# MACROECONOMIC PERFORMANCE AND THE STOCK MARKET: EVIDENCE FROM NIGERIA

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# Outline

- Conceptual Framework of macro variables and stock market
- Empirical Evidence of macroeconomic performance and stock market
- Macroeconomic performance and stock market in 2022
- Drivers of the macro-economy and the Nigerian stock market in 2023
- Recommended Investment Strategy

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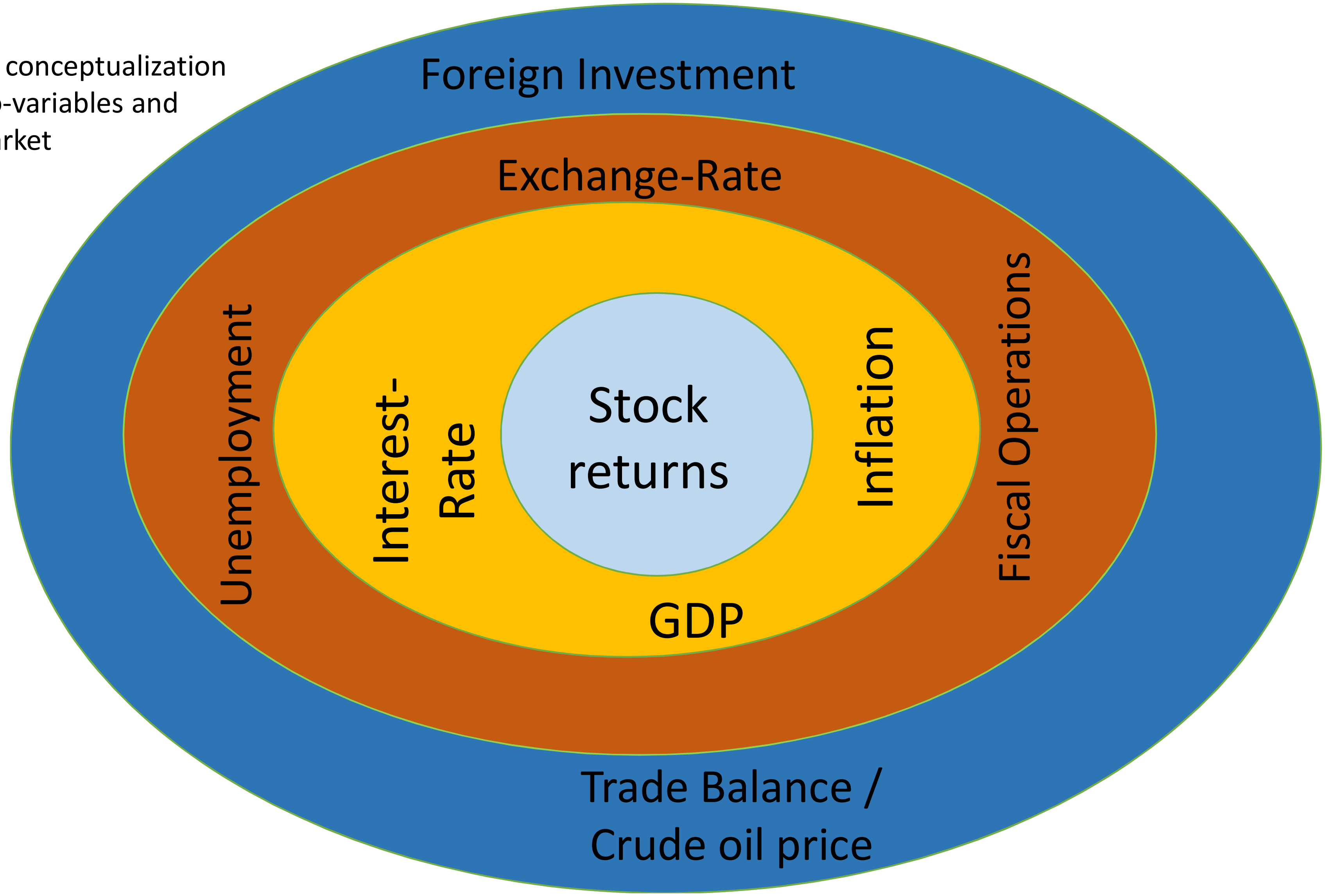
Author's conceptualization of macro-variables and stock market



