# 1 CURITIES

## Nigeria Strategy Report

Domestic Economy and Policy Environment

### Nigerian Inflation: Boiling below the Surface

#### **Executive Summary**

In our H2 18 NSR, we posited that the absence of potential increase in pump prices of premium motor spirit (PMS) and electricity tariff as well as mild moderation in food inflation will drive a downward trend in inflation over H2 2018. Precisely, we noted that the robust supply of Petrol by the NNPC across the country and kick-backs in the proposed increase in electricity tariffs by FG would drive moderation in transport and HWEGF baskets and invariably filter into both core and food inflation. In line with our views, headline inflation moderated by 174bps to average 11.27% YoY over H2 18, albeit at a slower pace relative to our expectation of 11.07bps to average 12.15% YoY over 2018. The decline cuts across core and food inflation. On the core basket, the moderation was hinged on the relatively flat movement in price of petrol which reflected the steady supply by NNPC in a bid to avoid scarcity while improved market supplies and harvest relative to the prior year drove the moderation in food inflation.

In framing our outlook on Inflation for 2019, we have analyzed the possible shocks to the CPI, mainly from a currency shocks, possible increase in petrol (PMS) prices, a raise in electricity tariff and the introduction of a wage increase by the FG. However, we see no increase to general electricity tariffs in 2019 even as a possible new wage bill will have a minimal bearing on inflation given Nigeria's inflation drivers. Consequently, we now expect a plausible depreciation in the naira as well as increase in petrol prices to be the key driver for our inflation outlook – which we foresee its occurrence in the latter part of 2019. We have adopted a blended approach of our regression and weighted average model to arrive at an average inflation rate of 12.4% over 2019 (2018E: 12.2%), which forms our base case scenario.

In this report, we look at the themes maior that dominated consumer prices and inflation in 2018 and delineate our outlook for Inflation over 2019.

#### Sticky downtrend in Inflation grinds to a halt

In our H2 18 outlook, we posited that the absence of potential increase in pump prices of premium motor spirit (PMS) and electricity tariff as well as mild moderation in food inflation will drive a downward trend in inflation over H2 2018. Precisely, we noted that the robust supply of Petrol by the NNPC across the country and kick-backs in the proposed increase in electricity tariffs by FG would drive moderation in transport and HWEGF baskets and invariably filter into both core and food inflation. In line with our views, headline inflation moderated by 174bps to average 11.27% YoY over H2 18, albeit at a slower pace relative to our expectation of 11.07bps to average 12.15% YoY over 2018. The decline cuts across core and food inflation.

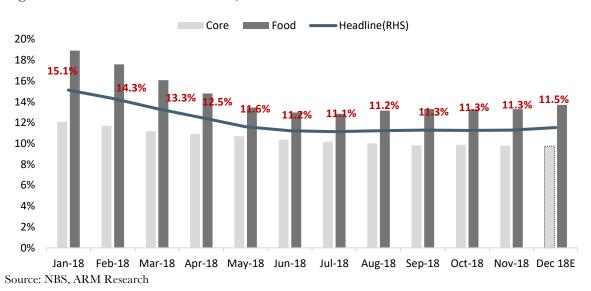


Figure 1: Historical YoY headline, Core & Food Inflation

On the core basket, the moderation was hinged on the relatively flat movement in price of petrol which reflected the steady supply by the NNPC in a bid to avoid scarcity. However, the slower moderation relative to our expectation was due to the increase in deregulated petroleum products, particularly diesel and kerosene, which mirrored crude oil prices and thus led to a sticky fall in inflation across the HWEGF, Food & Non-alcoholic beverages as well as the education basket which jointly accounts for 42.4% of the Core index. For context, average diesel prices increased by 3.2% to \$\frac{14}{14}\$ liter relative to \$\frac{18}{198}\$ liter in the same period of 2017, according to the NBS. This shock, though mild, tapered the pace of moderation in core inflation which dipped by 125bps to 9.91% YoY over H2 18, compared to a moderation of 274bps over H2 17.

Elsewhere, Food inflation dipped by 239bps to 13.24%, with decreases stemming from receding pressures from farm produce (-242bps to average 12.7% in H2 18), processed foods (-556bps to average 15.31% YoY) and imported foods (-47bps to 15.6%). Improved market supplies and harvest relative to the prior year drove the moderation in both farm produce and processed food prices.

