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NIGERIAN INFLATION FIGURES MAY NOT ADEQUATELY CAPTURE CONSUMERS' EXPERIENCE

Nigeria's inflation rate came in at the high value of 18.6% for June, 2022 while the average price paid by consumers for goods and services has doubled in the last 5 years. This has serious implications for citizens' welfare, especially as wages, in most sectors, have not increased substantially over similar period.

Inflation is commonly measured as changes in the Consumer Price Index (CPI) which itself measures the prices of a representative basket of goods and services purchased by a typical household. Based on what is known as the Laspeyres index, CPI is computed by using fixed weights of quantity of goods and services derived from household surveys conducted in some periods in the past while prices are updated more frequently.

Figure 1 shows the trend of the composite, urban and the rural inflation rates. The inflation estimate for June appears as the highest after the 18.72% recorded in January 2017, making the current figure a 65-month high. The trend also shows that the three rates move in a similar direction with the urban inflation rate higher than rural in all the periods.

Despite this high and rising inflation figures, many citizens still doubt if their experience of market prices is adequately captured. While some are of the view that they experience far higher price increase in recent times, others think otherwise.

No doubt, the national statistical authority applies a robust methodology to the measurement of inflation in Nigeria; but the nature and pattern of commodities used in the computation as well as the assumptions inherent in their measurements will always, and everywhere, make inflation figures imprecise.

The objective of this article is to discuss factors that may limit the usefulness of CPI as a true Cost of Living Index and therefore affect inflation figures, especially what consumers feel in reality. This problem is commonly referred to as **CPI Bias** in the literature; coming from substitution, quality change, new items and new outlets. Depending on their relative severity, the cumulative impact of these biases may lead to under- or over-estimation in inflation rate.

i. **Substitution bias**: This problem occurs when consumers switch away from goods that have become relatively more expensive in the basket to cheaper ones, yet the benchmark basket still assumes consumer still behave in the old static manner. For instance, when prices of some forms of fuels increase, consumers will substitute them for alternative and more affordable energy sources, but CPI will typically assume consumers still behave in the current period as they did in the past.

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ii. **Quality bias:** CPI does not adequately capture changes in the quality of commodities in the consumer basket; the computation continues to assume same quality for such goods many years after they might have changed. There are many items in Nigeria, e.g. groceries, which prices have not changed significantly in the past, but consumers have observed significant changes in their quality, such as tastes, packages, etc.

iii. **New products bias:** CPI also fails to capture products newly introduced into the market, as it maintains a constant basket of commodities for a period regardless of the emergence of new products. There are more and new consumer items now than in the past. For instance, products like mobile phones have improved significantly in terms functions and features in the last 10 years far beyond what CPI can easily capture.

iv. **New outlets bias:** When consumers change the outlets and locations where they purchase their goods and services, CPI may still be using the old outlets which may not mirror the new reality. In recent years, there are many big supermarkets that have opened outlets all over the country and as Nigerian consumers patronize them, it implies they are gradually moving towards VAT-paying sales outlets. E-commerce and online shopping are also new outlets that CPI may not adequately capture.

Certain features of Nigeria's CPI's computation further aggravate the effects of these forms of bias. For instance, the consumer basket being used comprises 740 items which were surveyed since 2003/2004 and re-valued in 2009; with the urban and rural indices weighted with a constant population ratio of 0.455 and 0.545 respectively.

However, many of the 740 items surveyed and weighted since 2009 would definitely have changed in terms of numbers, relative importance to consumer and in quality. Moreover, there are many more new items, or their variants, which consumers spend money on as well as in new shopping outlets, both physical and online.