**Slide 3**

**Ma1** Microsoft account, 1/19/2023

## Empirical Evidence

| Year | ASI (%) | INF (%) | RGDP (%) | INT (%) |
|---|---|---|---|---|
| 1999 | -4.2 | 6.84 | 0.6 | 20.29 |
| 2000 | 41 | 7.05 | 5.52 | 21.27 |
| 2001 | 24.7 | 18.9 | 6.67 | 23.44 |
| 2002 | 14 | 13.05 | 14.6 | 24.77 |
| 2003 | 51.4 | 13.93 | 9.5 | 20.71 |
| 2004 | 5 | 15.38 | 10.44 | 19.18 |
| 2005 | 4.4 | 17.85 | 7.01 | 17.95 |
| 2006 | 40.2 | 8.38 | 6.73 | 16.89 |
| 2007 | 57.6 | 5.42 | 7.32 | 16.94 |
| 2008 | -42 | 11.53 | 7.2 | 15.14 |
| 2009 | -4.5 | 12.59 | 8.35 | 18.99 |
| 2010 | 9.6 | 13.76 | 9.54 | 17.59 |
| 2011 | -17.4 | 10.85 | 5.31 | 16.02 |
| 2012 | 35.9 | 12.24 | 4.12 | 16.79 |
| 2013 | 45 | 8.52 | 5.49 | 16.72 |
| 2014 | -15.9 | 8.06 | 6.22 | 16.55 |
| 2015 | 15.6 | 9.01 | 2.79 | 16.85 |
| 2016 | -5.3 | 15.63 | -1.58 | 16.87 |
| 2017 | 43.7 | 16.55 | 0.82 | 17.55 |
| 2018 | -17.9 | 12.15 | 1.91 | 16.90 |
| 2019 | -13.6 | 11.39 | 2.27 | 15.38 |
| 2020 | 49.9 | 13.21 | -1.92 | 13.64 |
| 2021 | 6.01 | 16.98 | 3.4 | 11.48 |

Sources: World Bank Data (2021), Central Bank of NIgeria's Statistical Bulletin (2021), NGX Statistical Bulletin

In terms of scope, macro-variables of interest are inflation, real GDP and interest rates. Stock return as DV

Null Hypothesis: there is no significant effect of macroeconomic variables on stock market returns in Nigeria.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

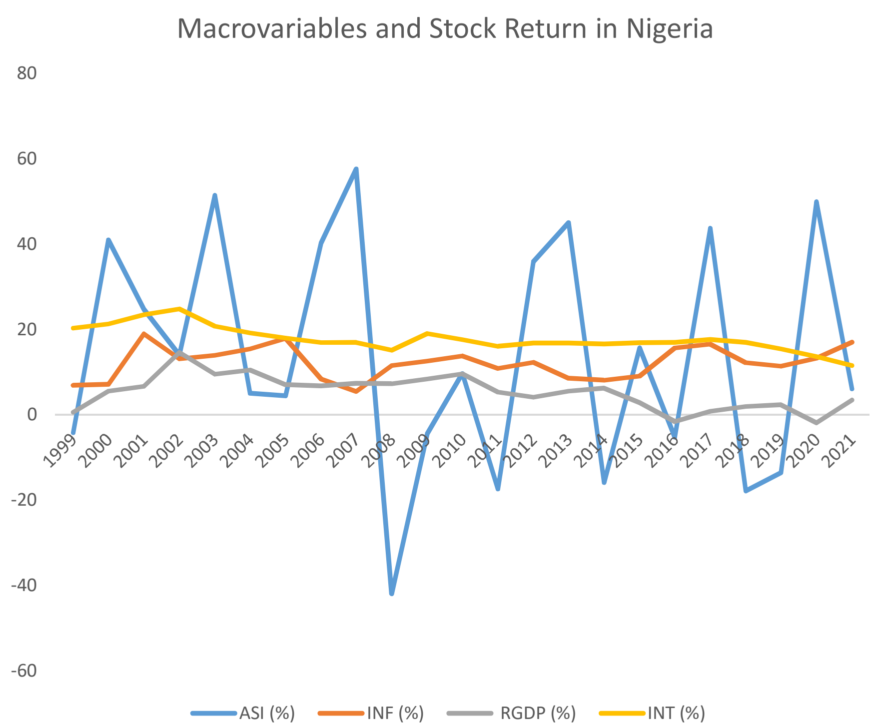
**Where**

Y is Stock market return

$X_1$, $X_2$, $X_3$ represent Inflation rate, Real GDP growth rate and Interest rate respectively.

$\beta_0$, $\beta_1$ - $\beta_3$ are the regression coefficients.

