Research Article

MONETARY VARIABLES IN THE DETERMINATION OF STOCK PRICE MOVEMENTS IN NIGERIA

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Abstract
This study critically examined the long and short run effect of monetary policy variables as determinants of stock price movements in Nigeria. Different studies have proffered different levels and directions of impact between the monetary policy variables and stock price movement and stock market performance in many countries. The difficulty in generalizing the result of their findings in every economy makes it significant to consider the peculiarities and economic realities of any country in concluding this relationship. This study therefore, observed the effect of money supply (M3), interest rate and exchange rate on stock price movement in Nigeria, seeking to know the direction of impact between the monetary policy variables and stock price movements. The study adopted the ex post facto research design to collect secondary data from the Central Bank of Nigeria (CBN) Statistical Bulletin and World Bank data indicator site for the period 1994-2019. The data was on All Share Index (ASI) as proxy for stock market price; and monetary policy variables proxy by money supply (M3), exchange rate and interest rate. Employing the unit multiple regressions (OLS), ADF and Granger causality tests, the study found as follows: there is a unidirectional relationship between the dependent and independent variables. Which is to say that the monetary policy variables exert determining effect on stock price movements in Nigeria? Consequently, the study recommends that the focus of investors should be on the movement of the macroeconomic factors to influence changes in monetary policy; also, the trend of the global macroeconomic variables should be observed so as to prepare for the effect of shocks such as it were during the global economic meltdown; and policy makers also should observe the correlation between stock price movements and monetary policy variables in order to make effective policies for economic development.
Key Words: Monetary variables, Stocks market, Stock price, Shocks, Nigeria.

Introduction

An integral part of a free-market economy is the stock market. This helps corporations to raise capital by selling equity shares and corporate bonds. It allows common investors to participate in the companies ' financial achievements, make profits through capital gains, and earn money through dividends, though losses may also be possible. Although institutional investors and skilled fund managers enjoy some advantages owing to their deep pockets, superior expertise and higher risk-taking skills, the stock market aims to give ordinary people a fair playing field. The stock market serves as a forum by which individuals' savings and assets are channeled into profitable investment propositions. It helps the country in the long run in capital accumulation & economic development.

Guglielmo, Peter and Alaa (2004) argue that a stock market's primary value is that it provides a competitive trading and price-determining process for a range of financial instruments. It is worth noting that stock prices around the world and Nigeria are marked by upward and downward trends that have caused both academic analysts and professional fund managers to be concerned. Although some researchers approached the determinants of the movements in stock prices from a micro perspective (Oniore and Akatugba, 2017; Osakwe and Chukwunulu, 2019), others approached it from a macro perspective (Adaramola, 2011; Victor, Jonathan and Anthony, 2013; Maku and Atanda, 2013).

Interestingly,some studies (Udegbunam and Eriki, 2001; Adaramola, 2011; Victor, Jonathan and Anthony, 2013; Maku and Atanda, 2013; Oniore and Akatugba, 2017; Osakwe and Chukwunulu, 2019) in Nigeria have attempted to provide empirical evidence of the determinants of stock price movements, yet there have been little agreement both in approach and result. Most of the studies took the macroeconomic approach and therefore ended with some macroeconomic determinants, which does not observe the industrial specific factors which the stock market participants see at a glance and consider in the process of investments.Yet some of the studies that took the microeconomic approach like Udegbunam and Eriki (2001) lags behind in time particularly in consideration of the recent global financial crisis.

Given the varying circumstances affecting each stock market setting, however, it is difficult to generalize the findings. This is because each market has its own rules and regulations, country peculiarities, type of investors and other factors which form the basis for its own peculiarity. Consequently, this analysis will be descriptive in its approach, rather than attempting to generalize, to provide quantitative evidence on the relationship between monetary variables and stock price movements in Nigeria. The policy importance of this study cannot be overemphasised as Nigeria has become increasingly an investment destination for most international financial investors as a result of the recent financial sector reforms.

