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Effects of Fiscal Policy Variations on Stock Market Turnover Ratio in Nigeria: 1990-2021

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ABSTRACT

This study explored how the Nigerian stock market turnover ratio have been influenced by the fiscal policy of the government from 1990-2021. A democratic government that allows private sector participation in economic development has always stimulated active economic activities even in the stock market and somewhat promoted making of sustainable fiscal policies. The Nigerian business environment seems frustrating and unpredictable despite entrenchment of democratic governments since. The fiscal policies of the federal government of Nigeria may have influenced the levels of market turnover ratios. Data for the study which are government expenditures, government revenue, public debt and stock market turnover ratio were extracted from the Central Bank of Nigeria (CBN) statistical bulletin and the stock market annual reports. The method of data analysis used is the multiple regression model with the application of Ordinary Least Squares (OLS) technique. The major findings of the study reveal that fiscal policy variables contributes negatively and insignificantly to stock market turnover ratio in Nigeria for the period analyzed. It is therefore the recommendation of the study that the effective use of fiscal policy instruments in order to set the market on the path of growth and development is recommended. In order to achieve this, these policy instruments should not only be directed at the stock market, but also must be consistent to enable a stable market that will boost investors' confidence. This in turn will attract both potential local and foreign investors and advance stock market turnover ratio.

KEYWORDS: Stock market turnover ratio, government expenditures, government revenue, public debt.

1.0 Introduction

The primary target of every meaningful government in any economy is the development of its vital macroeconomic sectors. Every economy under the globe is made up of sectors for the optimal functioning of the economy. Some of these sectors include the capital market, public finance, and education, industrial, monetary, health, agricultural and manufacturing. However, one of the sectors that have attracted the attention of researchers especially as it concerns developing countries is the stock market which is encapsulated in the capital market sector.

Globally, the capital market has been integral to the expansion and advancement of national economies. In essence, the stock market offers chances for portfolio diversification, liquidity, and capital formation while also lowering investment risk. On the other hand, investors in stocks typically have short time horizons and their assets are typically highly liquid. Consequently, investors may react quickly to changes in governmental policies. Government initiatives that boost investor confidence will pay off in the form of increased market valuations and stock prices (Urhoghide & Ndubuisi, 2014). However, in the event that governments adopt policies that are unfavorable to the market, investors have the ability to promptly withdraw their capital, which puts downward pressure on stock prices and valuations. In summary, stock markets provide a useful gauge of the preferences of financial players over the results of government policy. Growing body of research has been done in recent years to explain how fiscal policy affects stock market performance in both developed and developing nations (Urhoghide & Ndubuisi, 2014).

The fiscal policy operations in Nigeria is primarily made up of three parameters namely; government expenditures, government revenue and public debt. The operations of these fiscal policy variables interact and affects other macroeconomic variables in Nigeria which includes the stock market performance.

Empirical research on the subject of the effect of fiscal policy on the stock market has been conducted, and is continuing. For instance, Afonso and Sousa (2011) found that government revenue shocks had little to no effect on stock prices, but Agnello and Sousa (2012) discovered that there is an instantaneous, transitory negative response of stock prices to fiscal policy shocks. Laopodis (2010) demonstrated the significance of fiscal policy for stock prices.

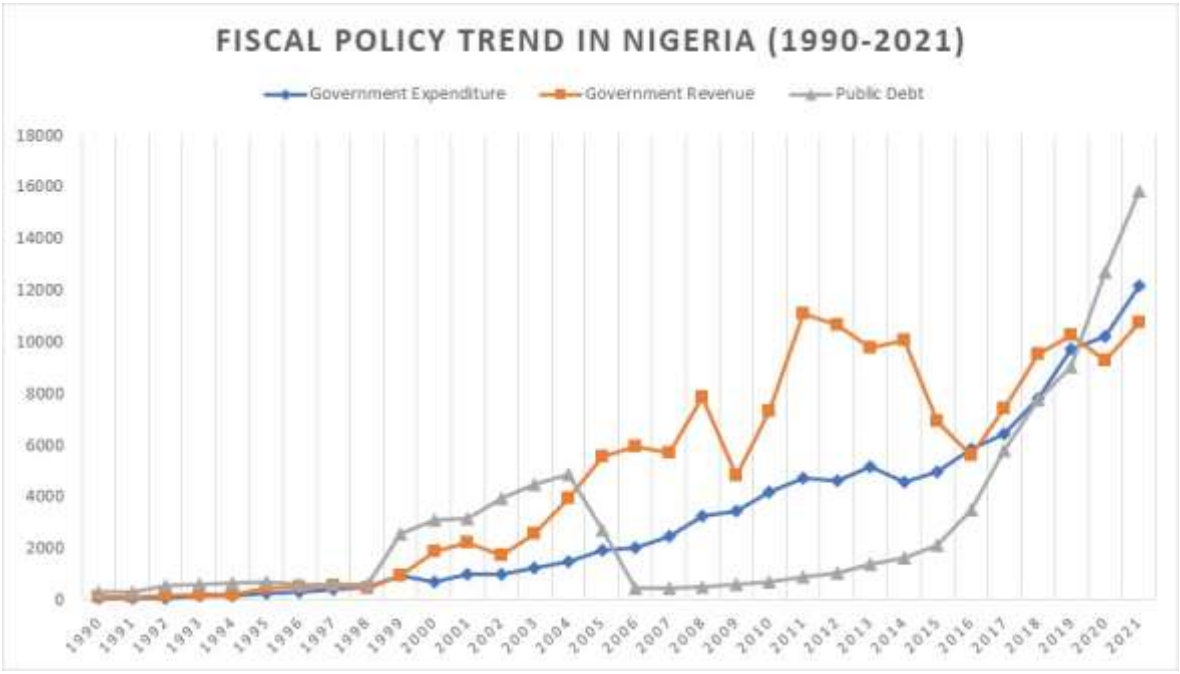
The influence of fiscal policy on stock markets appears to lie in an undefined theoretical domain, depending on whether it is viewed from a Keynesian, classical, or Ricardian equivalency approach. Under the domain of the Keynesian school of thought, fiscal policy has the potential of boosting the economy

