
INTERTEMPORAL POLICY MIX AND STOCK MARKET DEVELOPMENT IN NIGERIA

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ABSTRACT: *Given Nigeria's position as an economic giant in the sub-Saharan Africa, analyzing the country's macroeconomic policy coordination requires an understanding of its effectiveness in boosting the economy wide aggregate including stock market performance. This paper explores the effectiveness of intertemporal policy mix in fostering stock market development in Nigeria between 1986 and 2018. The specific objective focused on the effect of fiscal and monetary policy initiatives comprising public expenditure, public debt, treasury bill rate and broad money supply on the value of stock traded as a ratio of GDP. Year-end time series data on the variables were analyzed using error correction mechanism (ECM), diagnostics tests and descriptive statistics. The Philips-Perron unit root results reveal that the variables are stationary at first difference. Additionally, the cointegration test show evidence of long run relationship among the variables. It was observed from the estimated parsimonious ECM result that broad money supply and public expenditure positively and significantly influenced the value of stock traded. This indicates that public spending and monetary aggregates are the channels which monetary and fiscal policies foster the development of the stock market development in Nigeria. Given the findings, it is recommended for policy makers to synergize fiscal and monetary policy initiatives in order to foster robust and sustained development of the stock market in Nigeria.*

KEYWORDS: Fiscal policy, monetary policy, intertemporal policy mix, stock market development, Nigeria and ECM

Fiscal-monetary policy mix draws support from the Ricardian neutrality hypothesis which proposes for a synergy between fiscal and monetary policy measures. The basis for this proposition is that fiscal policy alone is perceived as inadequate in fostering real and financial sectors development and by extension stock market development without inputs from the monetary policy stance. Evidences in economics and financial literature have shown that bulk of the studies (Ajao, Ayoola and Iyaniwura, 2015; Afonso and Sousa, 2012 amongst others) focused on the implications of monetary policy on stock market behaviour with little or no attention on fiscal policy. It is however, important to note that monetary policy is perceived to independently influence the performance of the stock market through various channels as credit channel, interest rate channel, wealth channel and exchange rate channel (Lawal, Somoye, Babajide and Nwanji, 2018).

Besides the growing emphasis on monetary policy as core determinant of stock market outcome, the role of fiscal policy in explaining the stock market dynamics has not been completely neglected in economics literature and other related fields. The potential impacts of fiscal policy on stock market performance have attracted the attention of past studies such as Ardagna (2009); Agnelloy and Sousa (2010); Chatziantoniou, Duffy and Filis (2013). These studies are driven by the hypothesis that fiscal stimulus or contraction influences stock market behavior through public expenditure, taxation or deficit financing channels.

In view of the growing emphasis on policy coordination, studies such as Khan et al. (2014), Ofori-Abebrese, Ampoortu and Sakyi (2016) and Lawal et al. (2018) have shifted attention from the impacts of either monetary or fiscal policy on stock market performance to interplay of both macroeconomic policies and their implications for stock market outcomes. This could be partly attributed to the assumption that policy mix seems more effective in stimulating stock prices and driving overall economic activities in both medium and long term. Like other developing economies, macroeconomic policies in Nigeria have continued to change with varying implications on the overall economy and stock market performance in particular. For instance, the monetary policy measures of the Central Bank of Nigeria (CBN) is expected to foster price stability in the short run with positive spillover effects on stock market outcomes.

However, the myriad of inconsistencies that characterize the design and implementation fiscal and monetary policies tend to constraint their effectiveness in terms of driving stock market development in Nigeria. In view of the sub-optimal performance of the stock market in Nigeria, many has raised concern on the effectiveness of the interplay of fiscal and monetary policy. While some scholars are of the view that intertemporal policy mix is important source of stock market development, others argue that it is detrimental to improved performance of the stock market. It is against this backdrop that this study explores the implications of fiscal-monetary policy mix on stock market development in Nigeria.