In addition, lower global food prices drove the moderation in YoY imported food inflation. For context, FAO food price index – a measure for global food prices – declined by 4.9% over H2 18.

1.40%

1.20%

1.00%

0.80%

0.40%

0.20%

Jan-18 Feb-18 Mar-18 Apr-18 May-18 Jun-18 Jul-18 Aug-18 Sep-18 Oct-18 Nov-18

Figure 2: Historical MoM headline & Core Inflation

Source: NBS, ARM Research

On food, average MoM food inflation declined by 1bps to average 1.11% over H2 18 hinged on the moderation in food prices, following the bountiful harvest recorded during the main harvest season. Over the second half of the year, after ticking up slightly in August (1.4% MoM) and November (0.9% MoM) – the pressures on food prices subsided in December with food inflation at 0.81%. From our findings, food pressure in August reflected imported food inflation on the back of increases in global food prices, with imported food inflation expanding by 105bps to 1.75% MoM, though overall impact on food was neutered by decline in prices of farm produce. In November, increased market demand, against the impending festive season brought about some pressures on food prices in the month. However, we saw the pressure moderate in December.

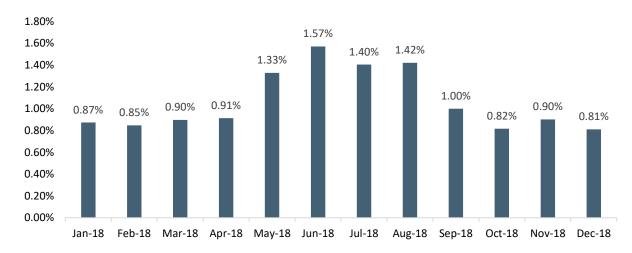


Figure 3: Historical MoM food Inflation

Source: NBS, ARM Research

#### 2019 Outlook: Follow the Core

In framing our outlook on Inflation, we analyzed the possible source of shocks to the CPI over 2019. We assessed the impact our view on the currency would have on the price level, possible increase in petrol (PMS) prices, a raise in electricity tariff and the introduction of a wage increase by the FG. Starting with our view on currency, while we believe the naira would remain stable for most part of the year as the Apex bank sustains its market intervention, we believe its intensity would reduce as accretion to the reserves would drop due to our expectation of lower oil receipts in the latter part of the year (Q4 19). That said, we applied an average exchange rate of \$368.02/\$ for the year.

On PMS prices, based on our estimate, at current crude oil prices and exchange rate, official selling price should come to \$\frac{\text{\text{N}}\frac{1}}{185} - \frac{\text{\text{\text{N}}}\frac{1}}{190}\$/liter (current: \$\frac{\text{\text{N}}\frac{1}}{145}\$/liter). In fact, from the NNPC report over 2018, average monthly under-recovery stood at \$\frac{\text{\text{\text{N}}}\frac{60}}{100}\$ billion, taking the pain to maintain prices so as not to tow the unpopular path. In our view, the growing pain of the FG post-election will force a raise in fuel prices in the second half of 2019. Consequently, using our average crude oil price for 2019 (\$55.95/bbl.) and current exchange rate of \$\frac{\text{\text{\text{N}}\frac{3}}{360}\$/\$\$1, we estimate landing PMS price of \$\frac{\text{\text{\text{N}}\frac{1}}{5}\$/liter, which in addition to distribution margins brings official selling price to \$\frac{\text{\text{\text{\text{\text{N}}}\frac{1}}}{175}\$/liter in the latter part of H2 19. As tested, there is a strong relationship between PMS and core CPI thus, higher PMS prices could likely fuel fresh inflationary pressures in H2 2019.