through supporting an increase in aggregate demand and thereby driving the stock prices higher. The classical school of thought on the other hand did not agree with the analogy of the Keynesians. They posit that fiscal policy do not have the potential to drive the economy positively given its crowding out effects in the market for loanable funds and of the productive sectors of the economy. According to them, fiscal policy could potentially drive stock prices lower through the crowding out of private sector activity. Furthermore, the perspective of the Ricardian school of thought maintains the impotence of the fiscal policy stressing that it will have no effect on stock market development. Consequently, there is the need to show what the empirical findings are for Nigeria and on what side of the theoretical divide can the findings be situated.

According to GlobalEconomy.com, the average stock market turnover ratio for Nigeria from 1993 to 2020 was 8.46%. The ratio in 2020 was 4.39%. The world average in 2020 based on 60 countries was 36.56%. Thus, to conclude that the Nigerian stock market is not very active may not be untrue. This study therefore seeks to measure stock market parameter with stock market turnover ratio, and investigates the effects of fiscal policy on the Nigerian stock market performance measured with stock market turnover ratio.

Figure 1 showed the graphical trend of the selected fiscal policy variables (government expenditure, government revenue and public debt) which cuts across between 1990-2021. The graph trend in figure 1 clearly shows that the three variables used in measuring fiscal policy follows a similar pattern of fluctuations starting from 1998 and with an upward fluctuating trend down to 2021. However, public debt experienced steeply rise from 2015 to 2021; and had prospect of increasing further thereafter. The government expenditure shows a smoother increasing trend pattern with a little touch of volatility. The government revenue showed scattered growing trend; but rising steadily from 2015 till 2019 when COVID-19 showed up. The government revenue has returned to increasing rate since 2021.

Figure 2 showed a graphical representation of the trend of stock market turnover ratio from 1990 - 2021. The stock market turnover ratio has maintained a fluctuating pattern. The stock market turnover ratio (SMTR) average between 1990 and 1995 was 1.36%. There was an increasing fluctuating trend at an average of 6.43% between 1996 and 2004. However, between 2005 and 2012, the average value was 9.183% which demonstrated a further improvement to the previous average years. Between 2013 and 2021, the average value of stock market turnover ratio is valued at 5.92% which is a massive drop compared to the previous performance.



Source: Central Bank of Nigeria (CBN) Statistical Bulletin & Stock Market Annual Reports

Figure 1: Fiscal Policy Trend in Nigeria (1990-2021)

Source: Central Bank of Nigeria (CBN) Statistical Bulletin & Stock Market Annual Reports

Figure 2: Bar chart representation of Nigeria's Stock Market Turnover Ratio (1990 – 2021)

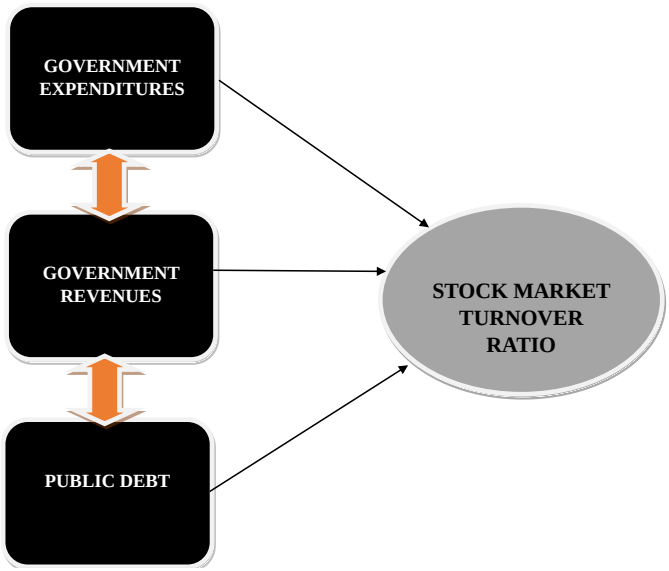
Thus, the broad objective of the study were to ascertain how Federal government fiscal policy have influenced the stock market turnover ratio in Nigeria (1990 – 2021). The more specific objectives were to ascertain the effects of federal government expenditure on Nigeria's stock market turnover ratio; federal government revenue on Nigeria's stock market turnover ratio; and public debts on Nigeria's stock market turnover ratio.

