

Evaluation of the Impact of Macroeconomic Variables on Stock Market Performance in Nigeria

Cordelia Onyinyechi Omodero¹ & Sunday Mlanga²

¹Department of Accounting, College of Management Sciences, Michael Okpara University of Agriculture, Umudike, Umuahia, Abia State, Nigeria

²Department of Accounting, Business Administration, Banking & Finance Faculty of Management and Social Sciences, Alex Ekueme Federal University Ndufu-Alike Ikwo, Ebonyi State, Nigeria

Correspondence: Cordelia Onyinyechi Omodero, Department of Accounting, College of Management Sciences, Michael Okpara University of Agriculture, Umudike, Umuahia, Abia State, Nigeria.

Received: March 19, 2019

Accepted: April 11, 2019

Online Published: April 15, 2019

doi:10.11114/bms.v5i2.4208

URL: <https://doi.org/10.11114/bms.v5i2.4208>

Abstract

Stock market is an essential part of a nation's economy and requires adequate evaluation of all factors that militate against its performance. This study investigates the role of macroeconomic variables in determining the stock market performance in Nigeria using annual time series data covering a period from 2009 to 2018. These data have been sourced from the World Bank Development Indicators, International Monetary Fund and CBN Statistical Bulletin. The results from the regression analysis indicate that exchange rate and interest rate do not have significant impact on share price index while inflation rate exerts a significant negative influence on share price index. On the contrary and in line with the concept of GDP and stock market performance, GDP significantly and positively impacts on share price index. The study among others suggests that the growth of the economy should be maintained to keep stock market flourishing while macroeconomic variables such as inflation, interest rate and exchange rate should be appropriately regulated by the relevant authorities to curtail all negative influences on stock market performance.

Keywords: stock market, macroeconomic variables, GDP, inflation, interest rate, exchange rate

JEL Classifications: E44, E31, E43, F31.

1. Introduction

A stock exchange market is an institution that provides a link for buyers and sellers of securities to engage into transaction. Talla (2013) submits that stock exchange is the center of a network of transactions where buyers and sellers exchange securities and also determine their prices. Stock market provides long term funds to listed companies in stock exchanges by pooling in funds from various investors which allow companies to expand their businesses and also provide investors with alternative investment opportunities (Golam, Wali, Ashraful, Alam & Khan, 2017). Stock market is the engine of an economy which mobilizes capital for corporate organizations and offers investment options to the national, international, institutional and individual investors who usually aim at maximizing their returns and wealth (Nijam, Ismail & Musthafa, 2015). Stock market plays a vital role in the mobilization of capital in evolving and industrialized countries, leading to the growth of industry and commerce of a country, which is the resultant effect of policies on liberalization and globalization embraced by most developing and advanced governments. In all emergent economies, stock markets portray the true picture of the financial health of the economy such that pressures from macroeconomic factors on stock market returns are usually evaluated to properly guide investors and other market players.

However, the presence and volatility of macroeconomic factors provide an indication to stock market participants to anticipate a higher or lower return when investing in a stock. The variations in macroeconomic variables can significantly impact on stock market prices. The influences of macroeconomic variables on stock market arouses the interest of both the economists and investors (Barakat, Elgazzar & Hanafy, 2016). This interest helps to get the attention of policy makers who help to forecast the overall effects of these economic indicators and incorporate them in their policies. The investors and the entire populace also benefit from it since the awareness will help the investors to make informed investment decisions while the public prepare to adjust for the shock it brings.

The performance of a nation's stock market generally determines the economic performance of the country (Gatsimbazi, jaya, mulyungi & Ochieng, 2018). An increasing share price index overtime indicates stability of the economy while a falling share price index indicates an unstable economy. Several studies have been carried out on the effect of macroeconomic indicators on stock market performance, but there has not been a consensus on the actual consequences of these variables on stock market performance of countries. The volatility in the stock market behaviour in Nigeria reflects in the stock prices which have been unstable. In the late 1990s and early 2000, many investors lost their investments due to the significant fall in the prices of shares. It was a shock that affected both the investors and even the financial analysts who provide professional guide to investors on investment decisions. However, this study is focused on determining the impact of macroeconomic variables on stock market performance in Nigeria.

