

Fiscal Policy and Stock Market Efficiency in Nigeria: Evidence from SVAR Framework

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ABSTRACT

This research investigates the impact of fiscal policy on stock market efficiency in Nigeria evidence from SVAR Modelling. The study used quarterly data between 2010Q1 to 2023Q2. Key finding is that shock to public debt caused more fluctuation to stock price in both the short-run and in the long-run by 13.2 per cent and 13.59, respectively. Shocks from government expenditure caused 9.6 per cents and 9.96 per cent fluctuation in stock price in the short and long-run, respectively. A one standard deviation positive shock or innovation to government expenditure caused stock price to fluctuate by 0.73 per cent and 0.75 per cents, respectively in the short and long-run. However, public debt appears to be an effective stock price tool to control and achieve stability in the capital market than the government expenditure and revenue. This study concludes that government should continue to participate more in the stock market for it to grow, since the government stocks constituting the major segments of the bond market. The effective use of fiscal policies, particularly public debt to set the market on the path of growth and development, which would promote investors' confidence to lessen price bubbling.

Keywords: Fiscal policy, stock market efficiency, public debt, government expenditure, government revenue

INTRODUCTION

The stock market is seen as an essential channel for the transfer of funds from the surplus units to the deficit units for the economic growth of any nation (Nowbutsing & Odit, 2009). In this case, the stock exchanges are modelled to boost productivity by increasing the liquidity of financial assets and ensuring that global risk diversification is made easy for prospective investors. It is pertinent that a viable stock market encourages the growth of an economy by accelerating the pace of savings mobilisation, effective and efficient allocation of investment resources and the inflow of foreign portfolio investment (Onyema, 2017). These savings are made possible through the provision of investible funds and additional financial investments for households to their required investment needs and risk preferences. Also, Mohtadi and Agarwal, (2006) asserted that savings ensure relative liquidity means for sharing risk in investment projects by individuals.

Turner, (2002) affirmed that the development of the stock market is essential for government to finance huge fiscal deficits without any need to suffer financial repression or resort to foreign borrowing with exchange rate risk. And a developed stock market also promotes the sterilization of large capital inflows. Nevertheless, the Stock market operations are seen to be affected by prevailing macroeconomic fluctuations, and shocks which influence investors' decisions. This scenario is predominant when investment in a particular stock is considered against the other, and the rate of return of an investment is viewed in relation to its costs. Moreover, the development of the arbitrage pricing theory of asset pricing in the 1970s by Stephen Ross proposed that the expected return on an asset or security could be determined by macroeconomic factors. This originated research focus on asset pricing and the macroeconomic variables. Also, the earlier efficient market hypothesis by Eugene Fama in the 1960s advocated that stock prices are

related to the fundamental macroeconomic indicators. This hypothesis opined that the prices at the stock market reflect every piece of substantial information that could affect the stock price, including company-specific factors, market factors and economic factors. This assertion was however nullified by the inadequacies found by empirical evidence (Shiller, 1981). Several studies (Hussainey & Ngoc, 2009; Masudussama, 2012) have stressed the importance of macroeconomic factors in the determination of stock market activity. The advent of the Structural Adjustment Programme (SAP) in Nigeria in 1986 accorded numerous economic reforms which majorly dwelled on the liberalisation of the various sectors of the economy and the diversification of the economic mainstay pave way for financial development. Also, the transition to civilian rule in 1999 from the military government witnessed deregulation, privatization, and commercialization with their various impacts on the stock market in Nigeria.