REVIEW OF RELATED LITERATURE

Theoretical underpinnings

Keynes (1936) proposed the positive hypothesis which emphasized on the spillover effect of fiscal policy on stock prices and overall performance of the stock market. The theory assumes that fiscal policy plays an important role in boosting aggregate demand and by extension increases stock prices. The Keynesian hypothesis supports the positive net effects of fiscal policy instruments on stock market performance as fiscal authorities often use taxation, budget deficit and discretionary measures to alter interest rate. It is believed that the transmission effect of these fiscal policy measures on interest rate has the potential of stimulating stock market activities. The monetarists are of the view that monetary policy influences stock market behavior through various channels

such as interest rate channel, credit channel, exchange rate channel and monetary aggregate channel. These channels define the transmission mechanism of monetary policy measures to commodity and capital markets.

A tight monetary policy tends to weaken borrowers' balance sheets. More importantly, the credit channel suggests that the central bank can influence the level of investment taking place in a country by altering interest rates. In this regard, it is understood that the level of corporate investment will affect the market value of firms. This argument is predicated upon the fact that the market value of firms is affected by the present value of its future cash flows. In this sense, higher corporate investment activity should lead to higher future cash flows, thus increasing the firm's market value. The Ricardian neutrality hypothesis assumes that fiscal policy alone does effectively influence real sector and financial outcomes without adequate input from the monetary policy measures. In other words, the theory advocates for the combination of fiscal and monetary policy measures to promote rapid growth of the economy and the development of the capital market.

Conceptualization of Stock Market

The stock market covers institutions and mechanisms through which both medium term funds and long term funds are aggregated and made available to corporate bodies and government. The stock market has been recognized as an institution that contributes to the socio-economic growth and development of emerging and advanced economies. Godspeed (2008) describes stock market as the institutional framework through which public companies issue new share capital in the primary market and the ownership of the shares changes hands in the secondary market. The existence of the stock market enables individual investors to transfer the control of their savings to the market place with confidence. Individual investors exchange their savings for shares of companies that are listed on the stock exchange. The share gives the individuals the right to vote and appoint directors of the company who have the responsibility of steering the performance of the company.

Ohionu and Enabulu (2011) observed that a unique benefit of the stock market to corporate entities is the provision of long-term, non-debt financial capital. Through the provision of equity capital, the market also enables companies to avoid overreliance on debt financing, thus improving corporate debt-to-equity ratio. The capital market has been identified as an institution that contributes to the socio-economic growth and development of emerging and developed economies. The creation of liquidity has remained the major channel through which the stock exchange market affects economic activity. It is noteworthy that many profitable enterprises require long-term capital, but investors are often reluctant to relinquish control of their saving for long periods. Therefore, the stock exchange market has remained very helpful for investors to meet their goals as it enables government and businesses to raise long-term capital for funding new projects, expand and modernize industrial concerns.

Empirical Literature

Hu, Han and Zhang (2018) analyzed the impact of Chinese monetary and fiscal policy shocks and the interaction of the two policy measures on stock markets. The study applied both correlation and regression analysis in estimating the relationship between the policy combinations and the activities of the stock market. It was uncovered from the results that the fiscal policy operations exert significant, negative contemporaneous impacts on stock market performance, while monetary policy's impact on stock market performance varies, depending on the policy stance employed by the policy makers. The estimates of the lagged variables indicate that Chinese monetary and fiscal policies both have a significant and direct positive effect on stock market performance. Moreover, the interplay of the two policies was found to play very important role in driving the development of stock markets.

Lawal *et al.* (2018) assessed how the fiscal and monetary policy interactions affect the behavior of stock market and the net-effects of the volatility of these interactions on stock market outcomes in Nigeria. They applied autoregressive distributed lag (ARDL) and Engel and Granger Autoregressive Conditional Heteroscedasticity (EGARCH) models as techniques for analyzing the monthly data. The result shows that there exist long run relationship between fiscal-monetary policy framework and all share index. Owing to this finding, the study recommended that fiscal and monetary policies should be incorporated into the stock market policies as both policies tend to achieve better results when considered together.