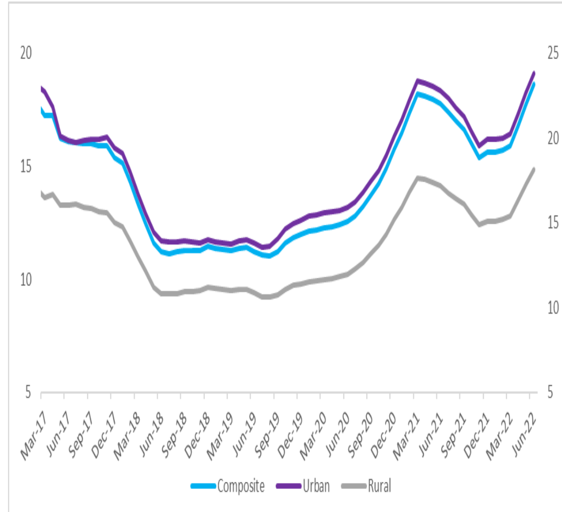
In addition to these well-established forms of bias, it is important to note that the CPI and the derived inflation rate are both average numbers, comprising several commodities, many of which are not consumed by the same consumer and also not in the same proportion.

To partly address this, the national statistical authority often presents various forms of inflation rates to support the headline figures. For instance, values are presented for rural and urban areas, food and non-food items as well as for different states in the country. Figure 2 shows the relative weights for each of 12 consumption classifications. As shown in the figure, items under food account for 53.2% of the Nigerian consumer basket weight and others are far less.

Figure 3 further shows that the 5-year average inflation rates vary across these consumption classifications. Specifically, Food and non-alcoholic beverages (16.92%), Clothing and footwear (12.8%), Transport (12.23%), Health (11.81%) and Furnishings and household equipment maintenance (11.7%) top the list of baskets with highest average annual inflation; while Communication (7.59%), Housing water, electricity, gas and other fuel (9.59%), Recreation and culture (10.21%), Restaurants and hotels (10.26%), and Alcoholic beverages, tobacco and kola (11.03%) rank lowest.

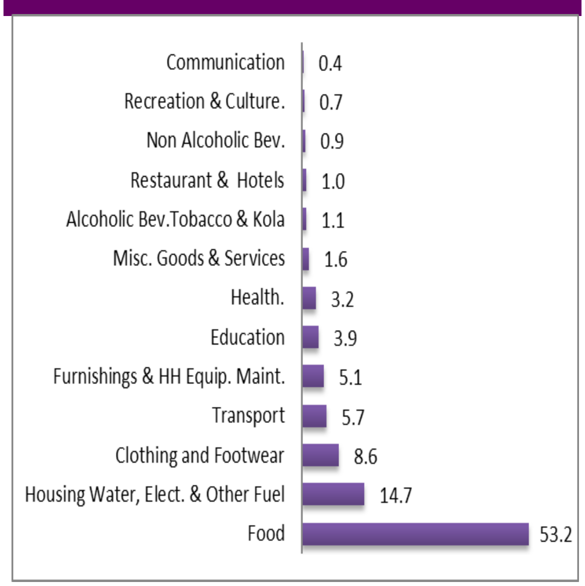
Consequently, the inflation rate encountered by a consumer will vary depending on the proportion of expenditure that goes into food relative to other items, the specific food item consumed, locations and many other factors. In other words, different consumers will be ex-

Figure 1: Inflation Rates (%)



Source: ADSR Research

Figure 2: Weights of Consumption Classifications



Source: NBS, ADSR Research

posed to different inflation rates depending on their characteristics; but the inflation rate often reported is an indicative figure averaged over several consumption items and the interaction of consumers and sales outlet distributed over many locations.

For instance, deriving from the popular ***Engel's Law*** that food's budget share is inversely related to household real income, the rich are often seen to spend a lower proportion of their income on food than the poor, which can affect the rate of inflation they may face. This explains a situation where Nigeria allocates over half of the weights in its consumer basket to food and only 16% and 15% are allocated to food in the case of Canada and the US respectively.