The other sections of this study include literature review; methodology; data analysis and discussions; and conclusion and recommendations.

2.0 Literature Review

Conceptual Framework:

The connection between fiscal policy and stock market performance is obvious. The stock market serves a variety of purposes, including financial intermediation, resource allocation efficiency enhancement through competitive pricing, and long-term capital provision. These makes it significant in the creation, management, reallocation and sustenance of wealth in an economy. However, to effectively and efficiently perform these roles, the stock market relies on good government policies among other factors. Fiscal policy is crucial for economic development as government spending and taxation influences disposable income while changes in monetary policy could influence investors to review their equity holdings. Figure 3 shows a graphical thematic relationship and perceived causality direction between selected fiscal policy variables and stock market turnover ratio.



Source: Author's Graphical-Conceptual Analysis, 2024

Figure 3: A schematic relationship and perceived causality direction between selected fiscal policy variables and stock market turnover ratio.

Okonkwo and Ngini (2018) related fiscal policy to fiscal activities, such government operations that are geared towards achieving desired economic objectives as stated in the annual budget of the state. The way and manner of the manipulations of the activities are usually captured in what is called fiscal policy. Fiscal policy is the means by which a government adjusts its spending levels and tax rates to monitor and influence a nation's economy (Kramer, 2019). Monetary policy complements fiscal policy towards achieving economic objectives of an economy. Monetary policy is used by the central bank to control money supply. The commonest economic objectives expected from fiscal and monetary policies include: balance of payment equilibrium, stimulation of investments; achieving full employment, and stable price level. Thus, fiscal policy infers proactive actions by the government given a prevailing economic conditions with a view of achieving desired economic goals consistent to the government's philosophy and political orientations. The idea of fiscal policy was primarily traced to John Maynard Keynes.

Fiscal policy as a tool for macro-economic management is a purposeful use of government revenue (tax and non-tax) and expenditure to manipulate the level of economic activities in a country. It can also be referred to as part of government policy relating to the raising of revenue through taxation and other means and choosing on the level and pattern of expenditure for the purpose of manipulating economic activities or achieving some needed macro-economic goals (Anyanwu & Ohahenam, 1995). Thus, government revenue refers to national revenue which consists of money received by the national government say from taxes and non-tax sources to enable it execute government expenditures.

Every country's budget has two sides of expenditure: the recurrent expenditures and capital expenditures. The recurrent expenditures are governments' payments for non-repayable transactions within a year while capital expenditures are governments' payments for non-financial (non-profit) assets used in the production for more than one year (Darma, 2014). Government expenditure is influenced by the expanded roles of government which include among others, the provision of pure public goods i.e. defense, law and order, property rights, macroeconomic management, public health, education, protecting the poor through the provision of anti-poverty programmes and disaster, relief programmes, addressing externalities, environmental protection, provision of social insurance, coordinating private sector activities and redistribution of income and assets (Nwokorobia & Okonkwo, 2023).

Public debt refers to government debt. It is the total outstanding debt (including bonds and other securities of a country). It can be classified broadly as internal and external debts. The internal debt is domestic debt while the external is foreign debt. Internal debts are the aggregate of unsettled government obligations to organizations and institutions within the shores of the country; and the foreign debts are external obligations to foreign organizations and institutions. Monogbe, Dornubari and Emah (2015) argued that even though public debt lead to increase in Gross Domestic Product (GDP) which is in support of the views of the Keynesian school, countries that have used public debt to boost their economy did so by putting such borrowed funds into infrastructures that oils the wheel of economic development.

Stock Market Performance and Fiscal Policy Operations:

For this study the selected the fiscal policy variables were Federal government revenue, Federal government total expenditure and Federal government public debt. The study proposed that Federal government fiscal policy have not significantly influenced the stock market turnover ratio. The theoretical underpin for the effect of fiscal policy on stock market performance proxied with stock market turnover ratio are the Keynesian theory, the Classical theory and the Ricardian hypothesis.

a) The Keynesian (1936) hypothesis advocates government intervention for an economy to function well, attain equilibrium and consequently influence economic outcomes. It suggests that, through automatic stabilizer and discretionary measure, government can boost aggregate demand and consequently boost the economy; thus, leading to increase in stock prices. Also, government can alter interest rate to improve stock market performance by expanding fiscal policy.

b) The Classical hypothesis advocates for free market and strongly disagrees with government intervention in market activities stating that market can self-adjust. According to Hollander (1987), the classicists believe that the effect of fiscal policy on stock market performance will be negative because it will reduce loanable funds in the market and also hinders private sector activities, thereby reducing stock market performance.

c) The Ricardian hypothesis, also known as the "neutrality effect", believes that fiscal policy has no effect on either of the real or financial sector activities (Peach, 1993). They also believe that fiscal policy is independently ineffective unless it is combined with monetary policy.