Stock market performance in Nigeria can be acknowledged with numerous challenges and problems some of which are shares hoarding attitude of Nigerians, perceived ignorance of the larger population of the Nigerian public of the pattern and importance of the market, low investments in the market, unfriendly economic policies and political instability. This is in addition to minimal operations of the Central Securities Clearing System (CSC), Automated Trading System (ATS), capital trade points of the Nigerian Stock Exchange, online and remote trading, trade alerts. Pockets of positive closes were evident in the Nigeria's stock market in 2022, despite foreign portfolio outflows. There were listings of some strong firms on NGX in 2021. Equity Capitalization rose by 25.20% (from N22.29Tn in 2021 to N27.92Tn in 2022) and Fixed Income Market capitalization grew by 17.58% from 19.74Tn in 2021 to 23.21Tn in 2022 (Popoola 2023). This indicates the NGX's commitment to achieving its strategic objectives during the year 2022. The percentage of market capitalization when compared to the economy's Gross Domestic Product (GDP) helps to assess the magnitude of the stock market. Nigeria's (GDP) grew by 3.52% (year-on-year) in Q4 of 2022, following a growth of 2.25% in the Q3 of the same year and 3.98% in the Q4 of 2021. Overall, the annual GDP growth rate in 2022 stood at 3.10%, from the 3.40% reported in 2021. During this period, the financial sector in aggregate grew by 23.46% and the contribution to real GDP totalled 3.95%, higher than the contribution of 3.66% recorded in the Q4 of 2021 by 0.29% points, and higher than 3.49% recorded in Q3 2022 by 0.46% points. In order to improve on this, the Nigerian stock exchange 2022 relaunched its Market Making Program to tackle liquidity constraints and ensure sustained flow of funds in the capital market, which was followed by the execution of several physical and online capacity building programs (Derivatives, Securities Lending, and Islamic Finance webinars) to enhance the knowledge of key stakeholders and increase investor participation (Popoola 2023).

On the other hand, Monetary authorities, particularly in emerging markets, are challenged with marked pressure on their respective local currencies due to rising global interest rates and risk off sentiments as Global investors rank the foreign exchange convergence of the Nigerian currency in 2023 as a major policy shift that could incentivise investment flows.

In summary, the Nigeria Stock Market at its peak in 15 years, profited by 18.9 percent in the first two quarters of 2023. Equity trading on the floor concluded the first half of the year on a positive note, with the All-Share Index closing at 66,381.20 index points. This shows a significant improvement for the index, years since March 2008, when it was 60,968.27 points.

June witnessed the All-Share Index rising by 9.32 percent, breaking a four-year streak of losses for stocks during this month. This represents the best monthly performance for the stock market in approximately two and a half years. Owing to the empirical illustrations, it is obvious that the nature of the stock pricing process in African capital markets is of vital importance to investors, regulators, policymakers, and academic researchers. The investors are interested in the presence of exploitable patterns in these markets to present opportunities for profit-making. Inefficiencies in the price formation process of the financial assets are of concern to regulators and policymakers, as they imply a less-than-optimal allocation of investment

capital in the system.

Also, the fiscal policy in Nigeria has faced challenges of revenue volatility resulting from oil price fluctuations, inefficient public spending and issues with tax collection. These factors impact economic stability and can influence the stock market. On the other hand, the stock market also faces concerns about information asymmetry, regulatory issues, and limited market liquidity, affecting its efficiency. Other challenges like budget deficits, inefficient public spending, and heavy reliance on oil revenues affect economic stability, thereby affecting investor confidence and the stock market. These tend to weaken the market response to fiscal measures, reducing the correlation between fiscal policies and stock market performance in Nigeria. At this point, an effort to improve fiscal discipline, transparency and regulatory frameworks that are crucial for enhancing both fiscal policy effectiveness and stock market efficiency in Nigeria cannot be undermined.

Researchers are hereby concerned with determining the extent to which the theory of efficient markets is applied or contradicted by empirical findings from these markets. Contemporary studies have revealed much relationship between stock market returns, macroeconomic activities, and monetary policy. There are only a few strides to link fiscal policy to with Stock Market in Nigeria. The need for utilisation of quarterly data for robust analysis as against annual data in previous studies is required. Also, the adoption of structural VAR to check the level of innovation of stock market prices to shock in fiscal policy variables remained intuitive. This required quarterly time series data range from 2010Q1 to 2023Q2. Following this introductory section of the study, the second section presents the literature review. The third section describes the research method. Section four utilised the time series data for stylized facts and presentation of results and analysis. Section five provides a summary of major findings, conclusions, and recommendations.