1.1 Objective of the Study

The general objective of the study is to evaluate the impact of macroeconomic variables on stock market performance in Nigeria.

The study also seeks to achieve the following specific objectives:

1. To determine the extent to which exchange rate affects share price index;
2. To assess the impact of interest rate on share price index;
3. To investigate the influence of inflation rate on share price index;
4. To establish the effect of Gross Domestic Product (GDP) on share price index.

1.2 Hypotheses

To pursue the above research objectives, the following null hypotheses have been formulated:

Ho1: Exchange rate does not have significant impact on share price index;

Ho2: Interest rate does not significantly influence the share price index;

Ho3: The inflation rate does not have significant impact on share price index;

Ho4: Gross domestic product does not significantly affect the share price index.

2. Literature Review

The literature review for this study has been divided into three phases which comprises the conceptual framework, theoretical and empirical reviews.

2.1 Conceptual Framework

The examination of theoretical and empirical literatures shows that the following macroeconomic variables can potentially influence the stock market performance. These variables include: the exchange rate, interest rate, inflation rate and Gross domestic product (GDP). In view of the above mentioned variables, the conceptual framework is summarized below:

Independent variables

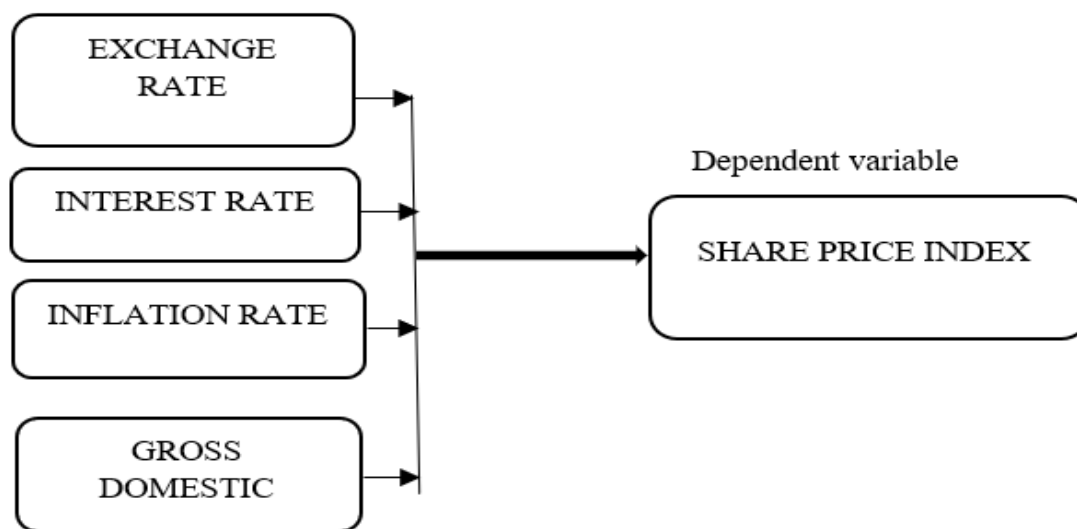


Figure 1. The conceptual model

Source: Authors' Desk Research, 2019

2.1.1 Exchange Rate and Stock Market Performance

Exchange rate is the value of one currency for the purpose of conversion to another. Exchange rate movements greatly affect the stock market returns due to its information content to the investors. Currency volatility affects stock returns and when it appreciates, especially if it is an export-oriented country, it makes the exports less attractive thereby harming the domestic stock market. Under this scenario, the quoted companies doing the export in the country become less profitable and less attractive to investors, thus the stock market loses (Muthike & Sakwa, 2012). The frequency of exchange rate fluctuation has a major impact on the financial market (Mechri, Hamad, Peretti & Charfi, 2019). Though the reverse is the case in a situation where the country's currency depreciates.