Review of related Empirical Studies:

Anghelache, Jakova and Oanea (2016) investigated the relationship between fiscal policy and capital market performance in 6 European Union (EU) countries from Central and Eastern Europe, for period 2004 – 2015. In order to understand very well the relationship between the analysed indicators, they searched in both directions: the effects of fiscal policy on capital market performance and also the effects of capital market performance on fiscal policy. For Czech Republic and Slovakia they found that there is a bilateral relationship between fiscal policy and capital market performance. In Bulgaria, they found that the fiscal policy affects the capital market return, while in Poland they obtained that the capital market return affects the fiscal policy. For the other two countries, Hungary and Romania, they did not find any significant influence between the variables.

Prukumpai and Sethapramote (2019) examined the impact of monetary and fiscal policies on the Thai stock market using the structural vector autoregressive (SVAR) model. In addition to the data on the market aggregate level, we also consider the response of stock prices at the sectoral level. The empirical results showed that the Thai stock market significantly responds to both monetary policy and fiscal policy. However, monetary policy has

stronger effects on both real output and stock prices than those of fiscal policy. Fiscal policy shocks affect the stock market only for the next two to three quarters. In addition, sector indices were used in place of the overall stock market and the results revealed that different sectors appeared to react heterogeneously to shocks in monetary policy and fiscal policy.

Kuncoro (2017) studied the impact of different kinds of fiscal policy on stock return stabilization in the case of Indonesia. Using quarterly data over the period 2001–2013, they obtained that the discretionary and automatic stabilization fiscal policy tends to induce the stock returns volatility. While the credible debt rule policy leads to a decrease in the volatility of stock returns, the deficit rule policy was found to be non-credible and does not have any effect. Accordingly, the lower ratio of government expenditure to GDP along with improving commitment tightly to the planned deficit ratio is a good signal for stabilizing financial market.

Eyo (2018) examined the impact of the Nigerian fiscal policy on the performance of the Nigeria stock exchange. The objectives were to determine the effect of government revenue, government expenditure and government borrowing on market capitalization (a proxy for Nigeria stock exchange performance). The study employed the ordinary least square of multiple regression technique to analyze the data derived from the Central Bank of Nigeria (CBN) statistical bulletin and attempted to establish the relationship between fiscal policy indicators and stock market performance. The study demonstrated that government revenue and government expenditure had a significant impact on market capitalization in Nigeria. Furthermore, the study also demonstrated that government borrowing had no impact on the performance of the Nigerian stock exchange.

Perveen and Rahman (2018) investigated the impact of fiscal policies on stock market performance along with the identification of moderating role of political stability in Pakistan. Data of Pakistan stock exchange for last 36 years (1981 to 2016) has been analyzed by applying multiple analytical methods. First, Stationary analysis has been performed through Augmented Dickey Fuller (ADF) and Phillips-Perron (PP) unit root tests. Based on its findings, confirmation of long run relationship has been done through Johansen co-integration analysis. The study has employed ordinary least square method (OLS) of regression analysis to analyze the nature of relationship in long run. Afterwards Error correction model has been used for analyzing short run relationship and Causal relationship has been tested through granger casualty test. The findings of research indicated the existence of long run relationship between both policies and stock market performance, while short run relationship exists only between monetary policy measures and stock market performance. Research also revealed that the government expenditures, budget deficit and money supply reflect significant positive impact, while tax revenue and interest rate depict significant negative impact on stock market capitalization in the long run.

Onyema (2017) investigated the stock market response to fiscal policy shocks in Nigeria using the structural VAR methods. The data used consist of 31 yearly observations on total government revenue, total expenditure and the Nigerian stock market price index from 1985 to 2015. The study found evidence that although, stock prices respond positively to fiscal policy shocks, the effect of these shocks on the stock market is insignificant. The observed variation in stock prices is largely caused by own shock. Thus, fiscal policy has very little or no influence on the stock market in Nigeria.

3.0 Methodology

This study adopts the error correction model (ECM) modified of the ordinary least squares method to investigate the effect of Nigeria's fiscal policy on stock market turnover ratio. The ECM achieves asymptotic efficiency because it modifies the ordinary least squares to account for serial/autocorrelation influences and test for endogeneity in the explanatory variables that results from the existence of cointegration relationship (Rukhsana & Shahbaz, 2008). The error correction model is therefore applied to account for possible endogeneity that may arise as a result of relationships among the estimated variables in the model.