# ..Empirical evidence




Dependent Variable: LOG(ASI)
Method: Least Squares
Date: 01/21/23 Time: 10:00
Sample: 1999 2021
Included observations: 23

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 12.75600 | 0.568945 | 22.42046 | 0.0000 |
| RGDP | 0.045312 | 0.023746 | 1.908223 | 0.0716 |
| INF | 0.013977 | 0.020960 | 0.666842 | 0.5129 |
| INT | -0.172997 | 0.031930 | -5.417932 | 0.0000 |

| | | | |
|---|---|---|---|
| R-squared | 0.619614 | Mean dependent var | 10.09772 |
| Adjusted R-squared | 0.559553 | S.D. dependent var | 0.563450 |
| S.E. of regression | 0.373940 | Akaike info criterion | 1.027327 |
| Sum squared resid | 2.656789 | Schwarz criterion | 1.224804 |
| Log likelihood | -7.814263 | Hannan-Quinn criter. | 1.076992 |
| F-statistic | 10.31643 | Durbin-Watson stat | 1.185847 |
| Prob(F-statistic) | 0.000301 | | |

E-Views output

# .. Empirical evidence

- Effect of interest rate on stock return is negative and significant at 1% level of significance.
- Effect of RGDP on stock return is positive and significant at 10%
- Effect of inflation on stock return is however insignificant.
- With F statistic of 0.000301, macro-variables of interest have significant effect on stock returns.
- Therefore, null hypothesis is rejected.

- Findings on effect of real GDP and interest rate on stock returns are consistent with previous studies (Pole & Cavusoglu, 2021; Josiah & Akoveta, 2019; Daasi et al.,2015)
- The positive relationship between inflation and stock return is underpinned by the theory of marginal efficiency of investment which holds that an investment will be made irrespective of the price/cost of capital as long as that is covered by expected rates of return over a stated period of time.

# Macroeconomic Performance and the Stock Market: 2022 in Retrospect

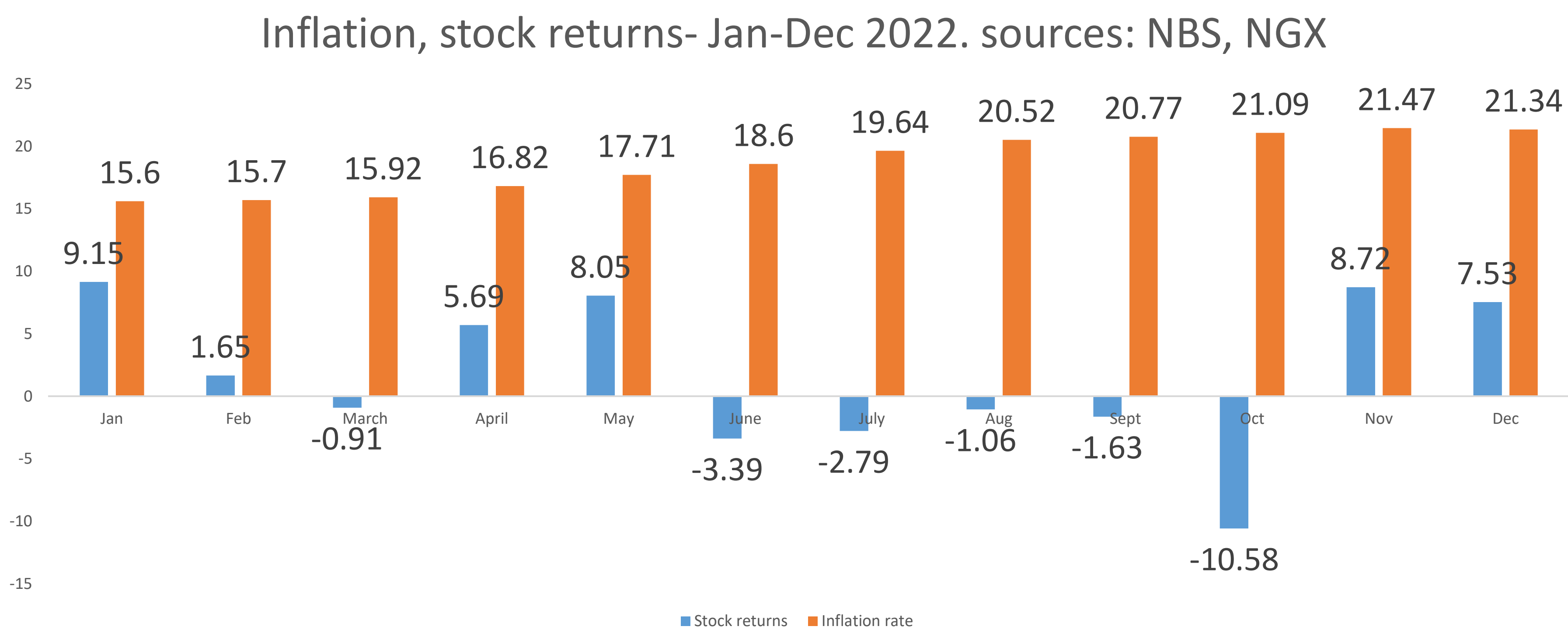
# ..Macro performance and stock market in 2022. sources: NBS, NGX