2.1.2 Interest Rate and Stock Market Performance

The key function of a stock market is to act as a mediator between borrowers and lenders (Issahatu, Ustarz & Domanban, 2013) in obtaining capital at a prevailing interest rate. Stock markets enables lenders (Banks and other financial institutions) to give credit facilities to individuals and firms who in turn use the funds for investment in stocks. The link between stock market and interest rate is a blend of debt and equity financing. If the rate of interest paid by banks to depositors is increased, investors will patronize the banks the more and fewer investors will invest in the stock market (Winful, Sarpong & Sarfo, 2016). This interaction decreases stock market performance as well as the productivity of the economy. On the other hand, high interest rate increases the cost of borrowing and at the same time reduces corporate profit and dividends, thereby affecting share prices of firms.

2.1.3 Inflation Rate and Stock Market Performance

Increase in inflation rate increases the cost of living which shifts scarce resources from investment in stocks to household consumption. Inflationary economic situation results to decrease in the demand for investment in stocks. There is always a negative correlation between inflation and stock market performance. Inflation is not good for any economy because it affects all the segments, misrepresents prices and threatens the clear relationship that is essential to exist between value and price of a product or service (Gurioveleen & Bhatai, 2015). The relationship between inflation and stock market performance can be positive or negative depending on whether the economy is confronted with foreseen or unforeseen inflation (Talla, 2013). If the inflation is anticipated, an increase in prices would result to increase in the firms' earnings which would lead to paying more dividends and hence increase the price of the firms' stocks. However, if inflation is unexpected, an increase in prices would increase cost of living which consequently shifts resources from investments to consumption thereby having negative effect on stock market prices.

2.1.4 Gross Domestic Product and Stock Market Performance

Gross domestic product (GDP) gives a comprehensive score card about the overall health of an economy. Thus, investors are very much concerned about a nations GDP report in every investment decision. Positive economic growth of a country is usually shown in the size of the GDP which helps to boost corporate profits as well as stock market performance (Mburu, 2015). This implies that a dwindling economic growth leads to a negative effect on stock market performance.

2.2 Theoretical Review

Arbitrage Pricing Theory (APT) and Efficient Market Hypothesis are the theories underpinning this study.

2.2.1 Arbitrage Pricing Theory (APT)

This study is supported by the Arbitrage Pricing Theory which explains the relationship between stock prices and macroeconomic variables (Ross, 1976; Chen, Roll & Ross, 1986). There are various empirical evidences revealing that macroeconomic factors are associated with stock market performance. According to Naik and Padhi (2012), the relationship of some macroeconomic variables with stock prices varies from market to market and can change depending on the periods under consideration. Ross (1976) submits that the primary influences on stock returns usually emanate from macroeconomic forces such as: inflation rate, interest rate, exchange rate, shifts in risk premiums, industrial production and the level of economic growth. Chen et al. (1986) believe that individual stock depends on both expected and unexpected macroeconomic variables which invariably determine the return realized by investors.

2.2.2 The Efficient Market Hypothesis

The efficient market hypothesis is linked with Fama (1970) who first made use of the term "efficient market". Fama (1970) defined efficient market as a market where stock prices always reflect all available information. The efficient market hypothesis are in three forms which include: the weak form, semi-strong form and the strong form. This study finds the semi-strong form more suitable because in this market, stock prices reflects all publicly available information. This is why stock prices fluctuates because all macroeconomic variables affecting a firm's stock must be evaluated to determine its share price under the semi-strong form of efficient market condition. Information on macroeconomic variables are usually in the public domain through publications by the World Bank, International Monetary Fund and Central Banks of

nations. Therefore, companies operating in a particular industry can be easily monitored and share price cannot be inflated to make profit since the information about the industry is known by everyone. Moreso, investors normally make wise and well informed investment decisions to avoid investment losses resulting from lack of information.