Model Specification:

The implicit model of this study is as follows:

SMTR = f (GEXP, GTREV, PUBDBT) ---------- (1)

Explicitly, the study models as follows:

$SMTR = B_o + B_1GEXP + B_2GTREV + B_3PUBDBT + U$ ---------- (2)

From the trend analysis the study envisaged non-linear effect of fiscal policies on stock market turnover ratio. The study therefore adopts the logarithmic estimation method. The technique modifies least squares to account for serial correlation effects, overblown estimation and test for endogeneity in the regressors that result from the existence of cointegrating relationship. The study model becomes:

$LogSMTR = B_o + B_1 \log GEXP + B_2 logGTREV + B_3 logPUBDBT + ECM(-1) + U$ --------(3)

Where:

f = Functional Relationship

SMTR = Stock Market Turnover Ratio

GEXP = Total Government Expenditures

GTREV = Total Government Revenue

PUBDBT = Total Pubic Debt

U = Stochastic Error Term

B_0, B_1, B_2, B_3 = Structural Parameters (coefficient of the variables 1, 2, 3)

ECM(-1) = Error correction model

Log = logarithmic

4.0 Data analysis and discussions

The raw data for the study are attached in Appendix 1, and descriptive statistics of the explored variables are depicted in Table 1.

Table 1: Descriptive statistics of the input data

	GEXP	GTREV	PUBDBT	SMTR
Mean	3190.741	4837.597	2944.403	6.037188
Median	1978.850	5196.050	1207.115	5.600000
Maximum	12164.10	11116.80	15855.23	17.56000
Minimum	60.30000	98.10000	298.6100	1.020000
Std. Dev.	3293.736	3981.579	3728.684	3.728290
Skewness	1.125315	0.185131	2.046817	0.837449
Kurtosis	3.466369	1.520548	6.780452	4.044253
Jarque-Bera	7.043783	3.101163	41.39954	5.194331
Probability	0.029544	0.212125	0.000000	0.074484
Sum	102103.7	154803.1	94220.90	193.1900
Sum Sq. Dev.	3.36E+08	4.91E+08	4.31E+08	430.9044
Observations	32	32	32	32

Source: *Authors' Computation and extracted from E-views 10 output data.*

From the descriptive analysis displayed in table 1 the average value for government expenditures (GEXP) between 1990-2021 is N3190.741 billion, for government revenue (GTREV) it was N4837.597 billion, public debt yielded an average of N2944.403 billion and stock market turnover ratio yielded 6.03%. A standard deviation (or σ) measures how dispersed the data is in relation to the mean. The standard deviation of stock market turnover ratio yielded a low value at the magnitude of 3.728290; GEXP (3293.736), GTREV (3981.579), and PUBDBT (3728.684) had high standard deviation.

From the Jarque-Bera statistics, GTREV (p value of 0.212125) and SMTR (p value of 0.074484) had significant normal distribution. Other variables had p values that were less than 0.05: GEXP (0.029544), and PUBDBT (0.00000); and thus had significant deviation from the normal distribution. Given the high standard deviations of three variables and non-significant normal distribution of two variables in the model, the study choose to use ECM in estimating the model.

Time series data are often assumed to be non-stationary and thus, it is necessary to perform unit root tests to ensure that the data are stationary. The Augmented Dickey-Fuller (ADF) unit root test was used to determine the stationarity of the data. The decision rule based on the ADF test is that its statistic must be greater than Mackinnon Critical Value at a 5% level of significance and in absolute terms. The results of the unit-root test are reported in Table 2.

Table 2: Unit Root Test Result

VARIABLE	ADF STAT.	CRITICAL VAL.	ORDER
GEXP	-5.165827	-2.986225	I(1)
GTREV	-5.408449	-2.963972	I(1)
PUBDBT	-6.123186	-2.991878	I(1)
SMTR	-7.655920	-2.963972	I(1)

Source: *Authors' Computation and extracted from E-views 10 output data.*

Table 2 shows the stationarity status of the individual series (variables). The extracted statistics showed that the variables were all integrated in the first order. This entails that the variables were stationary and stable at the first difference (I(1)). Therefore, long-run relationship was investigated using Johansen method. The relevant extracted results are shown in Table 3.

Table 3: Cointegration Results (Johansen Method)

Date: 12/27/23 Time: 10:44

Sample (adjusted): 1992 2021

Included observations: 30 after adjustments

Trend assumption: Linear deterministic trend

Series: GEXP GTREV PUBDBT SMTR

Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.734410	62.83891	47.85613	0.0011
At most 1	0.378223	23.06490	29.79707	0.2429
At most 2	0.219377	8.809669	15.49471	0.3833
At most 3	0.044951	1.379768	3.841466	0.2401

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Source: *Authors' Computation and extracted from E-views 10 output data.*

It can be seen from the Johansen cointegration test result in Table 3 that the trace statistics indicates 1 cointegration equation at 0.05 level of significance. This means shows that the none* cointegration hypothesis is rejected as the trace statistic which yielded 62.83891 is greater than the critical of 47.85613 at 0.05 level of significance (95% Confidence interval). This test probably indicates that the variables are cointegrated and hence there exists a long run relationship between government expenditures, government tax revenue, public debt and stock market turnover ratio.