LITERATURE REVIEW

Literature has shown that only a few theories tend to focus on the influence of government fiscal policy on stock market performance in an economy. Theoretical postulations revealed that the economic influence of fiscal policy depends on whether either one utilises any of the Keynesian, Classical or Ricardian views of the economy (Chatziantoniou, Duffy and Filis, 2013). The Keynesian theory stated the prescription on the appropriate role of fiscal policy in stabilizing economic fluctuations. Specifically, similar to automatic stabilizers, discretionary fiscal policy should also act in a countercyclical manner. The combination of discretionary and automatic stabilizers will only depend on the level and composition of the responsibilities of government in the economy. Contrary to the fiscal policy view of Keynesian, the Ricardian approach believed that policy can have no impact on aggregate demand. This is because any public borrowing will tend to be offset by the private savings of rational households. However, the classical economists emphasized that fiscal policy crowds out private sector activities in markets and hence, its effects will be insignificantly important in an economy that operates close to its output potential. The intuition into the relationship between stock prices and macroeconomic variables was earlier supported by the works of Modigliani and Miller (1961) referred as Dividend Discount Model (DDM). Accordingly, the current price of stock equals the present value of all future cash flows. As a result, the determinants of stock prices constitute the required rate of return and expected cash inflow.

Several theories and postulations were propounded by many scholars to explore the nature of relationships that may exist between stock prices and macroeconomic variables. However, these macroeconomic variables targeted the monetary side and not majorly focused on the fiscal sphere of the larger economy. These however, still remain relevant and have bearing on the current study and needed to be discussed. Findings from the studies of Ross (1976), Roll (1977), and Ross (1980) that culminated in the Capital Asset Pricing Model (CAPM) is not different from Arbitrage pricing Theory (APT). The CAPM is a single-factor model while the APT is a multi-factor model with many values as necessary. In APT, there are several

industry-specific and macro-economic factors that affect the security returns. Hence, a number of factors may measure the systematic (non-diversifiable) risk of an asset under APT. The basic understanding of APT is that investors always indulge in arbitrage whenever they discover differences in the returns of assets with similar risk features. Blanchard (1981) and Okafor (1983) asserted that two major theories dominate thinking on investor behaviour. While the former believed that errors of judgment in stock market transactions will be minimized by an investor who follows the lead market-makers, and therefore more likely to avert mistakes and losses, the later argues that if the market is efficient the best strategy is to do exactly the opposite of what the lead market makers do thereby, investing in the stocks they shy away from. (Onyema 2017).

Empirically, Nwaogwugwu (2018) adopted Autoregressive distributed lag (ARDL) on the data from 1970 to 2016 and results revealed that money supply, interest rate, government expenditure and tax have significant effects on the stock market in both the short and long run in Nigeria. Idowu, Bamidele and Eluma (2020) used data from 1985 to 2015 and finding based on error correction modelling demonstrate that fiscal policy exhibits a significant effect on stock prices in Nigeria. Iroh (2019) used data from 1990 to 2010 and employed error correction model technique and results revealed that company income tax, value-added tax and personal income tax have a significant effect on market capitalisation. Eyo (2016) used OLS and result revealed that government revenue and government expenditure significantly impact market capital while government borrowing exert no impact on capital market. Using regression model on data from 2004 to 2015, Anghelache, Jakova and Oanea (2016) found that fiscal policy significantly affects the capital market returns in the Czech Republic, Slovakia, Bulgaria and Poland, while an insignificant relationship was discovered in Hungary and Romania.