2.3 Empirical Review

The empirical review is a make-up of studies from different countries in the world where varying time periods, statistical tools and macroeconomic indicators were applied to assess of the impact of macroeconomic factors on stock market performance. Therefore, the findings differ depending on the economic environment studied, macroeconomic factors used and the time periods covered.

Nopphon (2012) study was a total contradiction and deviation from the general belief that macroeconomic variables affect stock market performance. Using Thailand as a case study, the study covered a period from 2001 to 2010 and found that stock return was a better economic indicator that could predict the behavior of macroeconomic variables. In other words, macroeconomic variables were found ineffective in determining stock market performance in Thailand. Tella (2013) examined the impact of selected macroeconomic factors on stock prices of the Stockholm Stock Exchange (OMXS30) from 1993 to 2012 using ordinary least squares (OLS) technique. The study found evidence that inflation and currency depreciation had significant negative influence on stock prices while interest rate had an insignificant negative impact on stock prices, but money supply exerted an insignificant positive influence on stock prices.

Issahaku et al. (2013) studied the relationship between macroeconomic variables and stock returns in Ghana from 1995 to 2010. The study found the existence of a long run relationship between stock returns and the independent variables which comprised inflation, money supply and foreign direct investment (FDI). In the short run, a strong relationship also existed between stock returns and interest rate, inflation and money supply. Barno (2014) elongated the study in Ghana by examining the impact of macroeconomic variables on stock market performance in Ghana from 2000 to 2013 using ordinary least squares (OLS) estimation technique. The findings revealed that interest rates and money supply had a significant negative impact on stock market returns while exchange rate had a significant positive effect on stock market returns, but inflation rate had no influence on stock market returns.

Arnes (2014) investigated Istanbul Stock Exchange in Turkey, the G20 economy from 1994 to 2013 using stock indices as proxy for stock market performance. The findings revealed that industrial production had a negative and insignificant impact, thus showing support for efficient market hypothesis which suggests that all information about the industry is in the public domain for investors to make an informed investment decision. The result of the study also revealed that inter-bank lending rate had a significant negative relationship with market returns while the result for the rest of the other variables were inconsistent within the period considered.

Khodaparasti (2014) used multi-regression analysis to assess the effect of macroeconomic variables on the stock market performance in Iran from 2007 to 2011. The outcome of the study indicated that exchange rate and industrial index had significant positive impact on the stock market while inflation exerted an insignificant impact on the stock market performance. Ouma and Muriu (2014) used the ordinary least square (OLS) technique to assess the impact of the macroeconomic variables on stock returns in Kenya from 2003-2013. The findings revealed that money supply and inflation had significant positive impact on stock market returns, while exchange rate had a significant negative influence on stock market returns. However, interest rate did not exert any influence on stock market returns.

Gurioveleen and Bhatai (2015) carried out a study on the impact of macroeconomic variables on Indian Stock Market using manufacturing firms as case study. Several statistical test were run using various economic indicators, however, foreign institutional investors and exchange rate were found significant but with no relationship with average closing prices of manufacturing firms. The study also revealed the existence of weak form of efficient hypothesis in Indian Stock Market due to the fact that the stock market index did not have any relationship with the variables tested for the period covered by the study. Nijam et al. (2015) employed ordinary least square (OLS) method to investigate the impact of macroeconomic variables on stock market performance in Sri Lanka from 1980 to 2012. The findings revealed that stock market index and macroeconomic variables in Sri Lanka had strong relationship. The study also established that GDP, exchange rate and interest rate had significant impact on all share price index while the balance of payment did not exert any influence.