ECM estimation:

The study model was estimated using the ECM. The relevant statistics are shown in table 4.

Table 4: Regression Analysis (Error Correction Mechanism)

Dependent Variable: D(SMTR)

Method: Least Squares

Date: 12/27/23 Time: 12:55

Sample (adjusted): 1991 2021

Included observations: 31 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.231748	0.562395	-0.412073	0.6837
D(GEXP)	-0.000377	0.001023	-0.368222	0.7157
D(GTREV)	-0.000696	0.000345	-2.014785	0.0544
D(PUBDBT)	-0.000136	0.000447	-0.305287	0.7626
ECM(-1)	-0.541881	0.162676	-3.331051	0.0026

R-squared	0.355155	Mean dependent var	0.080968
Adjusted R-squared	0.255948	S.D. dependent var	2.935957
S.E. of regression	2.532511	Akaike info criterion	4.842990
Sum squared resid	166.7539	Schwarz criterion	5.074278
Log likelihood	-70.06634	Hannan-Quinn criter.	4.918384
F-statistic	0.579938	Durbin-Watson stat	1.965631
Prob(F-statistic)	0.518725		

Source: *Authors' Computation and extracted from E-views 10 output data.*

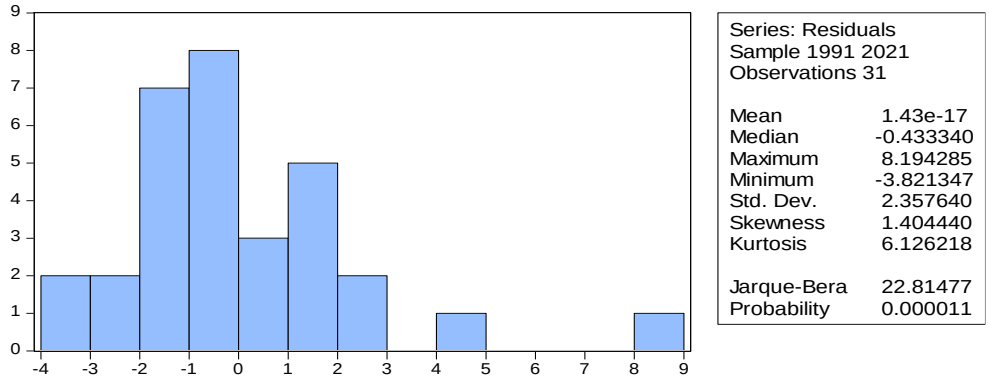
The regression analysis displayed in table 4 showed the econometric relationship between fiscal policy variables and stock market turnover ratio. The government expenditures (GEXP) yielded a negative numerical coefficient at the magnitude of -0.000377. This entails that government expenditures do not contribute positively to stock market turnover ratio. This entails that a 1% increase in government expenditures is expected to decrease the performance and magnitude of stock market turnover ratio by 0.000377. The regression output also showed that government revenue (GTREV) yielded a negative numerical parameter at the magnitude of -0.000696. This entails that there is an inverse relationship between stock market turnover ratio and government revenue. Hence, a 1% increase in government revenue contributed negatively to stock market turnover ratio at the magnitude of -0.000696. The relationship between public debt (PUBDBT) and stock market turnover ratio was estimated and it was seen that there is a negative relationship between the two variables. The result revealed that the contribution of public debt to stock market turnover ratio is negative. Thus, when the other factors are held constant, a percentage increase in public debt led to a reduction in stock market turnover ratio by -0.000136. This entails in totality that fiscal policy contributed negatively to stock market turnover ratio in Nigeria.

The coefficient of determination (R^2) is used to measure the explanatory power of the independent variables and a test of goodness of fit. The regression table clearly showed that the R^2 yielded 0.355155. Thus, approximately 36% of the variations in the dependent variable (Stock market turnover ratio) is explained by the changes in the independent variables (GEXP, GTREV and PUBDBT). The implication of this analysis is that there are other macroeconomic variables that influence stock market turnover ratio aside the explanatory variables under study. The F-statistic which is employed to test for the statistical significance of the entire regression plane yielded 0.579938 with a corresponding probability value of 0.518725 > 0.05. This entails that the test is not statistically significant at the entire regression plane.

The error correction mechanism (ECM) which measures the speed of the adjustment of the variables at which equilibrium is restored yielded -0.541881. This is correctly signed (negative) at a 5 percent level, and therefore confirms the earlier proposition that the variables are co-integrated. The speed suggests that stock market turnover ratio in Nigeria adjusts relatively slowly to the long-run equilibrium changes in the fiscal policy variables and it gives the proportion of the disequilibrium error accumulated in the previous period that is corrected in the current period. The speed of adjustment is specifically at approximately 58% annually.