Sede and Omorokunwa (2015) applied cointegration and error correction mechanism in studying the dynamic effects of fiscal and monetary policy variables on stock returns in Nigeria. It was found from the unit root that the series become stationary at first difference. The regression estimates show that monetary policy instruments exert more effects on stock returns in Nigeria and that the main fiscal policy variable, especially fiscal deficit ratio is not quite significant in determining stock market returns. The study however, concluded that the general findings indicate that the importance of government domestic debt as well as direct monetary policy control of money supply and inter-bank rates in driving short term stock returns cannot be over-emphasized.

Thanh, Thuy, Anh, Do-Thi, T and Truong (2017) evaluate the impact of monetary policy tools and fiscal policy stance on Vietnam's stock market, as well as examine interaction between these two policies with the Vietnam stock price index. The Vector error correction model (VECM) was utilized as the analytical techniques and applied on monthly data from January 2002 to October 2015. It was found that the monetary and fiscal policies are linked with Vietnam's stock market. In addition, Vietnam's stock market is also affected by exogenous factors such as the world oil prices and the S&P500 index, especially when Vietnam's economy is opening up and integrated with the global economy. On the basis of the empirical findings, the study concluded that the fiscal-

monetary policies mix must be taken seriously in order to accomplish major target of both macroeconomic targets, especially stock market development with a stabilized inflation rate.

Chatziantoniou, Duffy and Filis (2013) employed a structural VAR model in investigating the effects of monetary and fiscal policy shocks on stock market performance in Germany, UK and the US. The study was driven by the narrow scope of past studies which focused their attention on the relationship between monetary policy and stock market performance, yet only few of the effects of fiscal policy on stock markets was explored. The outcome of the empirical analysis showed that both fiscal and monetary policies influence the stock market, through either direct or indirect channels. More importantly, the study established that the interaction between the two policies is extremely important in explaining stock market developments. The study therefore recommended that policy makers, investors and analysts should consider fiscal and monetary policies together rather than in isolation.

Khalid and Khan (2017) investigated the implications of interest rates, exchange rates and inflation rates on stock market performance in Pakistan between 1991 and 2017. Primarily, the study was designed to offer better understanding of the long-run and short-run relationships between the KSE-100 index and macroeconomic variables following the application of econometric techniques of autoregressive distributed lag (ARDL) bounds testing procedure to cointegration and the Error Correction Model (ECM). The empirical results of the ARDL show that there was a negative and significant impact of interest rate on the market index, while the exchange rate and inflation rate exert positive impact on stock market volatility in the long-run. The study recommended for proper integrations of the macroeconomic policies in order to ensure that development of the stock market is not undermined.

Bhatti, Ziaei and Rehman (2015) examined how monetary and fiscal policy shocks affect stock market activities in Malaysia by applying a structural VAR model. The study also included international oil prices and gold prices in the SVAR model because it is proposed that concurrent developments in oil and gold prices have crucial influence over macroeconomic activities that are very closely linked with stock returns. The results reveal that oil prices positively affect stock returns while gold is used as hedge against the stocks. The study further reveals that contemporaneous government expenditures and short-term interest rate are ineffective in determining the stock returns. The study therefore recommended that investors and policy makers should contemplate the impact of monetary and fiscal policies jointly rather than separately in the investment and policy decisions in the stock market.

Khan, Javed, Shahzad, Sheikh, Saddique, Riaz, and Batool (2014) combined Pearson correlation and regression analysis techniques in analyzing the possible impact of macroeconomic variables, especially fiscal policies and monetary policies as well as inflation rates on stock market

performance in Pakistan. The data used for the analysis is monthly data collected from secondary sources. It was uncovered from the results that the Pakistan stock market index is significantly influenced by the outlined macroeconomic policies. Specifically, it was found that interest rate and government revenue have significant negative relationship with the stock market index, whereas inflation rate and the government expenditures have a significant positive relationship with the stock market Index for the period studied.