| 2022 | Av. Inflation (%) | RGDP (%) | Stock Return % |
|---|---|---|---|
| Q1 | 15.74 | 3.11 | 9.74 |
| Q2 | 17.71 | 3.54 | 10.35 |
| Q3 | 20.31 | 2.25 | -5.84 |
| Q4 | 21.3 | ? | 5.67 |

- Relationship between GDP growth and stock return was positive in 2022. Higher RGDP resulted in higher stock returns and vice versa.
- Stock returns rose in Q2 and Q4 of 2022 relative to previous quarters despite higher inflation rates.

FY Av. Inf 18.77%; YTD, 2022 Stock return 19.9%

# ..Macro performance and stock market in 2022. Inflation Vs Stock Returns (%)



# ..Macro performance and stock market in 2022.

Sources: NBS, Statista

| 2022 | Real GDP Growth % | Oil Sector % | Non-Oil Sector % | Av. Daily Oil prod (mbpd) | Av Oil price (Brent) US$ |
|---|---|---|---|---|---|
| Q1 | 3.11 | -26.04 | 6.08 | 1.49 | 100.30 |
| Q2 | 3.54 | -11.77 | 4.77 | 1.43 | 113.54 |
| Q3 | 2.25 | -22.67 | 4.27 | 1.20 | 100.71 |

Improvement in oil sector performance in Q2 2022 relative to Q1 and Q3 resulted in a higher GDP growth rate in Q2 2022.

# Selected Indices and Returns as of December 30 2022: source NGX

| Index | YtD% |
|---|---|
| NGX All-Share Index (ASI) | 19.98 |
| NGX 30 Index | 6.98 |
| NGX Premium Index | 13.14 |
| NGX Banking Index | 2.81 |
| NGX Insurance Index | -11.99 |
| NGX Consumer Goods | -0.06 |
| NGX Oil/Gas Index | 34.05 |
| NGX Industrial Goods | 19.67 |

- Much of the boost in stock market performance, in H1 2022 with a return of circa 21%, (Q1 9.74, Q2 10.35) came from the Oil and Gas Sector on the back of strong crude oil price.
- The lagged effect of the CBN's policy rate hikes manifested in the third quarter of 2022
- Between May 2022 and November 2022, the Monetary Policy Rate was jerked up by 500 basis points- from 11.5% to 16.5% .
- Q3 Stock return was -5.84. Oct is worst performing month with -10.58%

# Macroeconomic Performance and the Stock Market: Outlook for 2023:

- I see a Resilient Economy despite headwinds
- Bulls domination of Bears

# 2023 outlook: Drivers of Macro economy

- Rebound in Chinese oil demand due to ‘relaxation of the country's COVID-19 curbs’.
- ‘World demand in 2023 will rise by 2.22 mbpd’ (OPEC), 2mbpd (Goldman Sachs)
- World oil supply growth in 2023 is set to slow to 1 mb/d due to expected declines in Russia (OPEC)

| 2023 Crude Oil Price Forecast (Brent) | |
|---|---|
| **Organization** | **US$/b** |
| Energy Information Administration | 83 |
| World Bank | 88 |
| OPEC | 80 - 90 |
| Goldman Sachs | 98 |
| JP Morgan | 90 |
| Bank of America | 100 |
| Energy Pro (Reuters Survey) | 87 |
| **2023 FY Crude Oil Price Benchmark (Selected Countries)** | |
| Nigeria | 75 |
| Saudi Arabia | 76 |
| Angola | 81 |

# …2023 outlook: RGDP and Inflation (%)

| | Real GDP growth Forecast | Actual 2022 2.97 | Inflation Forecast | Actual 2022 18.77 |
|---|---|---|---|---|
| IMF | 3 | About Same level | 19 | About Same level |
| FGN | 3.75 | Higher | 17.16 | Lower |
| NESG | 2.98 | Same level | 20.5 | Higher |
| Most likely (median) | 3.25% | Higher | 19% | About same |