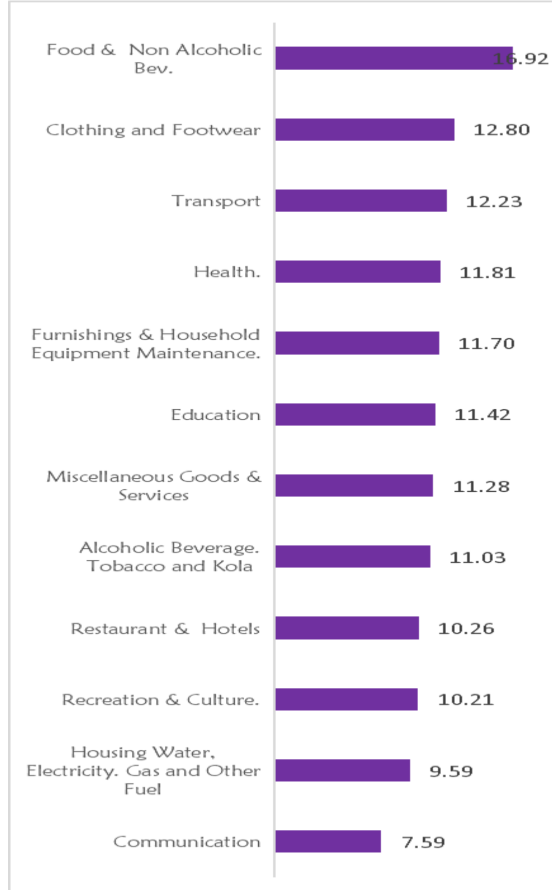
To deal with some of these problems, it is ideal that the survey of quantities used in deriving the items weight in the consumer basket is conducted at the same time as that of prices. However, because it is always difficult and costly to get the market baskets and weights reviewed on a monthly basis, the recommended option is to update the baskets used in generating the weights at least once every 4-5 years.

Table 1 shows the frequency and last year of update for selected countries. It is observed that while some developed countries update their baskets almost every 2 years on average, developing countries tend to do so every 5 years.

Going forward for the country's statistical authority and users, it is important to work on the following factors.

- Nigeria needs to update its consumer basket from what was done in 2009 to more recent years to reflect current realities and also keep to a minimum of a 5-year updating plan going forward.
- Many countries are now leveraging technology to obtain both quantity and price data from retail outlets. Nigeria needs to do likewise to make consumer basket, especially in certain locations, as dynamic as they should be.
- The urban (0.455) and rural (0.545) weights should be continuously updated, especially in the light of rural-urban migration of the country and the impact of insurgency and other crisis on rural activities.
- Development of new shopping outlets and platforms need to be duly recognised in obtaining prices and expenditure on items. E-commerce and transactions via online platforms have changed consumers' spending patterns in the last 10 years.
- Some countries also complement their CPI inflation with other indexes and Nigeria can learn from them. In addition to the CPI produced by the Bureau of Labor Statistics in the US, the Bureau of Economic Analysis also produces the Personal Consumption Expenditure (PCE). The PCE has more relevant items and more realistic weights which have made the Federal Reserves to choose it over CPI since 2000.
- Retail Price Index and Wholesale Price Index are other variants produced in countries such as UK, US and India; and Nigeria can learn from their relevance and approaches.
- Within what is currently available, users of CPI and inflation figures can adopt rates most suitable for their purpose and/or generate their own weights with which appropriate inflation rates can be computed.

Figure 3: 5-Year Average Annual Inflation (%)



Source: NBS, ADSR Research

Table 1: Frequency of Updates by Countries

SN	Country	Frequency of Updates
1	Nigeria	2009 (?)
2	Ghana	2017 (every 5 years)
3	South Africa	2022 (every 4-5 years)
4	USA	2019/2020 (every 2 years)
5	UK	2022 (every 2 years)
6	Canada	2021 (annually)
7	Japan	2020 (every 5 years)

