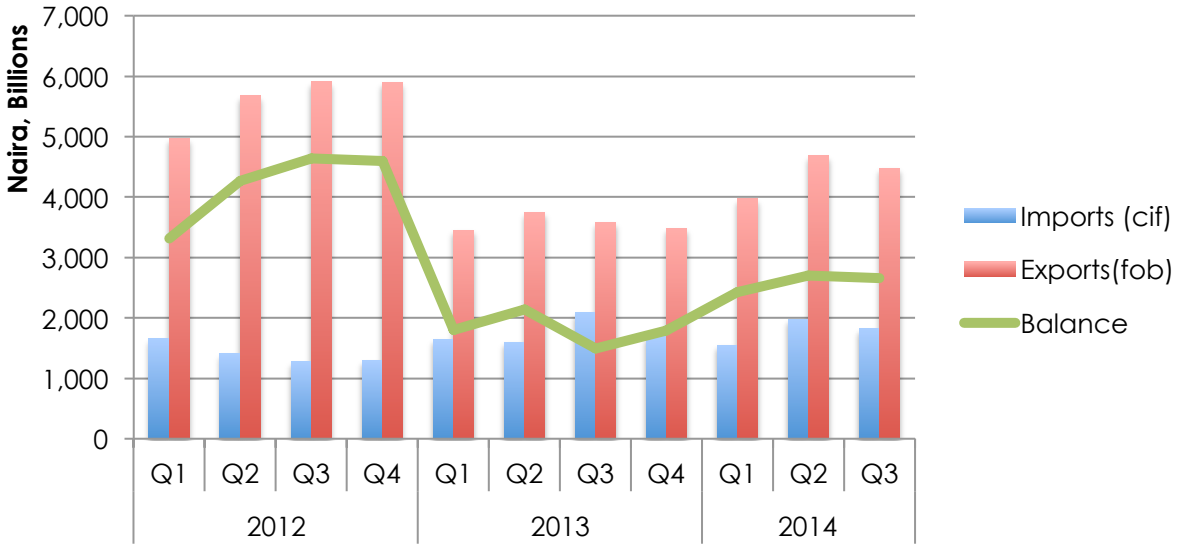


Figure 16: Trade Balance, Imports and Exports

The second quarter saw a rise in the balance of trade of N280,883.86 million or 11.59% from the Q1 value, to N2,704,917.92 million. This happened despite a rise in the value of imports quarter on quarter, of N431,793.24 million or 27.94%, whilst exports were able to compensate with a quarterly increase of N712,677.10 million or

17.95%. The trade balance for the second quarter further represented an increase of N560,248.02 million o 26.12% from the quarter of the preceding year, again despite having a value of imports N376,999.89 million or 23.71% greater than that of the corresponding quarter of 2013, whilst exports were higher by N939,247.91 million or 15.09% higher.

The balance of trade declined by N45,722.69 million or 1.69% from the second quarter value, to N2,659,195.23 million in Q3 of 2014. Despite a decline in the value of imports of N156,962.91 million or 7.94% quarter on quarter to N1,820,274.89 million, the decline in the balance of trade was due to a greater decline in the third quarter value of exports, from N202,685.60 or 4.33% to N4,479,470.12 million. Year on year, the Q3 trade balance greatly increased, by N1,170,576.61 million or 78.64% from the corresponding quarter of 2013, due to a rise in the value of exports of N906,081.92 million or 25.36% and a decline in the value of imports of N264,494.69 million or 12.69%.

SECTION TWO: 2015 to 2017 Economic Projections

2.1 Introduction and Overview of Methodology

In this section, the report provides further analysis of the trends described in Part A, and makes projections on their likely direction for 2015 to 2017. In addition, econometric evidence using a Bayesian vector autoregressive (BVAR) model is provided. The objective is to give baseline projections of the Nigerian economy over 2015 to 2017 given historical data.