Barakat et al. (2016) studied the impact of macroeconomic variables on stock markets of Egypt and Tunisia from 1998 to 2014. The macroeconomic factor investigated include: consumer price index, exchange rate, money supply and interest rate. The findings revealed that market index had a causal relationship with consumer price index, exchange rate, money supply and interest rate in Egypt while in Tunisia, it was only consumer price index that did not have causal relationship with the stock market index. Winful et al. (2016) investigated the impact of macroeconomic variables on stock market performance of 41 emerging economies using panel data from 1996 to 2011. The study employed four techniques which include: ordinary least squares (OLS) method, dynamic ordinary least squares (DOLS), Newey-West and fully modified

ordinary least squares (FMOLS) estimators. The results indicated that exchange rate depreciation and decrease in consumer price index had negative effects on stock market performance. The study also established that increase in money supply did not have positive impact on stock market performance.

Giri and Joshi (2017) extended the study in India using Auto Regressive Distributed Lag (ARDL) technique and Vector Error Correction Model (VECM) to examine the long run and short run association between macroeconomic variables and the stock prices in India from 1979-2014. The study found a long run relationship among the variables and established that inflation, exchange rate and economic growth had significant positive impact on stock prices while crude oil price affected stock prices negatively. Golam et al. (2017) employed ordinary least squares multiple regression model to examine the effect of macroeconomic variables on stock market performance of South Asian Association for Regional Cooperation (SAARC) countries from 2005 to 2015. The study found evidence that exchange rate, interest rate and foreign currency reserve were all statistically significant in influencing stock market performance of the SAARC countries while inflation and money supply did not exert significant influence on the stock market returns. Khalid and Khan (2017) investigated the effects of interest rates, exchange rates and inflation rates on stock market performance in Pakistan from 1991 to 2017 using ARDL bounds and Error Correction Model (ECM). The findings revealed that interest rate had a significant negative impact on stock market while exchange rate and inflation rate exerted positive influence on stock market index.

Epaphra and Salema (2018) employed monthly panel data of 10 companies listed on the Dar es Salaam Stock Exchange of Tanzania from 2012-2016 to examine the impact of macroeconomic variables on stock prices. The regression result showed that money supply and exchange rate had a positive effect on stock prices while Treasury bill rate exerted a negative influence on stock prices. The study confirmed that inflation rate did not have any impact on the stock prices. Gatsimbazi et al. (2018) extended the study in Rwanda using monthly time series data which spanned for a period of 6 years. The findings revealed that GDP, inflation and exchange rate had significant negative effects on stock market performance while interest rate exerted an insignificant negative influence on stock market performance in Rwanda.

Khan and Khan (2018) evaluated the impact of macroeconomic variables on stock prices in Pakistan using Karachi Stock Exchange as a case study. The study covered a period from 2000 to 2016 and discovered that the stock prices of Karachi Stock Exchange were significantly influenced by money supply, exchange rate and interest rate in the long run while in the short term, all the variables did not have influence but a negative impact was found with the exchange rate. Kolapo, Oke and Olaniyan (2018) assessed the impact of macroeconomic factors on stock market performance in Nigeria from 1986 to 2015 using Autoregressive Distributed Lag (ARDL) bounds technique. The study found evidence that Gross domestic product (GDP) and money supply had significant impacts on stock market performance in Nigeria. The study also established the existence of a long run relationship between macroeconomic fundamentals and stock market performance.

Megaravalli and Sampagnaro (2018) examined the long run and short run impact of macroeconomic indicators on stock markets in ASIAN 3 economies which include: China, India and Japan using monthly time series data from 2008 to 2016. The study found evidence that exchange rate had a significant positive impact on the stock markets in the long run while inflation had an insignificant negative impact on the stock markets. The variables did not have any statistically significant impact on the stock markets in the short run.