Therefore, the significance of this study lies in its specificity in studying the monetary policy variables that determines the Nigerian stock price movement and how the result will help for financial investment decision so that the country and sector specific factors influencing the upward and downward movements of stock prices can be identified both for research and policy purposes.

Objectives

The main objective of the study is to assess the place of monetary policy variables in the determination of stock price movements in Nigeria. Specifically, the study aims:

1. To determine the effect of money supply on stock price movements in Nigeria.
2. To examine the effect of interest rate on stock price movements in Nigeria.

3. To investigate the effect of exchange rate on stock price movements in Nigeria.

Hypotheses

Ho1: there is no significant effect of Money supply on stock price movement in Nigeria.

Ho2: Interest rate has no significant effect on stock market price movement in Nigeria.

Ho3: there is no significant effect of exchange rate fluctuations on stock price movement in Nigeria.

Literature Review and Theoretical Framework

The concept of monetary policy relates to policies intended to manipulate money and credit supply, quantity and direction to achieve the desired economic goals. According to Folawewo and Osinubi (2006), it is a combination of measures designed to control the demand, availability, and cost of money in an economy, in line with the level of economic activity anticipated. The supervisor of a country's money supply (the central bank) often has the power to regulate the amount of money in the economy in order to manage aggregate demand (Mortimer, 2012).In particular, monetary policy cuts through all monetary authorities' formulated policies and attempts to monitor the money supply and credit conditions in order to achieve broad macroeconomic goals.

To preserve monetary stability, the Central Bank uses deposit money banks to enforce policies that ensure the orderly amount and the economy's growth through necessary adjustments in the level of money supply (Masha, Essien, Musa, Akpan and Abeng, 2004). The banks' reserves are determined by the Central Bank through its diverse monetary policy instruments. These instruments include the cash reserves requirement, liquidity ratio, open market operations, and primary operations to control asset movement. Both of these practices impact the banks in their credit operations, thereby impacting the expense and availability of credit funds. This therefore makes the financial market a useful channel for the implementation of monetary policy.

A stock market is a market where people exchange, at low transaction rates, financial instruments and derivatives. Many of the securities include stocks, bonds, and precious metals. Often the term "market" is used for what are more specifically exchanges, organisations that promote financial securities trading, e.g. a stock exchange or commodity trades. It could be a physical site like the NSE, NYSE, LSE or an online network like NASDAQ. The term "financial markets" is also used within the financial sector only to refer to the markets that are used to raise capital, such as the capital markets for long-term finance, and for short-term financing, the money markets(Ajie, 2006).

The amount of funds accessible on the financial market for mobilization and allocation depends on a number of factors such as disposable income, consumption pattern, price level, financial intermediation, market confidence and integrity. To sum up, only through well-conceived and implemented macroeconomic policies, especially monetary policies, is a robust capital market possible (Ajie and Nenbee, 2010). Consequently, a correlation between monetary policy and stock market performance is expected to exist. Most scholars used stock market all share index as a way of assessing stock market movements and results (Nwakoby and Alajekwu, 2016; Barakat, Elgazzar and Hanafy, 2016; Onyeke, 2016; Adekunle, Alalade and Okulenu, 2016). This is because the index is an indicator monitoring upward and downward movement in the stock market (SEC, 2006).

It is on this note that Ajie and Nenbee (2010) examined the relationship between monetary policy and stock prices on the Nigerian stock exchange market. The data used were money supply, interest rate and stock prices from 1986 to 2008 which were analyzed using the co-

integration and error correction modelling (ECM). The findings showed that both money supply and interest rate had a major impact on stock prices in the short run.

Similarly, Okpara (2010) used the Two Stage Least Squared Method on a set of simultaneous equations to examine the impact of monetary policy on the returns of Nigerian stock markets from 1985 through 2006. The all-share index was study-dependent variable while the monetary policy instruments used were the Treasury bill rate, interest rate, and monetary policy rate. Using the Augmented Dickey Fuller Unit Root Test and Cointegration Test, Vector Error Correction Model, and Forecast Error Decomposition Analysis, data were analysed. The study's result show monetary policy as a significant determinant of long-run stock market returns in Nigeria.