Source: ADSR Research

Nigerian Economy to Grow by 3.44% in H1 2022

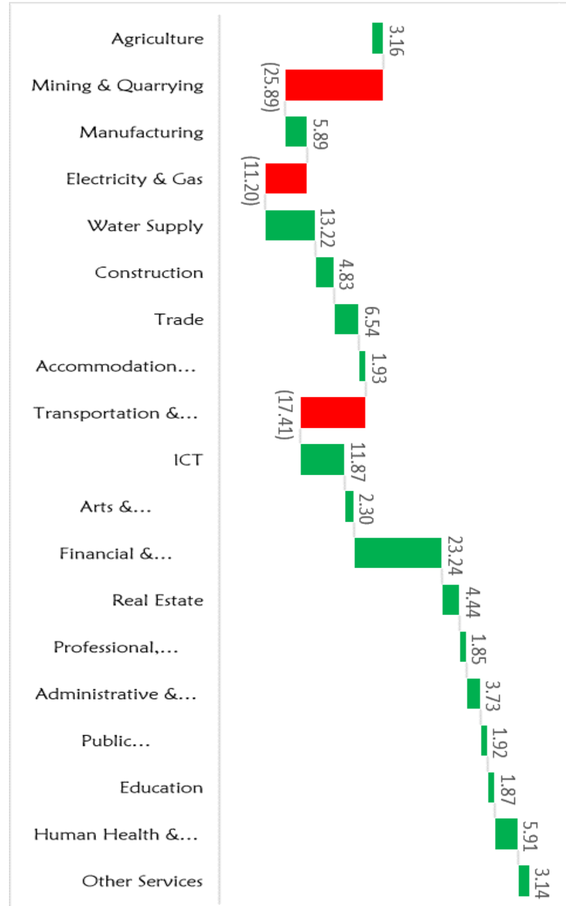
The IMF in her July edition of the World Economic Outlook has maintained Nigeria's growth of 3.4% (majorly as a result of the increase in the global oil price) but global growth has been downgraded by 0.4 percentage points from 3.6% to 3.2%. Although the Nigerian economy has been facing challenges such as insecurity affecting production of food items, high rate of inflation, rising debts, increase in the rate of oil theft which has been limiting her ability to take advantage of the increase in oil price, weak currency amid shortage of foreign exchange to meet demands to mention just a few, it is believed that the economy is gradually recovering from the COVID-19 pandemic shocks and has been recording positive growth since the fourth quarter of 2020.

In 2022'Q1 the economy recorded a growth of 3.11% and our projection is that by the time the National Bureau of Statistics (NBS) releases the 2022'Q2 GDP figures the economy will grow by 3.71%, leading to an average growth of 3.44% in the first half of the year.

This growth will be driven majorly by the non-oil sectors of the economy with the financial services sector taking the lead. Major drivers of our half year growth projection are Financial and Insurance (23.24%), Water supply sewage and waste management (13.22%), Information and communication (11.87%), Human Health and Social Services (5.91%) and the Manufacturing sector (5.89%) while the laggards are the Mining and Quarrying Sector (-25.89%), Transportation and Storage (-17.41%) and Electricity (-11.2%).

This is a call to action for Nigeria on the need to diversify away from the oil sector which is more susceptible to global price shocks; and the economy's continuous dependent on it is inimical. Adequate attention should be given to sectors such as manufacturing, financial services and the ICT as they possess great potential to generate more productivity for the country.