Khodaparasti (2014) analyzed the role and impact of macro variables in the Iranian stock market with the study period spanning from 2007 to 2011. Emphasis was placed on inflation, exchange rate, volume of liquidity in the private sector and index of industrial production as macroeconomic variables. The empirical analysis was carried out using the analysis of variance procedure. It was observed from the empirical analysis that the rate of exchange rate and industrial index have more effect on the stock market than inflation and near money supply. The study therefore, advocated for improved monetary management in order to enhance its effectiveness in promoting stock market activities.

Applying structural vector autoregressive framework, Gupta and Inglesi-Lotz (2012) investigated the implications of money supply, portfolio, aggregate spending, and aggregate supply shocks on real stock prices in the United States of America. Quarterly data spanning from the period of 1947:1-2011:3 was used for the analysis. The empirical results indicate that each macro shock has important effects on real stock prices, with aggregate supply shocks playing an important role, besides portfolio shocks. The real stock price was found to respond to the macroeconomic shocks, thus, conforming to the standard present-value equity valuation model. The variance decomposition indicates that the decline in the real stock prices during the “Great Recession” is mainly due to a slowdown in US productivity. The study therefore, concluded that during the declining stock prices in the period of great depression are due to unfavorable shocks emanating from different sectors of the US economy.

METHODOLOGY

Research Design

In view of the nature of this paper, ex-post facto research design was adopted. Basically, an ex-post facto research design is a type of research design in which the empirical investigation starts after the fact has occurred without interference by the researcher. Cooper & Schindler (2001) are of the opinion that ex post research design is ideal for investigating the possible past experiences that happened and cannot be controlled by the researcher. The choice of ex post facto design in this study was informed by the fact that the numerical data required for the actual empirical analysis were collected from secondary sources.

Nature and Source of Data

Year-end country-specific time series data were utilized in this paper. Specifically, data on stock market development indicator, fiscal and monetary policy were sourced from various documentary sources including the Central Bank of Nigeria Statistical Bulletin and Nigerian Stock Exchange Annual Reports.

Model Specification

Drawing support from the Ricardian neutrality hypothesis of fiscal-monetary policy mix, this paper adopts a more encompassing model with value of stock traded as the dependent variable while fiscal and monetary policy measures comprising public expenditure, public debt, Treasury bill rate and broad money supply are the explanatory variables. The model is specified as follows:

$$\Delta VSO = \alpha_0 + \sum_{i=1}^a m_1 \Delta VSO_{t-i} + \sum_{i=1}^a m_2 \Delta \ln PEX_{t-i} + \sum_{i=1}^a m_3 \Delta PDT_{t-i} + \sum_{i=1}^a m_4 \Delta BMO_{t-i} + \delta ECM_{t-1} + U_t \quad (1)$$

VSO = value of stock traded, PEX = public expenditure, PDT = public debt, TBR = treasury bill rate and BMO = broad money supply.

α_0 = constant parameter

$m_1 - m_4$ = short-run coefficients of the lagged regressors

a = optimal lag length

Δ = first difference operator

δ = coefficient of the ECM which estimates the speed at which the model converges to equilibrium in the long-run.

U_t = Random error term.

Variation Description

Total Value of Stocks Traded

This refers to the total number of stocks traded times their corresponding prices. In this study, the total value of stocks traded as a proportion of GDP is used and the formula for computing it is summarized as:

$$\text{Total value of stock traded (\% of GDP)} = \frac{\text{stocks traded X respective stock prices}}{\text{GDP}}$$

Some previous studies (Rousseau and Wachtel, 2000, and Beck and Levine (2004) used this measurement as it captures the degree of trading relative to the size of the economy.

Public expenditure

The Keynesian total expenditure model assumes that government spending boost business expansion and output growth as well as offers short term stimulus to hedge against recession. The share of government expenditure to GDP is used in this study. In accordance with the Keynesian hypothesis, increase in public spending is expected to foster stock market development by driving stock prices upward.