Projecting key macroeconomic indicators is one of the main tasks of policymakers, and it is a prerequisite ingredient in facing the unknown with greater levels of confidence. The key macroeconomic variables used in projections are GDP, inflation, exchange rate, T-bill rates, oil exports, nonoil exports and Total Trade. In addition to GDP, inflation, and trade, we consider it important to forecast their growth rates as well. That Nigeria is a small open economy informs that it is necessary to incorporate a measure of foreign demand into the projections. This is

proxied by the US GDP. Also important to the analysis is that Nigeria is a major oil exporting economy, hence an attachment of the importance of crude oil price in forecasting the future trends of the endogenous variables. In this section of the report, results of the analysis and implications for the Nigerian economy are provided.

In going about the set objective, the estimation technique used is called the Bayesian vector Autoregressive (BVAR) approach. This method was chosen after the classical VAR failed the stability test. In forecasting, it is a basic prerequisite that the estimated system be stable, otherwise such instability will filter into the data, implying that the forecasts cannot be carried out with an acceptable measure of reliability. An associated problem also is that one is not able to control much of the classical VAR model conventionally and generally used for this purpose. Hence, the BVAR is employed. In BVAR, the analyst is granted some measure of control through the use of prior information. What is done is to downplay past influences on the present by weighing the lags appropriately. The model emphasizes the importance of own-lags of a variable relative to those of the other explanatory variables. Stability was achieved by invoking the Litterman priors and the model yielded more reliable results in comparison with the VAR.
It is important to highlight that the following projections are based on quarterly data from 1999 through the 2014. Specifically, the projected growth rate for real GDP are computed from the trends of the historical GDP series, extracted using the HP filter. Thus, the report presents a forecast from 2015-2017 given historical trends in the economy up through 2014.

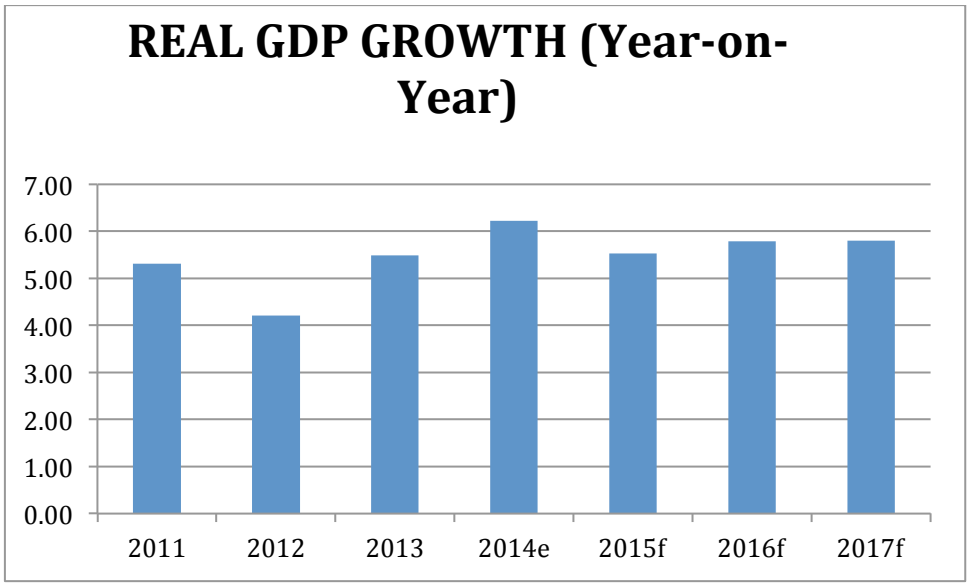
2.2 Discussion on the 2015- 2017 Projections

The projections for the annual growth rate of real GDP, annual inflation rate, and the annual growth rate of the Value of Total Trade from 2015 through 2017 are reported in Table 1 (See Appendix I), while Table 2 presents their quarterly

projections. Table 3 gives the forecast levels for Real GDP, Nominal GDP and Value of Total Trade from the BVAR model. The projected growth rates are calculated based on a year-on-year approach. We now highlight the projected series for the variables.