H1 2022 Growth Forecast by Sector



Source: NBS, ADSR Research

Structure of GDP

Activity Sector	Nominal GDP (N'bn)		Real GDP (N'bn)		
	H1 2021	H1 2022E	H1 2021	H1 2022E	Real GDP Growth (%)E
Agriculture	17,226.64	19,216.12	7,730.58	7,974.88	3.16
Mining And Quarrying	5,301.52	6,676.90	2,827.62	2,095.63	-25.89
Manufacturing	11,658.11	13,024.00	3,121.90	3,305.86	5.89
Electricity, Gas Steam and Air Conditioning Supply	848.21	827.78	171.04	151.88	-11.20
Water Supply, Sewerage, Waste Mgt. & Remediation	276.62	324.38	83.90	94.99	13.22
Construction	7,488.59	8,073.18	1,225.21	1,284.44	4.83
Trade	11,010.80	12,592.97	5,407.37	5,761.26	6.54
Accommodation And Food Services	672.09	716.22	236.29	240.85	1.93
Transportation And Storage	1,682.98	1,413.30	441.59	364.71	-17.41
Information And Communication	8,744.99	10,541.32	5,587.36	6,250.69	11.87
Arts, Entertainment and Recreation	151.33	174.05	86.34	88.33	2.30
Financial And Insurance	2,556.69	3,382.15	1,255.26	1,546.93	23.24
Real Estate	3,988.95	4,421.21	1,769.50	1,847.98	4.44
Professional, Scientific and Technical Services	2,171.80	2,374.36	1,066.14	1,085.83	1.85
Administrative & Support Services	13.72	15.27	6.74	6.99	3.73
Public Administration	1,315.38	1,439.14	646.45	658.88	1.92
Education	1,196.17	1,290.47	556.14	566.55	1.87
Human Health and Social Services	506.73	574.38	247.40	262.02	5.91
Other Services	2,326.89	2,576.15	1,141.06	1,176.87	3.14
Total	79,138.20	89,653.33	33,607.89	34,765.57	3.44

Source: NBS, ADSR Research

Nigeria to Service Debt with 125.09% of Revenue in 2022'H1

The fiscal performance report which was presented by the Ministry of Finance, Budget and National Planning in the just-concluded public presentation of the 2023-2025 Medium Term Expenditure Framework (MTEF) shows that the amount used in servicing debt for the country is about 129.85% of the FGN retained revenue as against budget of 48.01% in the period January-April, 2022. Higher debt service-revenue ratio implies that the country is now borrowing, not just to implement project and pay salaries, but also to service its debt; this is very worrisome.

The report further shows that the country's deficit stood at N3.06 trillion at the end of April, 2022 as against the pro-rated projection of N2.07 trillion. So far, it is evident that the fiscal outcomes fall below the government's projections.

Our projections show that revenue, expenditure and deficit will be N2.32 trillion, N6.83 trillion and N4.51 trillion respectively in the first half of the year.

Based on the trend of what has happened so far in the year and observed Federal Account Allocation Committee (FAAC) distribution, we projected the fiscal outcomes for the first half of the year. Our projections show that revenue, expenditure and deficit will be N2.32 trillion, N6.83 trillion and N4.51 trillion respectively in the first half of the year.

Further, oil to revenue, capital expenditure to total revenue, debt service to total expenditure and debt service to revenue are projected at 22.33%, 16.38%, 42.55% and 125.09% respectively for the first half of the year.

A situation where the country spends more than it earns to service debt is grossly unsustainable and needs to be urgently reversed. Government needs to be innovative in generating revenue, efficient in spending and re-prioritize its spending pattern. Nigeria should strive hard to ensure efficiency in tax administration and collection, seek diversification from oil to generate multiple streams of revenue and also address issues limiting full realisation of projected revenue while putting checks in place to judiciously track how monies allocated to projects are being spent.

FGN Budget

	2022 Amended Budget (N'bn)	Pro Rata (Jan-Apr) (N'bn)	Actual (Jan-Apr) (N'bn)	H1[E] (N'bn)
Federal Retained Revenues (excl. GOEs)	8,240.78	2,746.93	1,493.09	2,324.74
Oil Revenue	2,389.01	796.33	333.41	519.12
Non-Oil Revenue	2,258.39	752.80	632.56	984.90
FGN Independent Revenue	2,616.22	872.07	394.09	613.60
Other Revenue	977.17	325.73	133.04	207.14
FGN Expenditure (excl. GOEs and project-tied loan)	14,447.76	4,815.93	4,556.54	6,834.81
Statutory Transfers	803.60	267.87	289.89	434.84
Non-Debt Recurrent Expenditure (excl. GOEs)	6,023.57	2,007.86	1,581.76	2,372.64
Debt Service	3,956.09	1,318.70	1,938.74	2,908.11
Capital Expenditure (MDAs & Others)	3,664.50	1,221.50	746.15	1,119.23
Surplus (Deficit)	(6,206.98)	(2,069.00)	(3,063.45)	(4,510.07)
Ratios				
Oil to Total Revenue (%)	28.99	28.99	22.33	22.33
Capital to Total Expenditure (%)	25.36	25.36	16.38	16.38
Debt Service to Total Expenditure (%)	27.38	27.38	42.55	42.55
Debt Service to Revenue (%)	48.01	48.01	129.85	125.09