Further study to show the relationship between monetary policy and stock price trends were done by Bissoon, Seetanah, Bhattu-Babajee, Gopy-Ramdhany and Seetah (2016) who employed a panel data from five open countries including Mauritius, London, Trinidad, Australia and Japan, to investigate the impact of monetary policies on stock markets through the period 2004 to 2014. They used interest rate and money supply as explanatory variables which were regressed on stock returns from the selected countries. With the use of a random effect model for the panel regression and a panel vector error correction model, the short term and long term relationship between the variables were studied, and the findings reveal a negative relationship between interest rate and stock return and a direct link between money supply and stock return. In conclusion, they confirm that both in the short and long run monetary variables determine changes in price trend of stock.

Interestingly, Nwakoby and Alajekwu (2016) made a contrasting finding from the other studies reported above. They used the price-based

monetary policies to investigate the effect of monetary policies on stock market performance in Nigeria from 1986 to 2013. They used the all Share Index as the indicator of stock market performance and monetary policy rate, Treasury bill rate, lending interest rate, liquidity ratio and deposit rate as the explanatory variables. Using the co-integration test the result indicates a long run relationship between monetary policy and stock market performance in Nigeria. In further explanation, the Johansen co-integration, OLS and granger causality tests showed that monetary policy has the potential (53%) to influence the stock market, but the causality analyses showed that monetary policy cannot influence stock market performance but rather stock market performance has influenced the direction of monetary policy in Nigeria through lending and deposit rates.

In agreement with Nwakoby and Alajekwu (2016), Onyeke (2016) investigated the impact of monetary policy on stock returns in Nigeria using a monthly time data from January 2003 to June 2014, with consumer price index, inter-bank rate, open buy-back, Treasury bill rate, and exchange rate as the explanatory variables and the all share index as the dependent variable. The estimated results of their study revealed that monetary policy variables did not have a significant impact on the prices of stock in Nigerian equity market.

In relation to Nwakoby and Alejekwu (2016) as well as Onyeke (2016) is seen in earlier study in Bangladesh by Rifat (2015) who used monthly data from January, 2003 through December, 2013 to investigate the extent to which monetary policy tools such as inflation, real output, money supply, exchange rate can explain stock market returns. Their study employed the Johansen Cointegration test, Vector Error Correction, and Vector Autoregressive Model to conclude that there is no significant relationship between monetary policy instruments and stock market in Bangladesh.

Further, Aliyu (2010) singled out the relationship between inflation and the stock market both in Nigeria and Ghana, and employed the generalized autoregressive conditional heteroskedasticity (GARCH) model in examining impact of inflation on stock market returns and volatility. The study used monthly time series nominal stock return and inflation rate data from Nigeria and Ghana from 1998 to 2010. For Nigeria, the result of their study shows weak support for the hypothesis which states that bad news exerts more adverse effect on stock market volatility than good news of the same magnitude; and for Ghana, it was a strong opposite. In conclusion, they assert that inflation rate and its three-month average were found to have significant effect on stock market volatility in the two countries.

Reacting to Aliyu (2010), Nkoro and Uko (2016) investigated the relationship between exchange rate, inflation volatility and stock prices movements in Nigeria. Using time series quarterly data from 1986Q1-2012Q4,the volatilities of exchange rate and inflation were calculated using standard GARCH(1,1) models. Their findings nevertheless, contrasted that of Aliyu as they found a negative relationship between stock market prices volatility and exchange rate and inflation volatility in Nigeria.

Theoretical Framework
Each economy's aim is to achieve basic economic objectives such as job creation, price stability and economic development. In Ajie and Nenbee (2010) it is noted that selecting a monetary policy target variable involves some theoretical hypothesis about the interrelationship between the target variable and the ultimate target variable. Which is the basis of this study hinging its discourse on the ***Discounted Cash Flow Model***, which posits that stock prices are equal to the present value of expected future net cash flows.