2.3 Gross Domestic Product

Analysis of previous historical trends of Nigerian economic growth show that the economy has been largely supported by non-oil growth, as a result of domestic oil supply shocks. The Outlook for the economy in 2015 and beyond is even more complicated, in light of declines in crude oil prices. While this on one hand creates risks to the economy, these declines in prices give the Nigerian government the opportunity for some potential savings as payments subsidies on PMS and other refined products may be diverted into more productive aspects of the economy as currently done with the Subsidy Reinvestment Program (SUREP). Outlook for the Fourth Quarter of 2014 growth is projected to be 5.97 percent, and is to be supported by non-oil growth which is expected at 7.01 percent, while oil-growth is expected to be lower at -4.1 percent.

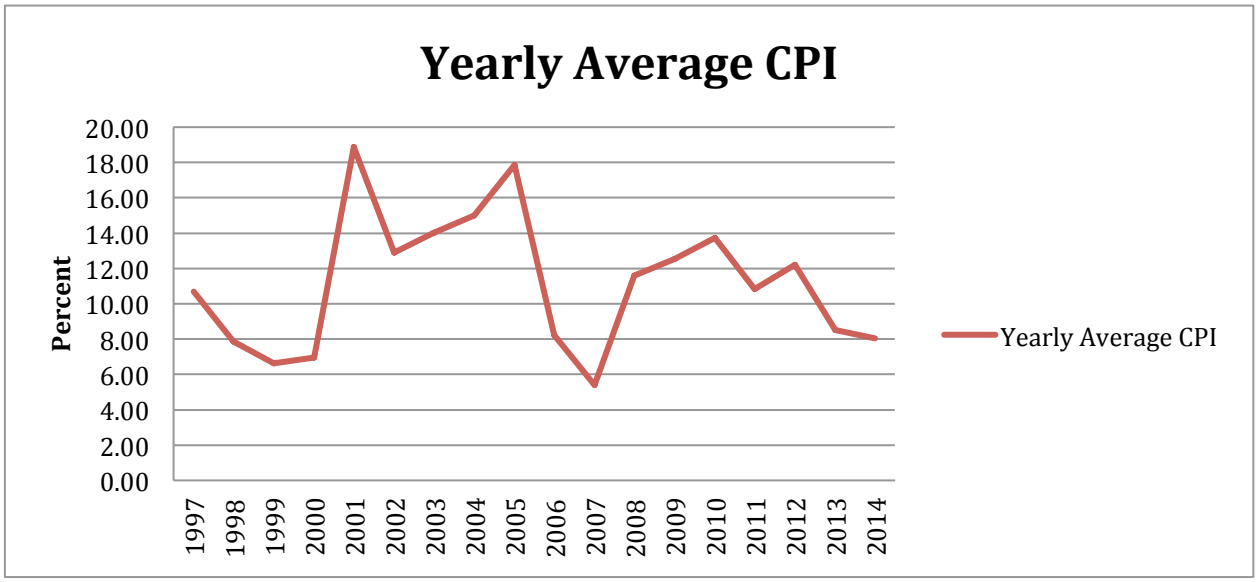


In 2015, the economy is expected to grow by 5.54 percent, again supported by growth outside the oil sector. This is also to be sustained by structural reforms by the Federal Ministry of Finance with initiatives such as the creation of the Nigerian Mortgage Refinance Company to support the Building and Construction Sector; Policies to support the Agricultural Transformational Agenda, such as the a N50 billion Farm Mechanization Support Fund set up by the Central Bank to establish 1,200 agricultural equipment hiring enterprises. All these and more are policies aimed to counter the cyclical effects. Non-public investment decisions, which may be put on hold during the first quarter of the year as a result of the upcoming elections, are likely to be firmed up by the second quarter, will provide further support for growth. And a reprioritization of capital expenditure by the FMF is likely to provide support for growth to reach 5.78 percent in 2016 and 5.80 in 2017.