More so, using data from 1986 to 2018, Nwakobi, Ananwude and Umezurike (2020) employed ARDL and result suggest that government expenditure has no significant effects on both market capitalisation ratio and stock market turnover ratio, however it has a significant effect on the value of the stock traded ratio. Agwu and Godfrey (2020) used data from 1989 to 2018 with the aid of Error Correction model (ECM) and Vector Autoregressive analysis and result shows that recurrent expenditure and non-oil revenue have a significant negative on capital market performances in Nigeria. Using Ordinary Least Square (OLS), ECM, and vector autoregressive method, Ogbulu, Torbira and Umezinwa (2015) and result indicated a significant negative between government expenditure, domestic debt, non-oil revenue and stock prices in Nigeria. In a study conducted in Nigeria using ARDL, revealed that fiscal policy is not significant in determining stock returns in Nigeria, while monetary policy has more effects on stock returns (Igbaudumhe & Omorokunwa, 2015). Onyema (2017) adopt structural VAR to analyse data from 1985 to 2016 result shows that fiscal policy variables (capital expenditure, government revenue) have no influence on the stock market in Nigeria.

Tsibikis and Danders (2020) conducted a study in Netherlands on data from 1988 to 2019 using ARDL techniques and result shows that interest rate, inflation, industrial production index and oil prices exert significant influence on stock returns, however fiscal balance to GDP shows an insignificant effect on stock returns. Using ARDL Bound approach, Adams (2020) finding show that oil and consumer prices have a relationship with the stock prices within the period of 2008 to 2018. Nwokoye and Otu (2018) used data from 1981 to 2015 and employed Vector Autoregressive technique and result show that interest rate, money supply, exchange rate, inflation rate and total traded value to GDP shows that monetary policy has a significant positive effect on market development in Nigeria. Umezuike, Echekoba and Ananwude (2019) adopted ARDL technique on data from 1986 to 2018 and result revealed that stock market in Nigeria is not significantly affected by adjustments in monetary policy instruments.

In summary, the review has revealed that current literature remains inexhaustive on the efficiency of stock market performances, stock returns and market development in Nigeria. However, gaps are also observed from the available reviews in varying dimensions. Despite some of the studies verifying the interaction

between monetary and fiscal policy variables on market efficiency as seen in Igbaudumhe and Omorokunwa (2015) Nwaogwugwu (2018) and Idowu, Bamidele and Eluma (2020). Other researchers focused on the monetary implications on stock market performances at different periods as reviewed in Nwokoye and Otu (2018) and Umezuike, Echekeba and Ananwude (2019). The real and encompassing effects of fiscal policy on the stock market cannot be felt due to the presence of other nontargeted policy variables in their models. Hence, the reliability of their varying outcomes and conclusions becomes impracticable.

On the other hand, there are limited studies on fiscal policy effects on stock market efficiency particularly on non-oil revenue (Agwu & Godfrey, 2020; Nwakobi, Ananwude & Umezurike, 2020). Most of the studies used aggregated government expenditure, thus does not allow for explicit effect analysis. This also invalidates the importance of money supply in any model in previous related studies. Available studies used all share index against market capitalisation that tends to measure the worth of market investment and efficiency. This study contribute to knowledge using fiscal variables decomposed units and market capitalisation to investigate the interaction between fiscal policy and stock market efficiency in Nigeria from 1994 to 2019 based on data availability of vital variables.

METHODOLOGY

To examine the stock market response to fiscal policy shocks in Nigeria, research technique and data model specification and the structural Vector Autoregressive (SVAR) model have been delineated in this subsection. This study uses 60 Quarterly observations on government capital expenditure and NSE All share index for the period from 2010Q1 to 2023Q2. All data are sourced from CBN statistical Bulletin. Government revenue and government expenditure data are expressed as a ratio of nominal GDP. Stock prices are converted into logarithms to minimize the effects of data extreme. Figure 1 shows the graphical plots of all the data. From figure 1, stock price data exhibit a positive trend, suggesting that the data follow a random walk movement. On the contrary, both government revenue and government expenditure appear to be stationary as there is no observable trend in their plots.