Consequently, monetary policy will then play a pivotal role in deciding equity returns either by adjusting the discount rate used by market participants or by manipulating the perceptions of future economic activity by market players. Both channels of forces are interlinked because more conservative monetary policy typically means both higher discount rates and lower potential cash flows (Thorbecke, 1997; Ekwe, 2018). Monetary policies that decrease monetary aggregates (contractionary monetary policy) would then be related to lower asset prices, due to the resulting higher discount rate for the projected cash flow stream and/or lower potential economic activity. On the other hand, an expansionary monetary policy can generally be seen as a favorable business cycle because it is correlated with low interest rates, higher economic growth and higher income for the companies in the economy.

Therefore, investors in the stock market place a high interest in recognizing business dynamics from the monetary authority standpoint as indicated by shifts in central bank policy indicators. Finance theorists relied on the reactions to changes in monetary policy when analyzing trends in asset prices (Patelis, 1997). So, fluctuations in the exchange rate, interest rate or money supply may influence the trends in the stock market, which has therefore prompted the need to find out if and to what extent, monetary policy determines the trends of the stock price movements in Nigeria.

Methodology
The ex-post facto research design is used in the study as it is known for its strength in enabling the collection of already existing secondary data without manipulating or altering the figures. The study obtained the secondary data from the Central Bank of Nigeria (CBN) Statistical Bulletin and World Bank data indicator site. The data for the period 1994 to 2019 were collected to cover the following variables:

All Share Index (ASI): obtained from Nigeria Stock Exchange market,

Exchange Rate (EXCHR): Nigerian Naira to US dollar measured as Monthly Average Official Exchange Rate of the Naira,

Real Interest Rate (INTR): the lending interest rate adjusted for inflation as measured by the GDP deflator,

Broad Money Supply (M3): the sum of currency outside banks; demand deposits other than those of the central government; the time, savings, and foreign currency deposits of resident sectors other than the central government; bank and traveler's checks; and other securities such as certificates of deposit and commercial paper.

The all share index (ASI) is the dependent variable and proxy for the stock price movements, while the monetary variables expected to explain the changes in the all share index are exchange rate, interest rate and money supply. The model adopted in this research is the multiple regression approach since all the independent variables are indicators of monetary policy and therefore explained in one model.

Having established what the discounted cash flow model holds as the role of monetary policy in determining price movements, the study also observed that previous studies (Ajie and Nenbee, 2010; Rifat, 2015; Barakat, Elgazzar and Hanafy, 2016; Bissoon, Seetanah, Bhattu-Babajee, Gopy-Ramdhany and Seetah, 2016 and Adekunle, Alalade, and Okulenu, 2016) have used either one or two of these variables, or any of it in combination with other macroeconomic variables. Therefore, to confirm or refute their findings and add to knowledge, through the achievement of this study's objectives, the model is modified thus:

$ASI = f(M3, INTR, EXCHR)$

The equation form of the model is thus:

$ASI = \alpha_0 + \beta_1 M3 + \beta_2 INTR + \beta_3 EXCHR + \mu$

Where:

ASI = All Share Index of the Nigerian Stock market.

$M3$ = broad money supply.

$INTR$ = Interest rate.

$EXCHR$ = exchange rate.

α_0 = constant

β_{1-3} = the coefficients of the independent variables.

The upward movement of each of the variables under examination will occur if the coefficient of the time variable (t) which is β_1 is positively significant. The negative but significant value of the coefficient of the squared time variable (β_1) will imply decelerating movement of the variables while stagnation of the variables will occur if the coefficient of the time variable (t) is not significant. The granger causality test was applied to test whether any of the independent variables determines the movement of ASI or ASI tends to influence the formulation of monetary policy in Nigeria. This is represented as follows:

ASI granger cause EXCHR or EXCHR granger cause ASI

ASI granger cause M3, or M3 granger cause ASI

ASI granger cause INTR, or INTR granger cause ASI

Method of Data Analysis
In summary, the study employed the following econometric analytic models: multiple regression, ADF and Granger causality.