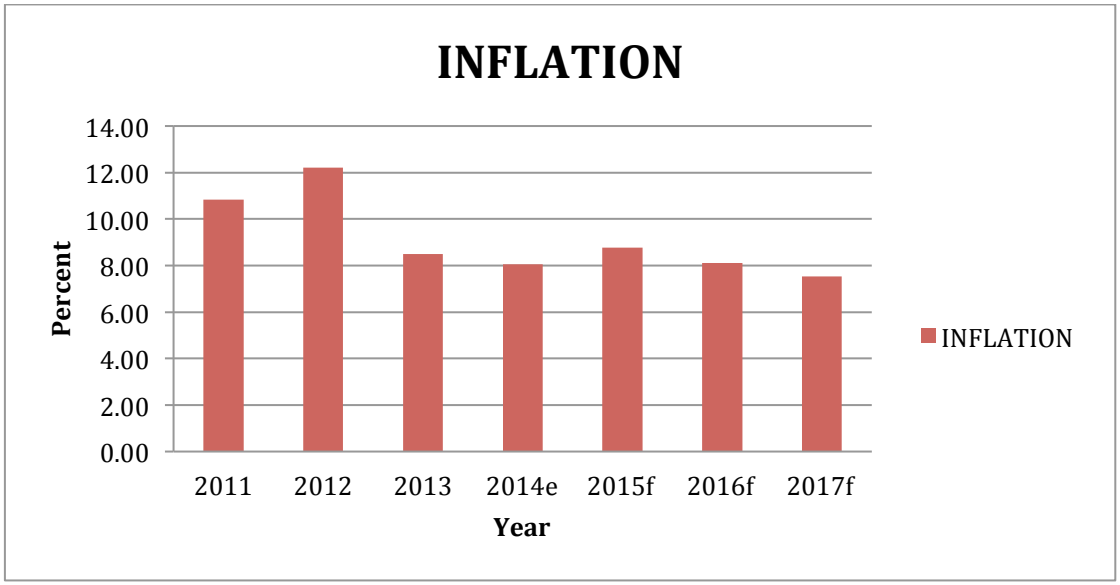
INFLATION

As stated earlier, while some may speculate that there are likely to be upward pressures on inflation as a result of the pending election, this is unlikely to be the case. In the previous four elections in the current democratic dispensations of 1999, 2003, 2007 and 2011, only one election year actually had an increase in the

inflation index; the yearly average inflation rates decreased by 124 basis points 1999, 284 basis points in 2007 and 291 basis points in 2011. The exception was the 2003 election where average annual rates increased by 115 basis points.



Lagged effects may however exist as the headline index was higher the year after the election. Rates increased by 32 basis points in 1999, 620 basis points in 2008 and 140 basis points in 2012. This would be subject to more empirical research as to whether or not elections are a key determinant of inflation rates.



We predict that the source of the upward pressure is likely to come from the devaluation of the Naira, which occurred in November 2014. The impact of the depreciation is likely to be in the first half of 2015; prices are likely to stabilize by the end of the year as a result of administrative measures by the CBN, in addition to ample food supplies when the harvest kicks in early in the second half of the year. In light of the aforementioned, the CPI is projected to rise to 8.78 percent in 2015, and average 8.13 percent over the 2015 to 2017 period.

TRADE

While exports are expected to be positive in the near term, the impact of declining crude oil prices is likely to result in a decline in the value of oil exports, over the forecasted period. The recent depreciation of the Nigerian Naira is expected to result in cheaper prices of non-oil exports, resulting in a boost. Finally, the recent depreciation is expected to weigh on imports as while imports may grow, they are likely to grow at a slower rate compared to historical values.

Total Trade is projected to increase by 9.66 percent in 2015, and average 5.05 percent over the forecast period.

APPENDIX I

Table 1.0: Historical and Projected Growth rates for GDP, Inflation and Trade (%) (2011 – 2017)

	2011	2012	2013	2014e	2015f	2016f	2017f
REAL GDP GROWTH	5.31	4.21	5.49	6.23	5.54	5.78	5.80
INFLATION	10.83	12.22	8.50	8.05	8.78	8.10	7.52
TOTAL TRADE	48.75	23.83	-36.28	28.48	12.16	0.54	4.07