2.4 Research Gap

The studies reviewed above were carried out in different economies, which consisted of both emerging and developed economies, and so the results varied. Nopphon (2012) was an outright deviation from the direction of other studies while several other studies made use of macroeconomic variables common in the countries they reviewed. This study is carried out in Nigeria and the most common macroeconomic factors among others selected for this study are the exchange rate, interest rate, inflation rate and gross domestic product. This selection is supported by Arbitrage Pricing Theory (APT) Model which expresses that these variables influence stock prices. The time period is from 2009 to 2018 which shows that the study is about the most recent study covering the immediate past year.

3. Methodology

3.1 Research Design and Method of Data Analysis

The study employs a causal research design which is used to explore the effect of one variable on another variable (Kothari, 2004). This research design is in agreement with this study which aims at establishing the impact of macroeconomic variables on stock market performance in Nigeria. The independent variables include: exchange rate (EXG), interest rate (INT), inflation rate (INF) and Gross domestic product (GDP) while the dependent variable is the share price index (SPI) which is used as proxy for stock market performance in Nigeria. The study covers a period from 2009 to 2018 using annual time series data. The data for SPI were collected from the Central Bank of Nigeria (CBN) Statistical Bulletin,

while the data for EXG, INT, INF and GDP were sourced from the World Bank Development Indicators and International Monetary Fund (IMF). The data were arranged in a spread sheet using excel 2013 software and due to the variation in the data values, all the data were logged to achieve uniformity necessary for the analysis. The study made use of Ordinary Least Squares Technique to perform the multi-regression analysis with the aid of Statistical Package for Social Sciences (SPSS) version 20 while E-views version 9 was used to carry out the trend analysis involving plotting graphs and bar chart. The rejection criterion is at 5% level of significance. If the p-value exceeds 5%, the null hypothesis (Ho) is accepted, but if it is otherwise the Ho is rejected.

3.2 Model Specification

The study adopted the Arbitrage Pricing Theory Model of stock market returns. The model for stock market performance and macroeconomic factors is expressed below:

Stock prices = f (macroeconomic variables).

For the purpose of this study, this model is expressed as follows:

$$\text{LOGSPI} = \beta_0 + \beta_1(\text{LOGEXG}) + \beta_2(\text{LOGINT}) + \beta_3(\text{LOGINF}) + \beta_4(\text{LOGGDP}) + \varepsilon$$

Where

- SPI = All Share Price Index
- EXG = Exchange rate
- INT = Interest rate
- GDP = Gross domestic product
- ε = Error term
- β_0 = Constant
- $\beta_1-\beta_4$ = Regression coefficients

A priori expectation:

$$\beta_1, \beta_2, \beta_3, \beta_4 > 0$$

The economic a priori expectation is that all the independent variables must be greater than zero, showing positive influence on stock market performance.