Result and Findings
The data used for this study is depicted in the table 1 (See appendix 1).

The OLS result reveals a positive relationship (104.7741) between exchange rate and All share index, which means that any upward movement in exchange rate will result to the same movement in the all share index. Again, interest rate has positive impact on all share index, meaning that a one unit rise in interest rate leads to 276.8449 unit rise in all share index. Also, money supply

showed the same trend with a positive impact on all share index of a unit value 244.7971.

Table 2: OLS Result

Dependent Variable: ASI
Method: Least Squares
Date: 07/23/20   Time: 10:47
Sample: 1994 2019
Included observations: 26

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	950.2613	5509.295	0.172483	0.8646
EXCHR	104.7741	27.48608	3.811896	0.0010
INTR	276.8449	216.7963	1.276982	0.2149
MS_M3_	244.7971	120.2896	2.035066	0.0541

R-squared	0.507928	Mean dependent var	22115.67
Adjusted R-squared	0.440828	S.D. dependent var	13884.27
S.E. of regression	10382.35	Akaike info criterion	21.47424
Sum squared resid	2.37E+09	Schwarz criterion	21.66779
Log likelihood	-275.1651	Hannan-Quinn criter.	21.52998
F-statistic	7.569645	Durbin-Watson stat	0.948911
Prob(F-statistic)	0.001173		

Altogether, the variables are responsible for 44.08% variation found in all share index, meaning that all jointly impacted stock price movements (F-statistics = 7.569645). The result of the Augmented Dickey-Fuller Unit Root Test is presented in table 3 below.

Table 3 Augmented Dickey-Fuller Unit Root Test

	Lag	ADF Test Statistic	Critical Values		
Variables	SCI	Level	1%	5%	Remarks
ASI	1	-1.885027	-3.724070	-2.986225	Stationary
INTR	3	-2.089619	-3.769597	-3.004861	Stationary
MS(M3)	3	-3.114492	-3.724070	-3.286225	Stationary
EXCHR	6	-0.406227	-3.737853	-2.991878	Stationary

The ADF statistic of all the series is more negative than the 5 percent critical value at level difference which implies that the series are differenced once for them to be stationary. They are therefore said to be integrated of order one I (1). And when all the series are integrated of order one, I (1) and a linear combination of the variables are integrated of order zero, I (0), the variables are said to be cointegrated. Since the order of integration of the variables has been established to be same, the researchers therefore test for cointegration as presented in table 4.
The result in table 4 shows that there are three cointegrating equations which implies that there is existence of long run equilibrium between ASI, EXCHR, INTR and MS (M3). Therefore, the researcher is now informed of the need to find the direction of causality between the variables, using the pair wise granger causality test. The result of the c test is presented in table 5 as follows:
The result of the granger causality test shows that there is unidirectional causality relationship between exchange rate and all share indexes. It also shows a unidirectional causality relationship between interest rate and all share indexes as well as money supply (M3) and all share index. Therefore, it could be said that monetary policy variables determine the movement of stock price in the Nigerian stock market. In other words, policy makers can use the monetary policy variables to control the price of stock in the

Nigeria stock market for the development of the economy.

From the result of the analysis therefore, it is established that the movement of the all share index which represents the stock price in the study is determined by the movement of the monetary policy variables namely exchange rate, interest rate and money supply.