# …2023 outlook: Will the candidate matter?

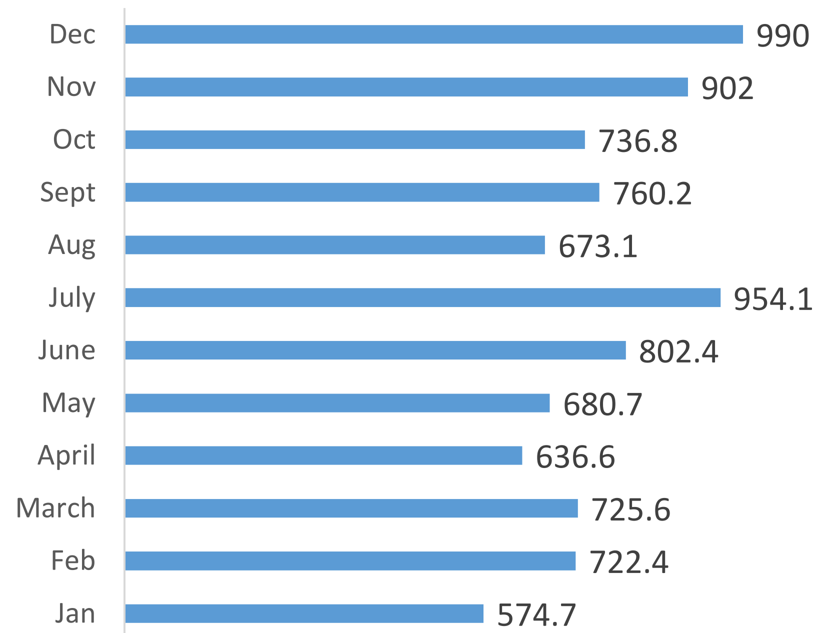
| | Abubakar Atiku (PDP) | Obi Peter (Labour) | Tinubu Ahmed (APC) |
|---|---|---|---|
| Fuel Subsidy removal | Yes | Yes | Yes |
| Elimination of multiple exchange rates | Yes | Yes | Yes |

- With regard to GDP and inflation trajectory in 2023, there may be no significant difference in outcomes regardless of who, among the three leading candidates, emerges the President.
- This is because the manifestos of the three candidates appear similar.
- All three seem favourably disposed to untying the Gordian Knot currently facing the Nigerian economy namely fuel subsidy removal and elimination of multiple exchange rates

# ...2023 outlook: Fiscal Position

- Contrary to projections in several quarters, government's fiscal position is likely to improve in 2023 on account of the following:
- Improvement in crude oil revenue from increase in crude oil production (assuming crude oil price does not disappoint and incidence of oil theft continues to go down)
- Savings from fuel subsidy removal
- Increase in government revenue from implementation of Finance Act 2022
- Increase in FAAC receipts due to likely depreciation of the naira following unification of exchange rates

FAAC Allocation Jan-Dec 2022 Nbn



# …2023 outlook: Drivers

**Tailwinds (Upside Risks)**

- Abating geopolitical tension- a key issue at WEF (high)
- Less aggressive monetary policy by the US Fed (medium)
- Ease in global supply pressure (medium)
- Favourable crude oil price (high)
- Increase in FPIs due to new regime (high)

**Headwinds (Downside Risks)**

- Intensification of Russian Ukraine conflict (medium)
- Energy supply shock from Russian Ukraine conflict (low)
- Global economic recession (low)
- Inflation spike due to oil subsidy removal (medium)
- Interest rate spike due to high level of government borrowing (medium)

# …2023 outlook: Public Debt and Interest Rate

Regarding Public Debt which falls under fiscal operations in our conceptual framework,

- A major channel through which it impacts the capital market is via interest rates.
- If the statements by the leading candidates is any guide, borrowing by the FG may slow in 2023.
- Currently, the US$500 million Eurobond bullet repayment which must be made in July 2023 does not pose any threat to the country's external reserves of over US$37 billion.
- The MPC of the CBN will likely pause policy rate hike in their scheduled meeting of May 2023, if not before then, to usher in the new administration.

# Recommended Investment Strategy: DHL Approach

- **In conclusion, contrary to projections, the macro-economy and the stock market will likely fare better in 2023.**
- The outlook is positive. The implementation of the Capital Market Master Plan is expected to acquire traction in 2023.
- Nevertheless, it is advisable to adopt the DHL approach**.**
- D- Diversify across several asset classes at fair prices. According to Warren Buffet, ''It's far better to buy a wonderful company at a fair price, than a fair company at a wonderful price''.
- H- Hedge against inflation and exchange rate risks.
- L- Long term perspective: historically, equities outperform over the long term. Adjust investment positions as events unfold. Regularly rebalance portfolio to ensure that it is in line with investment objectives and risk tolerance

**I Invite you to share in my Optimism**