Public debt

Public debt is one of the measures of fiscal policy in this study. As a percentage of GDP, public debt usually mirrors the ability of the government to meet its future obligations. The a priori expectation in line with the classical proposition is that increase in public debt will adversely affect stock market development due to the crowding-out effect of public borrowing on private investment.

Treasury bill rate

Treasury bill rate refers to the rate at which government's short-term debt instruments are offered to the public. On a priori basis, it is expected that increase in treasury bill rate as a result of tight monetary policy will adversely influence stock market performance as investors tend to take advantage of the increased treasury bill rate by investing in short-term government instruments.

Broad Money Supply

Broad money supply refers to the aggregate money supply. In this study, the monetary aggregate shall be measured by the broad money supply (M_2) which integrates narrow money, savings and time savings as well as foreign denominated deposits. In other words, it denotes the currency in circulation plus demand deposit. Increase in money supply is expected to reduce interest rate and by extension boost stock prices.

Method of Data Analysis

This Error Correction Mechanism (ECM) was applied in estimating the empirical relationship between the underlying variables. The ECM is also important in estimating the speed of convergence. In addition to the ECM, descriptive statistics and diagnosis tests conducted to ascertain the stationarity status of the variables and reliability of the model. The diagnostics test focused on the Phillips and Perron (1988) unit root used in testing the null hypothesis of unit root against the alternative hypothesis no unit root and Johansen cointegration to determine the long run relationship between stock market development and indicators of fiscal-monetary policy mix.

RESULTS AND DISCUSSION

Descriptive Statistics

The descriptive statistics are summarized in table 1.

Table 1: Summary of descriptive statistics

Variable	VSO	PEX	PDT	TBR	BMO
Mean	1.350420	90.18242	68.33113	12.37364	22.72381
Median	0.740285	90.92000	61.18994	12.00000	21.02095
Maximum	10.42941	106.7900	228.3717	26.90000	43.26613
Minimum	0.040000	67.92000	4.130980	3.790000	13.23075
Std. Dev.	2.166172	7.975487	63.34933	4.682615	6.114268
Observations	33	33	33	33	33

Source: Author's computation using E-views software

The descriptive statistics reported in table 1 show that the average values of stock traded and public expenditure are 1.35 percent and 90.18 percent respectively. The result further revealed that the mean values for public borrowing is 68.33 percent and 0.69 percent. Additionally, the treasury bill rate and broad money supply averaged 12.37 and 22.72 during 1986-2018. The distribution of the series over the study period as captured by the minimum and maximum values showed that the minimum and maximum values of the total value of stock traded are 0.04 percent and 10.43 percent respectively. The result further indicates that the value of public expenditure as ratio of GDP ranged from 67.92 percent to 106.79 percent while public borrowing spanned from 4.13 percent to 228.37 percent. The minimum value of treasury bill rate is 3.79 percent while its maximum value stood at 26.9 percent. The result further showed that the broad money supply as a ratio of GDP ranged from 13.23 percent to 43.27 percent. It was equally discovered from the standard deviation of each of the series that all the observations for the variables except value of stock traded converged around their respective mean values. This is evidenced in their respective standard deviation values which are lower than their corresponding mean values.

Unit Root Test

The unit root test was conducted using Phillips-Perron method. The results are presented in table 2.

Table 2: Summary of Philips-Perron Unit root test results

Variable	Levels tests results	1 st difference test results	Order of integration
	Adjusted t-statistic	Adjusted t-statistic	
VS0	-2.601 (0.282)	-6.629 (0.000)	I (1)
PEX	-3.034 (0.105)	-4.268 (0.000)	I (1)
PDT	-2.800 (0.207)	-9.671 (0.000)	I (1)
TBR	-2.713 (0.349)	-5.761 (0.000)	I(1)
BMO	-2.805 (0.206)	-9.426 (0.000)	I (1)

Source: Source: Author's computation using E-views software

The Philips-Perron unit root test was conducted at 5 percent level of significance. The results reveal that none of the variables is stationary at levels given that the corresponding probability values of the computed adjusted t-statistics are greater than 0.05. Thus, the null hypothesis of unit root for the variables cannot be rejected at 5 percent level. Consequently, the variables were differenced once and they were found to be stationary upon first differencing. Hence, they are integrated of order one [I(1)]. Overall, it was evidence from the Phillips-Perron unit root test results that the variables are difference stationary which necessitates the application of Johansen-Juselius cointegration test.