Table 4: Johansen Cointegration Test
Sample (adjusted): 1996 2019

Series: ASI EXCHR INTR MS(M3)
Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.948659	126.3949	47.85613	0.0000
At most 1 *	0.795840	61.07106	29.79707	0.0000
At most 2 *	0.688932	26.11629	15.49471	0.0009
At most 3	0.019174	0.425929	3.841466	0.5140

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level

Table 5 Pairwise Granger Causality Tests

Date: 07/23/20   Time: 14:24
Sample: 1994 2019
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
EXCHR does not Granger Cause ASI	24	1.17044	0.3316
ASI does not Granger Cause EXCHR		1.08110	0.3592
INTR does not Granger Cause ASI	24	0.02408	0.9762
ASI does not Granger Cause INTR		1.02162	0.3790
MS_M3_ does not Granger Cause ASI	24	1.89071	0.1783
ASI does not Granger Cause MS_M3_		0.30203	0.7428

This goes contrary to the findings of Rifat (2015), Nwakoby and Alejekwu (2016) and Onyeke (2016) who argued that there is no significant relationship between monetary policy variables and stock price movement both in Nigeria and Bangladesh. Rather, Nwakoby and Alajekwu (2016) assert that contrastingly, stock market performance influences the formulation of monetary policy in Nigeria. This goes to say that the influence and impact of monetary policy variables on the stock price movement could be country specific and determined by country's economic realities. This conclusion is made based on the findings of this study that monetary policy variables determines stock price movement in Nigeria, which confirms previous findings by Ajie and Nenbee (2010) who concluded that interest rate and money supply have impact on stock price in the short run; Okpara (2010) concluded that monetary policy is a significant determinant of long-run stock market returns in Nigeria and finally, Bissoon, *et al.* (2016) concluded that both in the short and long run, monetary variables determine changes in price trend of stock.

Policy Implications
The findings from this study make it evident that the Nigerian stock market and price movement specifically, is very sensitive to domestic

macroeconomic factors, and more specifically, the monetary policy realities. Hence, the following policy recommendations:

1. The impact of domestic macroeconomic factors on the monetary policy variables cannot be ruled out. Therefore, it suggests that Nigerian investors should focus and study the movement and significance of the macroeconomic factors in order to make wise investment decisions that can improve their portfolio performance.

2. Again, the fact that foreign exchange realities have a significant impact on stock price movement in Nigeria implies that the Nigerian stock market is also very sensitive to international economic instability. Therefore, investors in the Nigerian stock market should observe the trend of the global macroeconomic variables in order to cushion the effect of global economic crises such as the 2007 and 2009 as well as the Covid 19 pandemic global economic impact.

3. Finally, it is recommended that policy makers in Nigeria should look out for the correlation between stock price movements and monetary policy variables such as interest rate, exchange rate and money supply in the process of formulating monetary policies. When this is done, it will enable sufficient and timely adjustment of the Nigerian stock market for the benefit of the nation's economic.

References

Adaramola, A.O. (2011). The impact of macroeconomic indicators on stock prices in Nigeria. *Developing Country Studies,* 1 (2): 1-15.

Adekunle, O. A., Alalade, Y. S. A. and Okulenu, S. A. (2016). Macro-economic variables and its impact on Nigerian capital market growth. *International Journal of Economics and Business Management,* 2 (2): 22 – 37.

Ajie, H. A. and Nenbee, S. G. (2010). An econometric analysis of monetary policy and stock prices in Nigeria: 1986-2008.*International Journal of Economic Development Research and Investment,* 1 (1): 175 – 192.

Aliyu, S. U. R. (2010). Does inflation have an impact on stock returns and volatility? Evidence from Nigeria and Ghana. MunichPersonal RePEc Archive (MPRA) Paper No. 30091. Available at https://mpra.ub.uni-muenchen.de/30091/1/MPRA_paper_30091.pdf. Retrieved on 2oth July, 2020.

Barakat, M. R., Elgazzar, H. S. and Hanafy, K.M. (2016). Impact of macroeconomic variables on stock markets: Evidence from emerging markets. *International Journal of Economics and Finance,* 8 (1): 195 – 207.

Bissoon, R., Seetanah, B., Bhattu-Babajee, R., Gopy-Ramdhany, N. and Seetah, K. (2016). Monetary policy impact on stock return: Evidence from growing stock markets. *Theoretical Economics Letters,* 6: 186-1195.