Post Estimation Tests:

The normality test was carried out to ascertain if the residuals are normally distributed. Figure 3 showed the test result. The Jarque-Bera (JB) statistics yielded 22.81477 with a corresponding probability value of 0.000011. This result shows that the residuals are not normally distributed as the probability value is less than 5% (0.05 critical value). The reason for this could be attributed to the non-linear relationships among the study variables.



Source: *Authors' Computation and extracted from E-views 10 output data.*

Figure 3: Jacque-Bera Normality Test Results

The serial correlation test was also carried out to ascertain the presence of serial correlation in the model. The null hypothesis states that there is no serial correlation. Based on the serial correlation test, as depicted in Table 5, the probability of Chi-Square yielded 0.1702 > 0.05. This entails the acceptance of the null hypothesis and we therefore conclude that there is no evidence of serial correlation in our residuals.

Table 5: Serial Correlation Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	1.200195	Prob. F(2,22)	0.3201
Obs*R-squared	3.541502	Prob. Chi-Square(2)	0.1702

Source: *Authors' Computation and extracted from E-views 10 output data.*

The heteroscedasticity test was carried out to ascertain the presence of homoscedasticity in the model. The test result is shown in Table 6. The probability of the Chi-Square yielded 0.4910 > 0.05; and this means that there is no evidence of heteroscedasticity in the residuals. This is good and desirable.

Table 6: Heteroscedasticity Test (Breusch-Pagan-Godfrey)

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.894963	Prob. F(15,20)	0.5803
Obs*R-squared	14.45888	Prob. Chi-Square(15)	0.4910
Scaled explained SS	11.76427	Prob. Chi-Square(15)	0.6968

Source: *Authors' Computation and extracted from E-views 10 output data.*

Hypotheses Testing and discussions:

The p-values of the ECM were used to test the hypotheses of the study stated in null as follows: The Federal government expenditure has no significant effect on Nigeria's stock market turnover ratio; The Federal government revenue has no significant effect on Nigeria's stock market turnover; and the public debt has no significant effect on Nigeria's stock market turnover ratio.

The null hypothesis is rejected and the alternative accepted if the p value is less than or equal to 0.05; and vice versa.

The extracts for hypotheses testing were drawn from Table 4 and displayed in Table 7.

Table 7: Hypotheses testing results and decisions

Variable	Coefficient	Std. Error	t-Statistic	Prob.	Decision
D(GEXP)	-0.000377	0.001023	-0.368222	0.7157	Accept Ho
D(GTREV)	-0.000696	0.000345	-2.014785	0.0544	Reject Ho for Ha
D(PUBDBT)	-0.000136	0.000447	-0.305287	0.7626	Accept Ho

Source: *Extracted from Table 4; Authors' Computation and extracted from E-views 10 output data.*

This study concluded that the Federal government expenditure had a negative and no significant effect on Nigeria's stock market turnover ratio; the Federal government revenue had a negative and significant effect on Nigeria's stock market turnover; and the public debt had a negative and no significant effect on Nigeria's stock market turnover ratio.

On average, it was discovered that the selected fiscal policy variables did not contribute positively to the stock market turnover ratio. Theoretically, this finding is in line with the perspective of the classical school equivalency. The classical school of thought posits that fiscal policy does not have the potential to drive the economy positively given its crowding out effects in the market for loanable funds and of the productive sectors of the economy. According to them, fiscal policy could potentially drive stock prices lower through the crowding out of private sector activity. Empirically, this study is not in line with the findings of Anghelache, Jakova, and Oanea (2016) who investigated the relationship between fiscal policy and capital market performance in 6 European Union (EU) countries and found out that there is a bilateral relationship between fiscal policy and capital market performance. The present study is not also in line with the findings of Prukumpai and Sethapramote (2019) who examined the impact of monetary and fiscal policies on the Thai stock market using the structural vector autoregressive (SVAR) model. The empirical results showed that the Thai stock market significantly responds to both monetary policy and fiscal policy. The majority of the empirical studies where fiscal policy variables had a significant and positive effect

on stock market parameters were outside the shores of the Nigerian economy. Several factors could be responsible for the failure of fiscal policy to positively and significantly enhance the stock market turnover ratio which is a stock market variable. One of the elements that has compromised the capacity of fiscal policy to contribute positively to the economy of Nigeria is corruption. Nigeria has been ranked the 150th of most corrupt country out of the 180th baseline globally (Transparency International, 2022). The index offers an annual snapshot of the relative degree of corruption by ranking countries and territories from all over the globe. The presence of corruption therefore leads to other macroeconomic quagmires resulting in fund diversion, capital flight, and poor fiscal management, all of which take a negative toll on the stock market. Corruption erodes public confidence in the stock market hence could potentially force delisting of companies from the exchange. With Nigeria in such a dangerous position on the corruption index ladder, it is no advantage at all to the Nigerian Exchange Limited. Only in the year 2022/2023 delisting companies have withdrawn a total of N224 billion from NGX's market capitalization (David Olujinmi, 2023)