Table 2.0: Table 2: Projected Quarterly Growth Rates for the period 2015- 2017

	2014Q1	2014Q2	2014Q3	2014Q4e	2015Q1f	2015Q2f	2015Q3f	2015Q4f
REAL GDP GROWTH	6.21	6.54	6.23	5.97	5.26	5.44	5.59	5.80
INFLATION	9.69	7.24	8.15	8.24	9.69	9.48	8.72	7.24
TOTAL TRADE	8.16	24.68	11.34	29.76	7.85	12.24	11.42	6.94
	2016Q1f	2016Q2f	2016Q3f	2016Q4f	2017Q1f	2017Q2f	2017Q3f	2017Q4f
REAL GDP GROWTH	5.78	5.81	5.80	5.74	6.04	5.90	5.74	5.55
INFLATION	8.15	8.24	8.12	7.87	7.65	7.51	7.46	7.46
TOTAL TRADE	3.37	1.97	2.11	2.62	2.96	3.09	3.06	2.91

Table 3: Historical and Projected estimates for Real GDP and Trade (N' Millions)

Year	2010	2011	2012	2013	2014e	2015f	2016f	2017f
GDP	54,612,264.18	57,511,041.77	59,929,893.04	63,218,721.73	67,157,384.39	70,874,568.49	74,971,972.24	79,318,705.77
Nominal GDP	54,612,264.18	62,980,397.22	71,713,935.06	80,092,563.38	84,443,020.63	77,057,319.28	81,036,617.82	85,279,885.39
Trade	19,658,431.50	29,333,001.12	28,071,190.67	21,261,086.29	25,173,314.93	27,605,269.51	28,288,683.97	29,139,509.06

***NOTE:** Full Dataset can be downloaded from NBS eLibrary at:*

http://nigerianstat.gov.ng/pages/NBS%20eLibrary

2.1 Vector autoregressive (VAR) model

One of the major workhorses available for forecasting is the VAR model. In an N-variate VAR model, variable i□N is expressed in terms of its own lag and the lags of the other N-1 variables and, if available, the exogenous variables. However, given that the number of parameters in a VAR model quickly increases, consuming the degree of freedom and rendering inference imprecise, an alternative VAR method grounded in the Bayesian tradition has been applied to estimate the model. The VAR(p) model estimated has a general form given by

$$y_t = \theta_0 + \theta_1 y_{t-1} + \theta_2 y_{t-2} + \cdots + \theta_p y_{t-p} + \varepsilon_t \qquad (1)$$

It is sometimes convenient to put this model compactly as a VAR(1) model such as

$$\mathbf{Y}_t = \boldsymbol{\theta}_0 + \Phi \mathbf{Y}_{t-1} + \boldsymbol{\varepsilon}_t \qquad (2)$$

with Φ is the companion matrix in which the p matrices containing the coefficients are stacked together to form order 1 matrix.

$$\Phi = \begin{bmatrix} \theta_1 & \theta_2 & \cdots & \theta_p \\ 1 & 0 & \ddots & 0 \\ \cdots & \cdots & \cdots & \cdots \\ 0 & 1 & \cdots & 0 \end{bmatrix}$$

and $\mathbf{Y}_t = [y_t\ y_{t-1} \cdots y_{t-p}]'$ is also conformably defined. Since our goal is to forecast over h periods ahead, our forecast is generated by the following system

$$\mathbf{Y}_{T+h} = \hat{\Phi}^h \mathbf{Y}_T + \sum_{i=0}^{h-1} \hat{\Phi}^i (\boldsymbol{\theta}_0 + \varepsilon_{T+h-i}) \qquad (3)$$

with the forecast starting from the end of the historical data , T.

If the system is stable in the sense that the eigenvalues of $\hat{\Phi}$ are all within the unit circle, then forecasting with the above system will be reliable. However, if the system is unstable, the powering up of $\hat{\Phi}$ will magnify the instability and render the forecasts from the system unreliable. Hence, we need to ensure that the system is stable so that the forecasts too are accurate enough. We examine the stability of the system by examining the placement of eigenvalues in relation to the unit circle. The occurrence of eigenvalues outside the unit circle indicates that the system is unstable. If the system contains unit roots or the variables are near cointegration, the equilibrium-correction model (EqCM) becomes a better choice of estimation.