Source: Budget Office, ADSR Research

Do Highly Indebted States Spend More on Capital Projects?

Rising debts, by both the federal and state governments in Nigeria, have become a popular topic of discussion in recent times as the government keeps accumulating debts while infrastructure development is still inadequate. That brings up the question of whether these debts are used to finance capital projects which have the potential of at least repaying the debt in the near term and not just expending on recurrent expenditure items. There have been several issues around this and arguments have been put forward to justify reasons for borrowing. However, borrowing should be for the purpose of implementing capital projects which will earn returns to repay the debt and also be beneficial to the masses.

With this in mind, we have conducted an analysis to show the states of the federation in terms of their debts, budgeted capital expenditure for 2022 and the debt to capital expenditure ratio, showing the extent to which capital expenditure items can repay the debt burden of the state. Lower ratio is better, indicating that a state is spending more on capital projects relative to its debts and vice versa.

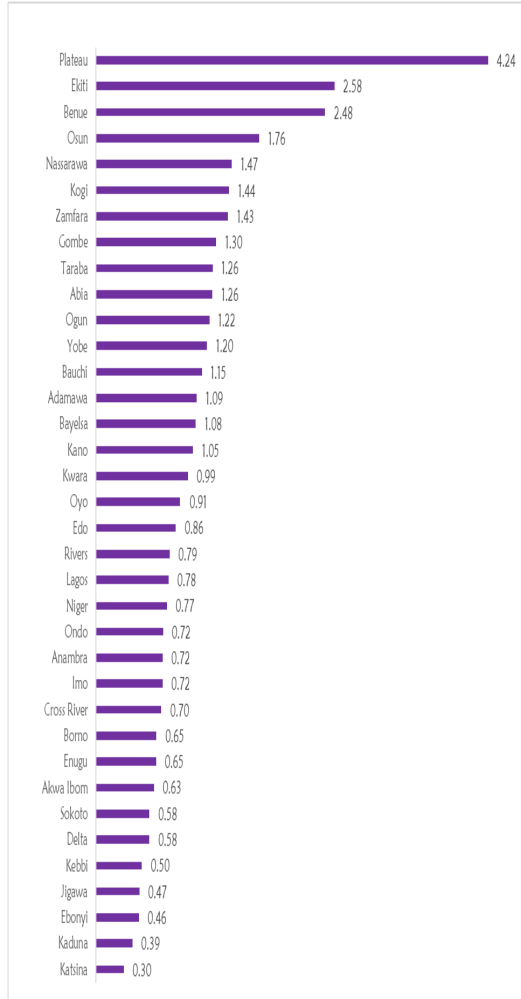
The result of the analysis for 2022 shows that Lagos has the highest capital budget of N995.92 billion and a debt stock of N780.48 billion which is also the highest among the states. Akwa Ibom, Imo, Delta, Rivers and Cross River have capital expenditure budgets of N324.92 billion, N284.72 billion, N284.14 billion, N284.01 billion and N225.75 billion while Kogi, Benue, Ekiti, Nasarawa and Plateau have the lowest capital budget of N63.57 billion, N56.82 billion, N40.07 billion, N38.93 billion and N35.89 billion respectively.