In this study, the SVAR methodology is employed to examine the stock market response of fiscal policy shocks in Nigeria. To this end, impulse response function, Granger causality test and variance decomposition will be used to examine the dynamic relationships of interest. The success of structural VAR models in capturing the joint dynamics of macroeconomic and financial series is well documented.

This study adopted the empirical work of Michael (2012) and as such the variables included in the SVAR model for this study are the Stock Price Proxied by All Share Index (ASHI), Government expenditure (GEX) and Government revenue (GRE).

$$[1] \text{ASHI} = f(\text{GEX}, \text{GRE})$$

$$[2] \Delta \text{ASHI} = \alpha_0 + \alpha_1 \Delta \text{GEX} + \alpha_2 \Delta \text{GRE} + \mu_t$$

Where μ_t is the error term and assumed to be a white-noise process where $\mu_t \approx ii(0, \delta^2 \mu)$ since the mean is equal to zero and variance is constant. Meanwhile, α is the coefficient of the respective estimated variables ΔASHI is the differenced all share index, ΔGEX is the differenced government expenditure and ΔGRE is differenced government revenue.

Since most of the macroeconomic time series are non-stationary (Nelson & Plosser, 1982) and thus conducive to spurious regression, stationary is first tested. For this purpose, the Augmented DickeyFuller (ADF) test is done by carrying out a unit root test based on the following structure;

$$[3] \Delta X_t = k + \phi t + \Theta X_{t-1} + \sum_{i=0}^n \phi_i \Delta X_{t-1} + \mu_t$$

Here a VAR reduced form specification was presented to enable specification of the SVAR; the SVAR model exhibits the features of a reduced-form statistical model of the data generating process. The starting point of SVAR analysis is the reduced form of VAR (Gottschhalk, 2001).

Reduced form VAR

$$\begin{matrix}
 \text{ASHI} & \alpha_0 & \beta_{11} & \beta_{12} & \beta_{13} & \text{ASHI}_{t-1} & \mu_{1t} \\
 [4] \text{ [GEX]} & =[\alpha_0] & =\sum[\beta_{21} & \beta_{22} & \beta_{23}] & [\text{GEX}_{t-i}] & + [\mu_{2t}] \\
 \text{GRE} & \alpha_0 & \beta_{31} & \beta_{32} & \beta_{33} & \text{GRE}_{t-1} & \mu_{3t}
 \end{matrix}$$

Where the column vector on the left hand side of each equations denotes the vector of policy and non-policy variables, the optimal lag order of the VAR specification is k, the intercept α^s , that is, vectors of constants, β^s are the coefficients of the variables of the model that is, the matrix of coefficients on the variables lagged j periods, μ^s are the VAR errors, that is, vectors of serially uncorrelated disturbances that have zero mean, unit-variance and zero-covariance matrix. There are basically two tools of analysis under the SVAR model as outlined above and as asserted by Enders (2014), they are: impulse response function (IRF) and forecast error variance decomposition (FEVD). The IRF shows the time path response of variable to shock in itself and shock to other variables in the model while FEVD shows the proportion of movement in a sequence that occurs due to its own shocks versus shocks to other variables in the model.

RESULT AND DISCUSSION

This section presents the empirical estimates and other necessary tests based on the procedure stated in the methodology which includes: the summary statistics, unit root, VAR lag order selected by the criterion, impulse response, variance decomposition and granger causality.

Table 1 Descriptive Statistics result

	ALSHI	EXP01	PBD	REV
Mean	33417.17	1881961.	15575989	971929.2
Median	31587.66	1478697.	17122.04	953875.5
Maximum	60968.27	5627499.	87379402	2166368.
Minimum	20373.00	743654.3	4111.353	498540.0
Std. Dev.	9366.781	1017701.	19445473	292245.8
Skewness	0.810488	1.253762	1.170390	1.677550
Kurtosis	3.221668	4.737323	4.487204	7.596875
Jarque-Bera	6.022569	20.93843	17.30480	72.87292
Probability	0.049228	0.000028	0.000175	0.000000
Sum	1804527.	1.02E+08	8.41E+08	52484174
Observations	54	54	54	54