4. Data Analysis and Interpretations

4.1 Trend Analysis

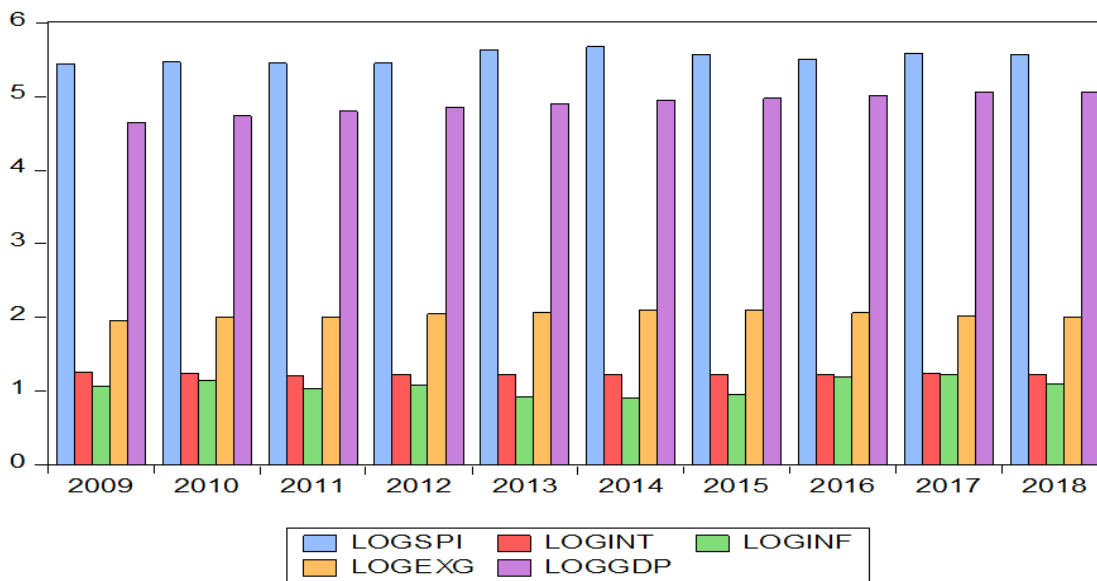


Figure 2. Trend of SPI, EXG, INT, INF and GDP from 2009-2018

Source of Data: Word Bank Development Indicators, IMF and CBN Statistical Bulletin.

Figure 2 above is the trend of the all share price index, interest rate, inflation rate and GDP from 2009 to 2018. The trend shows that the share prices rise as the GDP increases. This confirms the concept that the level of growth in an economy

has a lot to do in determining stock market performance in a country. The fluctuation in the rest of the variables has not been very substantial except the inflation rate.

Table 1. Model Summary of results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.904 ^a	.817	.671	.04828277	2.562

a. Predictors: (Constant), LOGGDP, LOGINF, LOGINT, LOGEXG

b. Dependent Variable: LOGSPI

Authors' computation, 2019.

Table 1 above shows the model summary of the regression result of the data. The correlation (R) value of is 90.4% implying that the relationship between stock market performance and the macroeconomic variables is strong and significant. This confirms that the macroeconomic variables in Nigeria determine share prices to a very large extent. The coefficient of determination which the R Square is 81.7%. The value shows that exchange rate, interest rate, inflation rate and GDP explain up to 81.7% of the variations in share price index while the remaining 18.3% is attributed to other factors the model did not capture. However, the R Square is also very high and significant thus, it reveals that the macroeconomic variables are very strong in influencing the stock market performance in the country. The Durbin-Watson is within the acceptable limit.

Table 2. ANOVA test results

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.052	4	.013	5.583	.044 ^b
	Residual	.012	5	.002		
	Total	.064	9			

a. Dependent Variable: LOGSPI

b. Predictors: (Constant), LOGGDP, LOGINF, LOGINT, LOGEXG

Source: Authors' computation, 2019.

From table 2 above, the value of F statistics is 5.583 with the p-value of $0.04 < 0.05$. Therefore, the result is statistically significant and the model is suitable for the study. The result also implies that all the independent variables jointly influence the stock market performance significantly.

4.2 Test of Hypothesis

Table 3. Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.077	1.952		.552	.605
	LOGEXG	.007	.549	.004	.013	.990
	LOGINT	1.969	1.205	.392	1.635	.163
	LOGINF	-.577	.225	-.737	-2.566	.050
	LOGGDP	.538	.176	.888	3.057	.028

a. Dependent Variable: LOGSPI

Source: Authors' computation, 2019.

H₀₁: Exchange rate does not have significant impact on share price index

The study earlier hypothesized that exchange rate does not have significant impact on share price index in Nigeria. From table 3 above, exchange rate (EXG) t-statistics is 0.013 with the p-value of $0.99 > 0.05$. This result implies that exchange rate does not have significant impact on share price index which reflects the overall performance of stock market in Nigeria. Thus, H₀₁ is accepted and the alternative suggestion which states otherwise rejected. However, this finding is not consistent with the findings of (Khodaparasti, 2014; Nijam, et al., 2015; Giri & Joshi, 2017; Golam et al., 2017; Khalid & Khan, 2017; Epaphra & Salema, 2018; Megaravalli & Sampagnaro, 2018) who found in their studies that exchange

rate significantly and positively influenced stock market performance. The result also contradicts the findings of Khan and Khan (2018) whose study revealed that exchange rate influenced stock prices of Karachi Stock Exchange in Pakistan significantly and negatively in the short run.