Cointegration Test

The cointegration test was conducted using at 5 percent level using Johansen-Juselius method and the result is showed in table 3.

Table 3: Johansen-Juselius cointegration test results

Series: VSO PEX PDT TBR BMO				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.695312	85.61280	69.81889	0.0017
At most 1 *	0.590495	48.77034	47.85613	0.0409
At most 2	0.339782	21.09338	29.79707	0.3519
At most 3	0.205433	8.222657	15.49471	0.4419
At most 4	0.034673	1.093945	3.841466	0.2956
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.695312	36.84246	33.87687	0.0215
At most 1 *	0.590495	27.67696	27.58434	0.0487
At most 2	0.339782	12.87072	21.13162	0.4642
At most 3	0.205433	7.128712	14.26460	0.4740
At most 4	0.034673	1.093945	3.841466	0.2956

Source: Source: Author's computation using E-views software

* denotes rejection of the hypothesis at the 0.05 level

The cointegration test results that the trace statistics in show evidenc two cointegrating equations. Similarly, it was uncovered from the maximum eigenvalue statistics that two cointegrating equations exist in in the model. The results reveal that variables have long run relationship and therefore, can be represented as an ECM in accordance with the proposition of Engle and Granger (1987).

Estimation of the ECM

Following the evidence of cointegration in the series, the relationship between variables was represented as ECM using a general-to-specific approach. The result of the parsimonious ECM is reported in table 4.

Table 4: Parsimonious ECM

Dependent Variable: D(VSO)				
Method: Least Squares				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(VSO(-2))	-0.360946	0.189537	-1.904355	0.0730
D(VSO(-3))	0.612493	0.278253	2.201204	0.0410
D(PEX(-1))	0.038189	0.013745	2.778392	0.0148
D(PDT)	-0.021963	0.013674	-1.606137	0.1256
D(PDT(-2))	0.020773	0.014697	1.413430	0.1746
D(TBR)	-0.088704	0.087660	-1.011912	0.3250
D(TBR(-2))	-0.151672	0.078804	-1.924662	0.0702
D(BMO)	0.358108	0.117609	3.044895	0.0070
D(BMO(-2))	0.124871	0.038672	3.228977	0.0039
ECM(-1)	-0.749876	0.284222	-2.638346	0.0167
C	0.045204	0.312095	0.144840	0.8864
R-squared	0.555361	Mean dependent var		0.016667
Adjusted R-squared	0.468339	S.D. dependent var		1.957357
S.E. of regression	1.627858	Akaike info criterion		4.094104
Sum squared resid	47.69860	Schwarz criterion		4.612733
Log likelihood	-48.36451	Hannan-Quinn criter.		4.256532
F-statistic	6.248227	Durbin-Watson stat		2.100698
Prob(F-statistic)	0.003689			

Source: Source: Author's computation using E-views software

Table 4.1: Diagnostics test results

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.267440	Prob. F(2,16)	0.7687
Obs*R-squared	0.938111	Prob. Chi-Square(2)	0.6256
Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	1.212735	Prob. F(10,18)	0.3461
Obs*R-squared	11.67355	Prob. Chi-Square(10)	0.3075
Scaled explained SS	7.024487	Prob. Chi-Square(10)	0.7231