Source: *Extract from E-views 12 Output*

The results in the table above indicate the mean of stock price is 33417.17 while the skewness and kurtosis are 0.810 and 3.222 respectively. This implies that stock price is positively skewed and that the distribution is mesokurtic, which means that the degree of peakness is relatively normal. The excess kurtosis can be calculated as kurtosis minus three (k-3=ek): 3.222-3= 0.222 which implies that the distribution is relatively normal. Meanwhile, public expenditure, public revenue and public debt are positively skewed and the distribution is leptokurtic

Table 2: Unit Root Result

Variable	ADF		PPS		Order of integration
	I(0)	I(1)	I(0)	I(1)	
AISHI	0.040341	-5.898962**	-0.168805	-5.888941**	I(1)
EXP	2.975197	-8.850802**	-0.876461	-15.46076**	I(1)
PBD	2.481516	-2.036638**	2.439349	-2.036638**	I(1)
REV	0.580848	-12.14892**	-2.206386	-7.743567**	I(1)

Source: *Extract from E-views 12 Output*

Table 2 above shows the results of the unit root test. Augmented Dickey-Fuller Test and Philips-Perron were adopted to test whether the variables are stationary at level. The result depicts that all variables were not stationary at level (0). However, became stationary after first difference (1). Therefore, the variables are integrated of order one I(1), which is suitable for Structural Autoregressive Vector regression.

Table 3: VAR Lag Order Selected by the Criterion Result

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-2823.089	NA	1.52e+44	113.0835	113.2365	113.1418
1	-2681.466	254.9213	1.00e+42*	108.0586*	108.8234*	108.3499*
2	-2674.216	11.88959	1.44e+42	108.4086	109.7853	108.9329
3	-2655.213	28.12404*	1.32e+42	108.2885	110.2770	109.0458
4	-2642.226	17.14315	1.59e+42	108.4090	111.0094	109.3993

* indicates lag order selected by the criterion

Source: *Extract from E-views 12 Output*

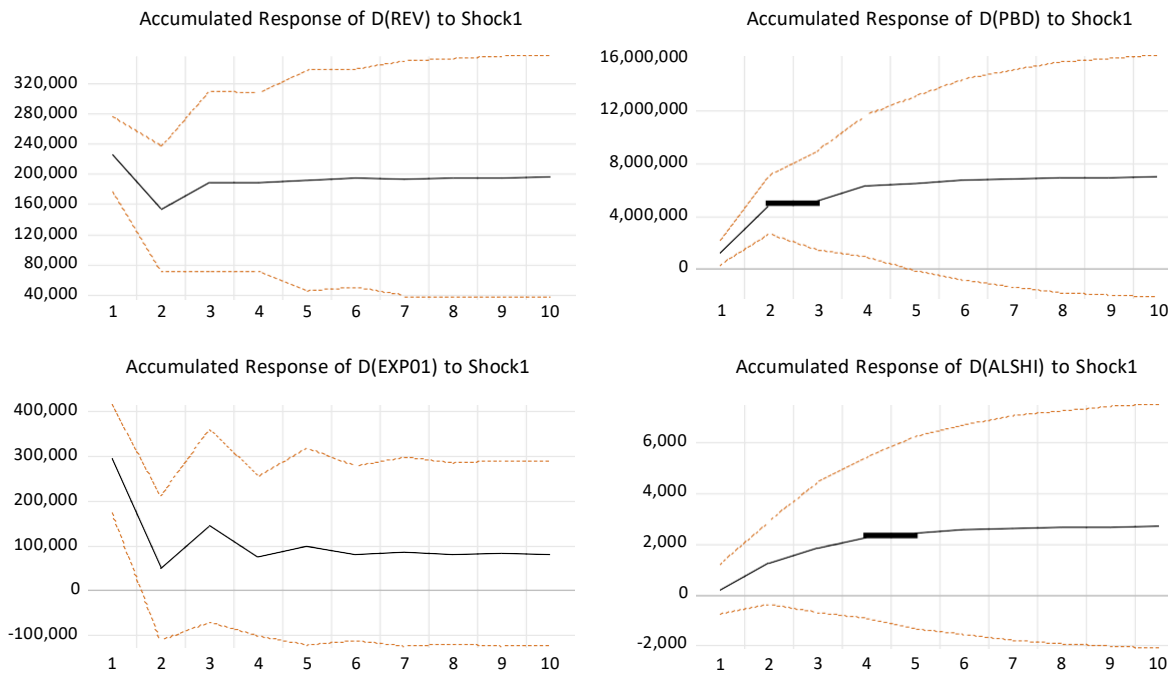
Where LR: sequential modified LR test statistic (each test at 5% level), FPE: Final prediction error, AIC: Akaike information criterion, SIC: Schwarz information criterion, HQ: Hannan-Quinn information criterion the VAR lag order selection test result on Table 4.2 shows that the SIC selected 1 lag. As such, this study used 1 lag to carry out the VAR estimation.