5. 0 Conclusion and recommendations

The major findings of the study revealed that fiscal policy had no significant effect on stock market turnover ratio. Thus, fiscal policy is a causative factor in influencing the rate and level of stock market development negatively in Nigeria. The fiscal policy priority in Nigeria seems not consistently channeled to achieve a sustainable level of macroeconomic development in Nigeria. Hence, there is need for discipline, blockade of loopholes, total revamping and reallocation of the interests of fiscal authorities and polices in Nigeria.

Recommendations:

In the light of the findings of the study, the following recommendations are suggested:

1. To ensure that fiscal policy contributes positively and significantly to stock market turnover ratio, the fight against corruption should be taken seriously. Investors' sentiments work on the border line of perception and experience. The corruption index ladder puts Nigeria on the spot light among the most dangerous investment centres as a result of corruption perception. This no doubt scares investors away and subsequently reduces stock market turnover ratio. Government fiscal activities must therefore be corruption proof through transparency, accountability and fair hearing/justice to change the dangerous perception.
2. Fiscal policies in Nigeria should be stock market-driven. This entails that the federal government should intentionally formulate and channel fiscal policies that will have a direct contributory effect on the stock market. Finance literature is replete with direct intervention of Governments either as policy or intervention through bailouts in stock market. This has helped to improve the Stock market turnover ratio and hence revived the sector. American International Group Inc. better known as AIG is still alive and kicking today in the New York Stock Exchange (NYSE) thanks to the US government intervention. (Gregory Gethard, Dec.31,2022).
3. Stock markets grow through foreign direct investments. To ensure the inflow of foreign stock investors, the federal should create an enabling macroeconomic environment to attract and sustain foreign stock investors. The relationship between foreign stock investors and stock market development has been demonstrated in literature.

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APPENDIX I

YEAR	Government Expenditure (N'billion)	Government Total Revenue (N'billion)	Fiscal Deficit (N'billion)	Public Debt (N'billion)	Private debt to Total Debt Secuties Ratio	Stock market Turnover Ratio
1990	60.30000	98.10000	-22.10000	298.6100	21.58	1.38
1991	66.60000	101.0000	-35.80000	328.4500	6.08	1.05
1992	92.80000	190.5000	-39.50000	544.2600	7.31	1.58
1993	191.2000	192.8000	-107.7000	633.1400	75.67	1.69
1994	160.9000	201.9000	-70.30000	648.8100	92.10	1.49
1995	248.8000	460.0000	1.000000	716.8700	100.00	1.02
1996	337.2000	523.6000	32.00000	617.3200	80.89	2.44
1997	428.2000	582.8000	-5.000000	595.9300	32.72	3.66
1998	487.1000	463.6000	-133.4000	633.0200	1.27	5.17
1999	947.7000	949.2000	-285.1000	2577.370	0.00	4.69
2000	701.1000	1906.200	-103.8000	3097.380	0.00	5.96
2001	1018.000	2231.600	-221.0000	3176.290	0.00	8.71
2002	1018.200	1731.800	-301.4000	3932.880	11.54	7.77

2003	1226.000	2575.100	-202.7000	4478.330	99.95	8.86
2004	1504.200	3920.500	-172.6000	4890.270	84.49	10.69
2005	1919.700	5547.500	-161.4000	2695.070	11.30	9.07
2006	2038.000	5965.100	-100.8000	451.4600	4.32	9.18
2007	2450.900	5727.500	-117.2000	438.8900	100.00	8.16
2008	3240.800	7866.600	-47.40000	523.2500	99.97	17.56
2009	3453.000	4844.600	-810.0000	590.4400	100.00	9.75
2010	4194.600	7303.700	-1105.400	689.8400	0.00	8.07
2011	4712.100	11116.80	-1158.500	896.8500	0.00	6.22
2012	4605.300	10654.70	-975.8000	1026.900	12.20	5.47
2013	5185.300	9759.800	-1153.500	1387.330	7.32	12.32
2014	4587.400	10068.90	-835.7000	1631.500	0.00	7.91
2015	4988.900	6912.500	-1557.800	2111.510	13.26	5.60
2016	5858.600	5616.400	-2673.800	3478.920	18.54	6.22
2017	6456.700	7444.800	-3609.400	5787.510	0.00	5.60
2018	7813.700	9551.700	-3628.100	7759.230	0.00	5.50
2019	9714.600	10262.30	-4820.600	9022.420	50.10	3.70
2020	10231.70	9276.100	-6248.600	12705.62	54.58	2.81
2021	12164.10	10755.40	-7118.700	15855.23	55.43	3.89