In terms of domestic debts, after Lagos state, Ogun, Rivers, Imo, Akwa Ibom, Delta, Cross River, Plateau, Bayelsa and Oyo have debts of N241.98 billion, N225.51 billion, N204.61 billion, N203.11 billion, N163.48 billion, N158.93 billion, N152.09 billion, N151.41 billion and N141.19 billion respectively at the end of the first quarter of 2022.

Figure presents the debt to capital ratio of the states in Nigeria. Katsina (0.30), Kaduna (0.39), Ebonyi (0.46), Jigawa (0.47), Kebbi (0.50), Delta (0.58), Sokoto (0.58), Akwa Ibom (0.63), Enugu (0.65) and Borno (0.65) appear to be the top ten states with their budgeted capital expenditure exceeding their debt stock while Plateau (4.24), Ekiti (2.58), Benue (2.48), Osun (1.76), Nasarawa (1.47), Kogi (1.44), Zamfara (1.43), Gombe (1.30), Taraba (1.26) and Abia (1.26) have capital budget lower than their debt stock.

Based on the outcome of this analysis, it is clear that many of the states in Nigeria have debt burden that are in excess of their budgeted amount for capital projects. States should devise means to checkmate the rate at which they borrow and if at all they are going to borrow, it should be monitored closely to ensure the funds are channelled towards capital projects that will foster development, be of benefit to the masses and at the same time generate revenue for the state.

Debt/Capital Expenditure



Source: DMO, ADSR Research

ESG Disclosure and Ranking of Companies Website

Environmental, Social and Governance (ESG) rating of companies is fast gaining relevance in the corporate world as investors look out for this metric to assess various organisations of the world.

Most organizations around the world now tailor their activities in such a way that it will give them a better ESG rating and avoid practices that will hamper their rating.

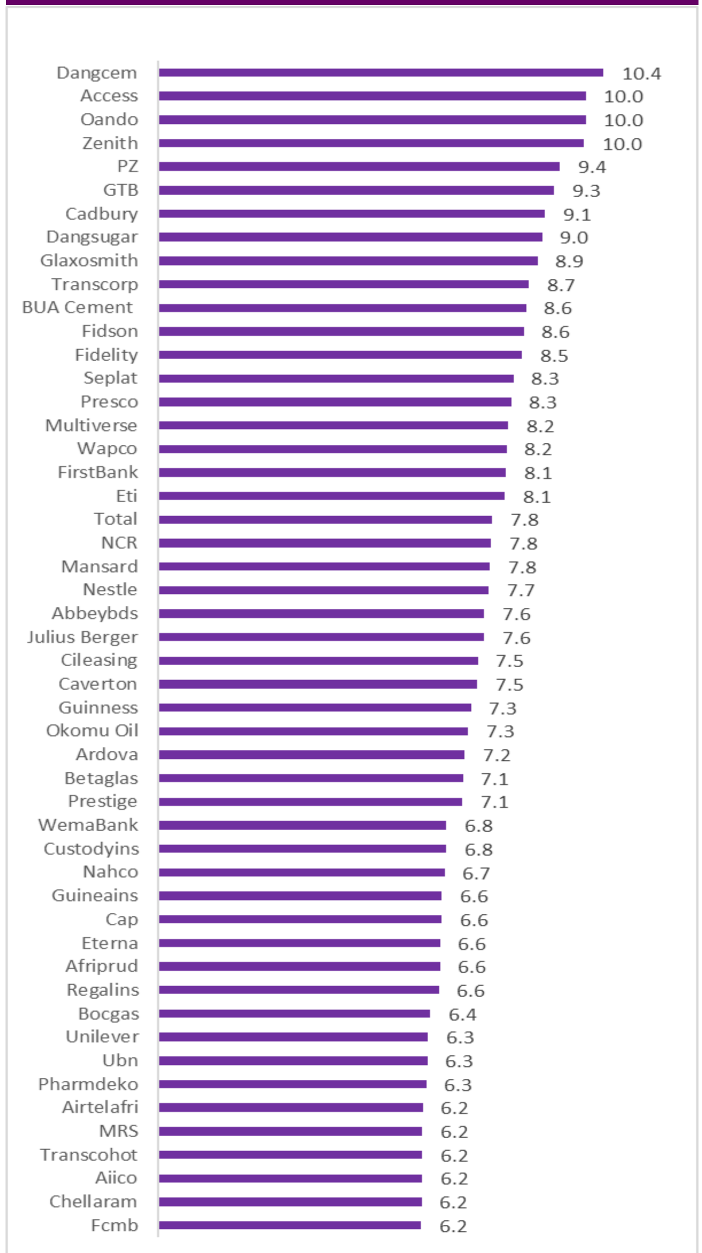
ESG acronym is usually seen on companies' websites, reports and releases to demonstrate that they are eager to engage and also are engaging with ESG as a whole. However, the challenges faced by companies are not tied to awareness but of implementation of ESG.