Impulse Response

The figure below presents the benchmark results on the impulse responses of the endogenous variables to a positive stock price shock. The two dotted lines represent the 5% asymptotic error bands, while the solid lines represent the impulse function. The impact of government revenue on stock price remained positive and statistically significance over the horizon, although downward sloping in the first quarter, after which became stable throughout the horizon. a positive shock to government revenue significantly maintained stock price stable through the multiplier effect of government spending. Also, as expected, government spending shock is persistent and significant to its own shock or innovations. The high persistence of government spending shocks is a typical finding of most empirical studies on fiscal policy shocks (see Ogbulu, Torbira and Umezina 2015; Akpan and Atan 2015 and Onyema 2017). Interestingly, government spending shock has a positive impact on stock price in Nigeria. This effect is persistent and significant after the 2 quarter. Clearly, this is a useful result as it confirms that government spending is a veritable instrument that can be used to stabilize the Nigerian economy. Similar conclusions on the positive effect of government

spending shock on stock price has been reported in Akpan and Atan (2015) for Nigeria and Boiciuc (2015) for Romania.

Accumulated Response to Structural VAR Innovations
± 2 analytic asymptotic S.E.s



Accumulated response of endogenous variables to the government revenues shock (Perotti approach)

The response of public debt to shock also remained positive, stable and statistically significance throughout the horizons. This persistence is in tandem with the fact that, when government borrows either internally or externally, it spends the money in the economy. This tends to boost the economy thereby affecting the stock market positively. The response of stock price to shock also remains positive and persistence overtime. This indicates that all the variables (government revenue, government expenditure and public debt) included in the study impact positively on stock prices in Nigeria. This finding is line with Anghelache, Jakova and Oanea (2016) for six European countries and Iroh (2019) for Nigeria.

Variance Decomposition

The Forecast Error Variance Decomposition (FEVD) is used to determine the proportion of movement in a sequence that occurs due to its own shock versus shocks to other variables in the model. In other words, the variance decomposition shows the apportionment of forecasting errors of a variable to itself and other variables in the system. For analysis this study used period 4 and 10 to represent the short and long-run periods respectively. The basis is that the series is in quarter, which is the conventional way of ordering.