Table 1: PMS Retail price/Liter Scenarios

<b>Exchange Rate</b>	305	330	360	400
\$55/bbl.	137	145	156	170
\$60/bbl.	146	156	167	182
\$65/bbl.	156	166	178	195
\$70/bbl.	166	177	190	207

Source: ARM Research

With regards to electricity tariff, given frequent kick-backs by the FG and other groups with regards to an increase in general tariffs, especially with the FG holding the view that the sector players are yet to satisfy the conditions that accompanied the previous electricity review and therefore holds off the implementation of an electricity hike. Based on the foregoing as well as distractions from elections over the first half of the year, we perceive the hike could be delayed. Elsewhere, though the implementation of the proposed new wage bill, from \$\frac{1}{2}\$18,000 to \$\frac{1}{2}\$30,000, seems to be gaining more grounds, our findings suggest a little to no impact on the inflation numbers. We note that Nigeria's inflation is largely cost-push (cost driven) and not demand-pull (demand-driven) even as the decline in real income in prior years does suggest the increase will mainly drive a recovery than fuel renewed demand pressures. For context, inflation moderated over 2011 to an average of 10.9%, the year in which the minimum wage was increased to \$\frac{1}{2}\$18,000 form \$\frac{1}{2}\$7,500.

Consequently, we have modeled our inflation outlook using the impact of currency and PMS increase in the latter part of 2019. We have adopted a blended approach of our regression and weighted average model to arrive at an average inflation rate of 12.4% over 2019 (2018E: 12.2%), which forms our base case scenario.

16.0% 14.8% 13.8% 13.8% 14.0% 12.8% 11.9% 11.3% 11.2% 11.3% 11.3% 12.0% 10.0% 8.0% 6.0% 4.0% 2.0% 0.0% Jan-19 Feb-19 Mar-19 Apr-19 May-19 Jun-19 Jul-19 Aug-19 Sep-19 Oct-19 Nov-19 Dec-19

Figure 4: Headline Inflation Forecast for Jan - Dec 2019

Source: ARM Research

#### **Regression Results**

- PMS accounts for 70% of the movement in Transport inflation.
- Transport inflation accounts for 98% of the movement in Food inflation.
- Elsewhere, the PMS and currency accounts for 72% of the movement in core inflation.

#### **Weighted Average Model**

- The model applies different weights to the monthly inflation rates from prior years (2014-2018)
   with higher weights allocated to years where currency and PMS price shocks were more evident.
- Weights were allocated based on our correlation results, which shows the impact of PMS and currency shocks were more evident in 2015 and 2016
- In H1 19, we allocated more weight to 2014 and 20171, given that there were no shocks from PMS and Currency in these years. In H2 19, more weight was allocated to 2015 and 2016<sup>2</sup>

■ Regression
■ Weighted average 20.0% 18.0% 16.0% 14.0% 12.6% 12.5% 12.3% 12.3% 12.1% 11.7% 11.9% 11.8% 11.9% 11.5% 10.9% 12.0% 10.0% 8.0% 14.2% 13.7% 6.0% 11.9% 11.4% 11.3% 10.4% 10.3% 10.1% 9.8% 4.0% 2.0% 0.0% Apr-19 Jan-19 Feb-19 May-19 Jun-19 Jul-19 Aug-19 Sep-19 Oct-19 Nov-19

Figure 5: 2019 Inflation forecasts using Regression and Weighted Average Models.

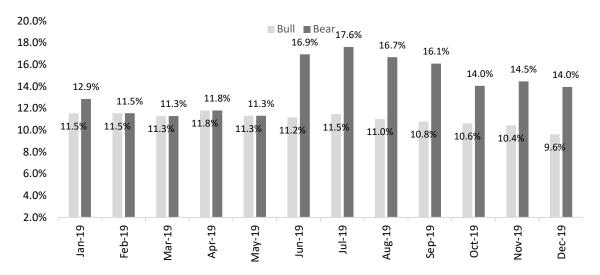
Source: ARM Research

Furthermore, we carried out a scenario analysis, factoring stability in petrol prices and currency. This guides to a further moderation in inflation to 11.05% YoY – which is our bear case scenario. On the flipside, should these pressures kick in, inflation rate would expand to 14.05% YoY – which is our bull case scenario.

<sup>&</sup>lt;sup>1</sup> We allocated a weight of 45% to 2014 and 35% to 2017

<sup>&</sup>lt;sup>2</sup> We allocated a weight of 30% to 2015 and 60% to 2016

Figure 6: Inflation forecast for Jan-Dec 19 (Bull, Base and Bear)



Source: ARM Research

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