Following that, we have conducted an ESG disclosure rating of listed companies in Nigeria using available and updated information from their functional websites. This rating is closely tied to disclosure of 15 vital aspects of ESG on the companies' website.

We present the results of the top 50 companies in the figure. It is shown that Dangote Cement has the highest score of 10.4 out of 15. This is closely followed by Access (10.0), Oando (10.0), Zenith (10.0), PZ (9.4), GTB (9.3), Cadbury (9.1) and Dangote Sugar (9.0).

Since less than 30 of Nigerian listed firms disclose adequate ESG information on their website, much still need to be done. This will require the relevant authorities, platforms and companies to take the issue of public disclosure of information more seriously, particularly via the internet and other electronic channels.

ESG Website Ranking



Source: NBS, ADSR Research

Summaries of the Months in the Quarter's Financial Variables

- The table below shows the summary of the financial variables for the quarter. The exchange rate differential between the I&E window and the parallel market was N189.95/$ at the end of the quarter.
- Inflation rate increased from 16.82% in April to 18.6% in June.
- The interest rate (MPR) was increase from 11.5% to 13% during the quarter. However, the rate has been further increased to 14% in the just concluded meeting of the Monetary Policy Committee (MPC).
- Commodities prices have been on the rise as a result of supply chain disruption caused by the on-going war in the Black Sea region which supplies significant quantity of global commodities.
- The Y-o-Y change shows that the commodities except Inflation rate, Interbank Call rate and AFEX Commodity index (which fell by 0.23%, 76.59% and 0.79% respectively) gained relative to the average of the corresponding period in the previous year.

Selected financial Indicators

Selected Financial Indicators

Month	Apr	May	Jun	Quarter Average	Y-o-Y Δ (%)
Parallel market rate (N/$)	590.00	608.00	615.00	604.33	16.77
I & E Window (N/$)	415.69	415.65	415.72	415.69	1.01
Inflation (%)	16.82	17.71	18.60	17.71	(0.23)
Money Supply (N'billion)	47,214.18	48,577.98	48,865.82	48,219.33	18.06
Interest rate – MPR (%)	11.50	13.00	13.00	12.50	8.00
Interbank Call Rate (%)	8.67	8.38	11.10	9.38	(76.59)
NGX - All Share Index	496.39	536.37	518.18	516.98	26.68
AFEX Commodity Index	473.28	463.35	467.89	468.17	(0.79)
FMDQ Bond Index	611.19	614.88	621.69	615.92	13.47
External Reserve ($'million)	39,579.28	38,483.66	39,155.28	39,072.74	14.71
Cocoa ($/MT)	2,567.00	2,496.00	2,340.00	2,467.67	3.19
Wheat (cent/bushel)	1,055.75	1,087.50	884.00	1,009.08	32.66
Gold ($/toz)	1,896.93	1,837.35	1,807.27	1,847.18	4.17
Brent ($/barrel)	109.34	122.84	114.81	115.66	35.04
Petrol (N/litre)	172.61	173.08	175.89	173.86	4.75

Source:: ADSR Research

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