Table 4: Variance Decomposition

Period	S.E.	Shock1	Shock2	Shock3	Shock4
1	3588.190	0.387480	1.387675	0.284107	97.94074
2	3921.336	7.152680	9.421387	0.612661	82.81327
3	4042.065	9.012361	12.33314	0.710292	77.94421
4	4083.060	9.683010	13.19235	0.734752	76.38988
5	4095.886	9.871691	13.47083	0.744567	75.91291
6	4099.895	9.933861	13.55444	0.746791	75.76491
7	4101.173	9.952950	13.58149	0.747758	75.71780

8	4101.565	9.958906	13.58976	0.747980	75.70336
9	4101.691	9.960815	13.59240	0.748072	75.69871
10	4101.730	9.961395	13.59322	0.748095	75.69729

Source: Author’s Computation using E-views 12

The variance decomposition of Stock price (ASHI) for the SVAR estimation is presented in above. The test result shows that own shock (shock 4) constituted the most source of fluctuation in the model followed by shocks from public debt (shock 2) and then government revenue (shock 1). The variance decomposition of stock price indicates that a one standard deviation positive shock or innovation to shock 1 (government revenue) caused stock price to change by about 9.6 per cent in the short-run, in the long-run however, it caused stock price to change by 9.96 per cent. Shocks from public debt (shock 2) caused 13.2 per cent and 13.59 per cent of fluctuations in stock price in the short and long-run respectively. While shocks from government expenditure (shock 3) caused 0.73 per cent and 0.75 per cent fluctuations in sock price in both the short and long-run, respectively. The variance decomposition of stock price showed that the public debt had more effect on stock price than the government expenditure for the period under analysis, thus supporting the result of the impulse response test on the efficacy of public debt on stock price in Nigeria.

Granger Causality Test

The Granger causality test was employed to determine the nature of causation between fiscal policy and stock price in Nigeria. The result of the Granger causality test is presented on Table below.

Table 5: Var Granger Causality result

Null Hypotheses	No of obs.	F-Statistics	p-value
D(PBD) does not granger cause D(REV)	52	0.050216	0.8227
D(REV) does not granger cause D(PBD)	52	0.028986	0.8648
D(PBD) does not granger cause D(EXP01)	52	62.31582	0.0000
D(EXP01) does not granger cause D(PBD)	52	0.028986	0.8648
D(ALSHI) does not granger cause D(PBD)	52	0.112843	0.7369
D(PBD) does not granger cause D(ALSHI)	52	3.917180	0.0478

Source: Author’s Computation using E-views. 2012

The result of the Granger causality test shows that there was a one-way causation running from public debt to stock price at the 5% level, but stock price does not granger caused public debt in Nigeria. The public debt variable granger caused stock price at the 5% level. Also, public debt granger caused government expenditure at the 5% level. And lastly, there was no causality between public debt and government revenue in Nigeria, according to the finding of this paper. The causality test result supports the findings from the impulse response function and the variance decomposition test that the public debt positively affected stock price for the period under analysis. That these fiscal policy instruments had significant effects on the economy.

CONCLUSION AND POLICY REMARKS

The objective of this research is to investigate the impact of fiscal policy and stock market efficiency in Nigeria, using evidence from SVAR Modelling. The study used quarterly data between 2010Q1 to 2023Q2, a sample period of approximately fourteen years. Key finding is that shock to public debt caused more

fluctuation to stock price in both the short-run and in the long run by 13.2 percent and 13.59, respectively. Shocks from government expenditure caused 9.6 percent and 9.96 percent fluctuation in stock price in the short and long run, respectively. A one standard deviation positive shock or innovation to government expenditure caused stock price to fluctuate by 0.73 percent and 0.75 percent, respectively in the short and long run. The public debt was however a much more effective stock price tool to control and achieve stability in the capital market than the government expenditure and revenue.

From the foregoing, the study therefore recommends that government should continue to participate more in the stock market for it to grow, since the equity market dominates the Nigerian exchanges group with government stocks constituting the major segments of the bond market. The effective use of fiscal policies, particularly public debt to set the market on the path of growth and development, which would promote investors' confidence to lessen price bubbling. Government should also invest its revenue in those sectors and projects that would have direct impact on the stock market. More companies should therefore be encouraged for enlistment in the market so that the market would be bubbling. It further recommends that policymakers should design and implement appropriate fiscal policies given their potential impact on the activities in the capital market.

Disclaimer: The view expressed therein does not represent that of the Central Bank of Nigeria but of the authors.

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