Source: Source: Author's computation using E-views software

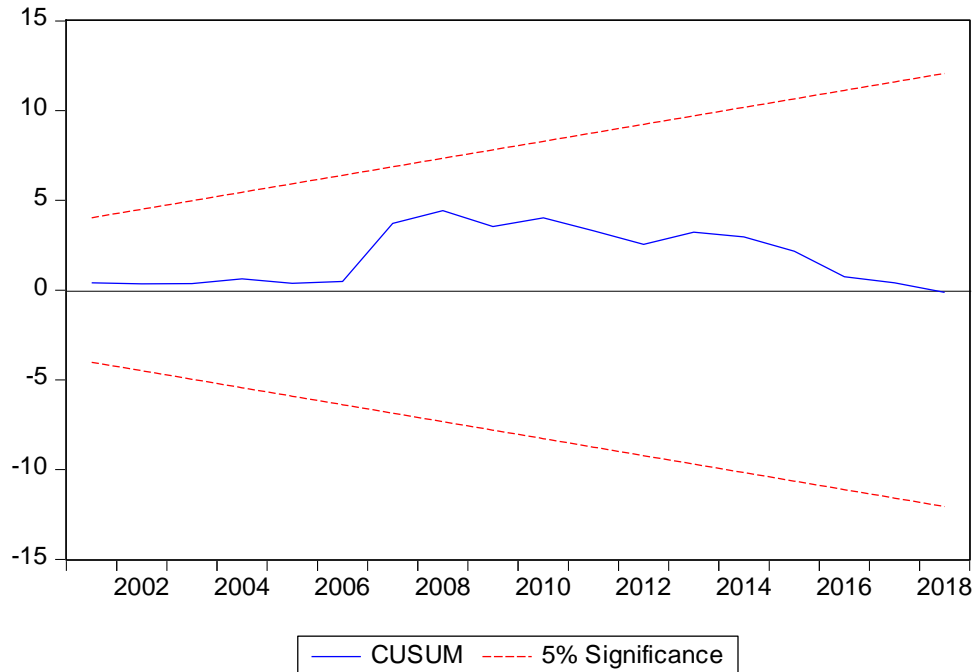


Figure 1: Cumulative sum plot for stability

As observed from the parsimonious ECM, public expenditure has significant positive effect on the value of stock traded. With one percent increase in the public expenditure, value of stock traded, on the average, increase by 0.0381 percent. The positive effect of public spending on the value of stock traded is consistent with the Keynesian hypothesis on positive spill-over effect of public spending on stock prices. Similarly, the contemporaneous and lag value of broad money supply are positively related the value of stock traded. The positive effect of broad money on the value of stock trade corroborates with the monetarists view on the effectiveness of transmission mechanism of monetary policy in driving stock market development. The result further reveals that public debt and treasury bill rate are statistically insignificant in influencing the value of stock traded at 5 percent level. However, the error correction coefficient (-0.7498) has the hypothesized negative sign and it is significant at 5 percent level. This indicates that the model is convergence to long run equilibrium positive at a speed of 74.98 percent. The probability value of the F-statistics reveals that fiscal and monetary variable indicators are jointly significant in explaining changes in the value of stock traded. It is observed from the diagnostics test results that the model is free from serial correlation and heteroscedasticity. Again, the cumulative sum plot reveals that the coefficients are stable over the study sample. Overall, the outcomes of the diagnostics tests provide appreciable empirical evidence for the reliability of the model for long term prediction.

CONCLUSION

The thrust of this paper is the empirical investigation of the relationship between intertemporal policy mix and stock market development. It was observed from the estimated parsimonious ECM result that broad money supply and public expenditure positively and significantly influence the value of stock traded. This indicates that public spending and monetary aggregates are the channels through which monetary and fiscal policy foster the development of the stock market development in Nigeria. On the basis of the findings, it is concluded that while both monetary and fiscal policy significantly account for stock market development, monetary policy have greater and sustained influence on stock market development in Nigeria. Thus, it is recommended for policy makers to synergize fiscal and monetary policy initiatives in order to foster robust and sustained development of the stock market in Nigeria.