Due to the proliferation of parameters in the VAR model as stated above, the degree of freedom is quickly consumed up as a higher order is entertained. One way not feasible in our case is to use longer dataset to be able to estimate the system and ensure the adequacy of the forecasts. In particular, given the small sample size we have had to work with, an alternative approach might need to be adopted. In this respect, Doan, Litterman and Sims (1984) have suggested a Bayesian alternative, namely Bayesian VAR, to the pure frequentist approach outlined previously. A major difference between these approaches is that the BVAR model is grounded in the Bayesian paradigm, in which the variables are considered as fixed, while the environment (the set of model parameters) is seen as stochastic. This is a diametrically opposing paradigm to the classical where the environment is considered as fixed and the variables stochastic. This method is thought superior to the classical VAR estimation method because it allows a fair control over the estimation procedure. In particular, it allows us to input our judgments regarding the importance of a given variable in the dynamic equation endogenizing another variable and the importance of the past in influencing the present. In the BVAR model, as time goes by the past will have less and less impact on the present such

that the further in the past the less influence on the estimated and consequently the predicted time series. This is achieved by imposing a Minnesota prior on the VAR model specified in Equation (1) above.

The Bayesian VAR model warrants some conceptual clarifications, which are now discussed. Let $\alpha_i \sim N(1, \sigma^2_{\alpha_i})$ be the priors on the coefficients associated with the lagged dependent variable in each of the equations and $\alpha_j \sim N(0, \sigma^2_{\alpha_j})$ the priors on the coefficients of any other dependent variable in the equation. The assumed priors therefore assign a mean value of 1 to the lagged dependent variable since this variable is thought to be most important in dynamically determining its own future behavior. The mean value of 0 assigned to the coefficients of other variables featuring in this equation, on the other hand, is indicative of the lesser role they are to play in driving the dynamics of the dependent variable. If the assumed variances are tight enough, therefore, one can downplay the importance of these other variables as desired. To overcome the proliferation of parameters, which informs our choice of the BVAR method of estimation in the first place, we used the method suggested by Doan, Litterman and Sims (1984) to shrink the deviation of variable j in equation i at lag k:

$$\sigma_{ijk} \sim \phi\omega(i,j)k^{-\eta}\left(\frac{\tilde{\sigma}_{\varepsilon_j}}{\tilde{\sigma}_{\varepsilon_i}}\right)$$

where $\frac{\tilde{\sigma}_{\varepsilon_j}}{\tilde{\sigma}_{\varepsilon_i}}$ is a scaling construct adjusting for the varying magnitudes across the equations, ϕ is a measure of overall tightness and $0 \leq \eta \leq 1$ gives the rapidity with which lags in the model get discounted in the shrinkage formula. Lastly, $\omega(i,j)$ is the weighting function assigning tightness to variable j in relation to the own-lags in each equation.

2.2 The Bayesian Vector Autoregression Model

We estimate the BVAR model on seven endogenous variables over the period between the first quarter of 1999 and the last quarter of 2014. The seven endogenous variables are those for which the data were available. The data on real GDP, inflation rate, exchange rate, interest rate, oil exports, nonoil exports, trade, price of crude oil and US real GDP were obtained from the NBS, CBN and the U.S BEA. The last two variables – real GDP and US GDP – were considered as exogenous variables. Real GDP, exchange rate, oil exports, nonoil exports, trade, price of crude oil and US real GDP were transformed to their logarithm for estimation.

We adopt a two-stage estimation approach to forecasting using the BVAR model. The approach can be understood as follows. In the first stage, we estimate a BVAR model for the exogenous variables considering these variables as endogenous variables at this stage. In that case, the model estimated has the form:

$$X_t = AX_{t-1} + \xi_t$$

where $X = [USGDP, OILPRIOCE]$. Based on the estimated model, we carry out the forecast for the projection period. We therefore obtain the forecast, X_t^f , for the US GDP and crude oil price. In the second stage, we bring on the historical as well as the projected series in the first stage for the two exogenous variables. These projected estimates serve as new information in estimating the BVAR at the second stage. Thus, at the second stage, we employ the seven endogenous variables namely real GDP, inflation rate, exchange rate, interest rate, oil exports, nonoil exports and trade. We the estimate the BVAR model again using the model of the form stated above with the modification that the variables now include the seven endogenous variables as well as the exogenous term:

$$Y_t = AY_{t-1} + BX_t^f + \varepsilon_t$$

Given the above formulation, we then forecast the endogenous variables as reported in this Outlook.

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