CBN (2010). Statistical bulletin Part A. Available at https://www.cbn.gov.ng/OUT/2010/PUBLICATIONS/STATISTICALBULLETINS/2009/PartA/TableA.5.7.1.xls. Retrieved on 21st July, 2020.

CBN (2019). Statistical bulletin. Available at https://www.cbn.gov.ng/out/2019/publications/statisticalbulletins/2019/tableA.4.2.1.xls. Retrieved on 21st July, 2020.

Ekwe, E. I. (2018). The Impact of Monetary Policies on Nigeria's Unemployment: Lessons for Poverty Reduction in Nigeria. *Equatorial Journal of Finance and Management Sciences*, 3 (1):1-16.

Folawewo, A. O. and Osinubi, T. S. (2006). Monetary policy and macroeconomic instability in Nigeria: A rational expectation approach. *Journal of Social Sciences,* 12 (2): 93- 100.

Guglielmo, M. C., Peter, G. A. H. and Alaa, M. S. (2004). Stock market development and economic growth: The causal linkage. *Journal of Economic Development*, 33 (29): 201-213.

Maku, O.E. and Atanda, A.A. (2013). Determinants of stock market performance in Nigeria: Long-run analysis. *Journal of Management and Organizational Behaviour,* 1 (3): 1-17.

Masha, S. N., Essien, M. L., Musa, D., Akpan, B. and Abeng, M.O. (2004). Theoretical issues in financial intermediation, financial markets, macroeconomic management and monetary policy. In Nnanna, O.J., Englama A. and Odoko, F.O. (eds), *Financial markets in Nigeria.* Lagos: Central Bank of Nigeria Publication, 7-27.

Mortimer, R. (2012). Monetary policy explained. *Economic Basics,* Available at http://romeconomics.com/monetary-policyexplained/ Retrieved on 19th July, 2020.

Nkoro, E. and Uko, A. K. (2016). Exchange rate and inflation volatility and stock prices volatility: Evidence from Nigeria, 1986-2012. *Journal of Applied Finance & Banking,* 6 (6): 57-70.

Nwakoby, C. and Alajekwu, U. B. (2016). Effect of monetary policy on Nigerian stock market performance. *InternationalJournal of scientific research and management,* 4 (9): 4530-4442.

Okpara, G. C. (2010). Monetary policy and stock market returns: Evidence from Nigeria. *Journal of Economics,* 1 (1): 13-21.

Oniore, O. J. and Akatugba, D. O. (2017). Impact of monetary policy on stock market prices in Nigeria. *Journal of Economics, Management and Trade,* 19 (4): 1-11

Onyeke, C. E. (2016). Impact of monetary policy on stock returns in Nigeria. *Middle-East Journal of Scientific Research,* 24 (5): 1778-1787.

Osakwe, A. C. and Chukwunulu, J. I. (2019). Monetary policy and stock market performance in Nigeria. *EPRA International Journal of Research and Development (IJRD),* 4 (5): 58-65.

Patelis, A. (1997). Stock return predictability and the role of monetary policy. *Journal of Finance,* 52: 1951-1972.

Rifat, A. (2015). Impact of monetary policy on stock price: Evidence from Bangladesh. *Journal of Investment and Management,* 4 (5): 273-284.

Securities and Exchange Commission (SEC) (2006). *Capital Market Bulletin*, August, pp. 15.

Thorbecke, W. (1997). On stock markets returns and monetary policy.*Journal of Finance, 76,* 635-54.

Udegbunam, R. I. and Eriki, P. O. (2001). Inflation and stock price behavior:

Evidence from Nigerian stock market. *Journal of Financial Management and Analysis,* 14 (1):1-10.

Victor, A. M., Jonathan, E. O. and Anthony, O. (2013). Determinants of stock price movements in Nigeria: Evidencefrom monetary variables. *Journal of Economics and Sustainable Development,* 4 (14): 61-66.

World bank (2019). World development indicator: Nigeria. Available at https://data.worldbank.org/indicator/FM.LBL.BMNY.ZG?locations=NG. Retrieved on 21st July, 2020.