REFERENCES

- Afonso, A., & Sousa, R. M. (2012). The macroeconomic effects of fiscal policy. *Applied Economics*, 44(34), 4439-4454.
- Agnello, L., & Sousa, R. M. (2013). Fiscal policy and asset prices. *Bulletin of Economic Research*, 65(2), 154-177.
- Ajao, I. O., Ayoola, F. J., & Iyaniwura, J. O. (2015). Temporal disaggregation methods in flow variables of economic data: Comparison study. *International Journal of Statistics and Probability*, 5(1), 36–46.
- Ardagna, S. (2009). Financial markets' behaviour around episodes of large changes in fiscal stance. *European Economic Review*, 53(1), 37–55.
- Bhatti, G. A., Ziaei, S. M., & Rehman, A. (2015). Monetary and fiscal policies variables interaction with stock returns in Malaysia. *Science International*, 27(1).
- Chatziantoniou, I., Duffy, D., & Filis, G. (2013). Stock market response to monetary and fiscal policy shocks: Multi-country evidence. *Economic Modelling*, 30, 754-769.
- Engle, R. F., & Granger, C. W. (1987). Co-integration and error correction: representation, estimation, and testing. *Econometrica: journal of the Econometric Society*, 251-276.
- Godspeed, I. (2008). Introduction to financial markets, South African Institute of Financial Markets.
- Gupta, J., & Sankalp, S. (2017). The Impact of Global Financial Crisis on Market Efficiency: An Empirical Analysis of the Indian Stock Market. *International Journal of Economics and Finance*, 9(4), 225.
- Hu, L., Han, J., & Zhang, Q. (2018). The Impact of Monetary and Fiscal Policy Shocks on Stock Markets: Evidence from China. *Emerging Markets Finance and Trade*, 54(8), 1857-1872.
- Johansen, S., & Juselius, K. (1990). Maximum likelihood estimation and inference on cointegration—with applications to the demand for money. *Oxford Bulletin of Economics and statistics*, 52(2), 169-210.

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- Keynes, J. M. (1936). *The General Theory of Employment, Interest and Money*. London and Basingstoke: Macmillan
- Khalid, W., & Khan, S. (2017). Effects of macroeconomic variables on the stock market volatility: the Pakistan experience. *Global Journal of Management and Business Research*.
- Khan, W. A., Javed, M. A., Shahzad, N., Sheikh, Q., Saddique, S., Riaz, M., & Batool, S. (2014). Impact of Macroeconomics variable on the Stock Market index; A Study from Pakistan. *International Journal of Accounting and Financial Reporting*, 4(2), 258-272.
- Khan, W. A., Javed, M. A., Shahzad, N., Sheikh, Q., Saddique, S., Riaz, M., & Batool, S. (2014). Impact of Macroeconomics variable on the Stock Market index; A Study from Pakistan. *International Journal of Accounting and Financial Reporting*, 4(2), 258-272.
- Khodaparasti, R. B. (2014). The role of macroeconomic variables in the stock market in Iran. *Polish journal of management studies*, 10(2),54-64.
- Lawal, A. I., Somoye, R. O., Babajide, A. A., & Nwanji, T. I. (2018). The effect of fiscal and monetary policies interaction on stock market performance: Evidence from Nigeria. *Future Business Journal*, 4(1), 16-33.
- Ofori-Abebrese, G., Amporfu, E., & Sakyi, D. (2016). Do economic policy decisions affect stock market development in Ghana?.*Botswana Journal of Economics*, 14(1), 33-51.
- Phillips, P. C., & Perron, P. (1988). Testing for a unit root in time series regression. *Biometrika*, 75(2), 335-346.
- Sede, I. P., & Omorokunwa, O. G. (2015). The impact of fiscal and monetary policy on stock market returns in Nigeria. *Journal of Resourcefulness and Distinction*, 10(1), 1-12.
- Thanh, T. T. T., Thuy, L. P., Anh, T. N., Do Thi, T., & Truong, T. T. H. (2017). Empirical Test on Impact of Monetary Policy and Fiscal Policy on Vietnam Stock Market. *International Journal of Financial Research*, 8(2), 135.