Ho2: Interest rate does not significantly influence the share price index

The study initially suggested that interest rate does not have significant influence on share price index in Nigeria. Therefore, the result on table 3 above shows that interest rate (INT) t-statistics is 1.635 with the p-value of $0.163 > 0.05$. This result entails that interest rate does not have any significant impact on share price index, therefore, the Ho2 is hereby accepted and the alternative which states otherwise rejected. This result conflicts with the findings of (Nijam et al., 2015; Golam et al., 2017) whose studies provided evidence that interest rate positively influenced share prices. There is also a discrepancy between this result and the findings of (Arnes, 2014; Barno, 2014) whose studies revealed that interest rate had significant negative influence on stock market performance in Turkey and Ghana respectively.

Ho3: The inflation rate does not have significant impact on share price index

The study earlier suggested that inflation rate does not have significant impact on share price index. However, from table 3 above, the inflation rate (INF) t-statistics is -2.566 with the p-value of $0.05 = 0.05$. This result implies that the inflation rate has significant negative influence on share price index and so, Ho3 is rejected and the alternative suggestion which states that inflation rate has significant influence on share price index is hereby accepted. This result is in agreement with the findings of (Talla 2013; Gatsimbazi *et al.*, 2018) while disagreeing with the findings of (Ouma & Muriu, 2014; Giri & Joshi, 2017) whose studies revealed the inflation rate had significant positive impact on share prices. The result also conflicts with the findings of (Barno, 2014; Golam et al., 2017; Khalid & Khan, 2017) whose studies did not find inflation rate influencing share prices.

Ho4: Gross domestic product does not significantly affect the share price index

The study initially suggested that GDP does not significantly influence share price index in Nigeria. From table 3 above, GDP t-statistics is 3.057 and the p-value is $0.02 < 0.05$ level of significance. This result indicates that GDP significantly and positively impacts on share price index, thus, Ho4 is rejected and the alternative which states otherwise accepted. This result is in harmony with the findings of (Nijam et al. 2015; Giri & Joshi, 2017; Kolapo et al., 2018) while objecting the findings of Gatsimbazi et al. (2018).

5. Conclusion and Recommendations

5.1 Conclusion

The study evaluates the impact of macroeconomic variables on stock market performance in Nigeria from 2009 to 2018 using macroeconomic factors such as exchange rate, interest rate, inflation rate and Gross domestic product. The economic a priori anticipation is that these variables mentioned above will significantly and positive influence the share price index which is used as proxy for stock market performance. However, the statistical evidence reveals that exchange rate and the interest rate do not have significant influence on share price index. Thus, the economic a priori expectation is defeated. The economic implication is that exchange rate and interest rate volatility have been well predicted by the policy makers, investors and the entire public in such a manner that everyone anticipates them and prepares against their effects. This evidence provides support for the semi strong efficient market hypothesis which states that all publicly available information affects share prices. In other words, the semi strong efficient market hypothesis is effective in the Nigeria Stock Exchange.

On the contrast, the economic a priori expectation was also not met in the case of inflation rate because it exerts a significant negative influence on share price index. Inflation is usually not good for any economy, its existence cripples investment as resources are shifted from investment in stocks and are directed to household consumptions which in turn affects stock market performance. However, the economic a priori expectation for GDP is met and GDP has a significant positive impact on share price index. This result supports the stock market concept that growth in the economy improves stock market performance. Appendix 1 below shows that the growth of GDP in Nigeria has been on a steady rise and that gives credence to the positive influence on share price index.

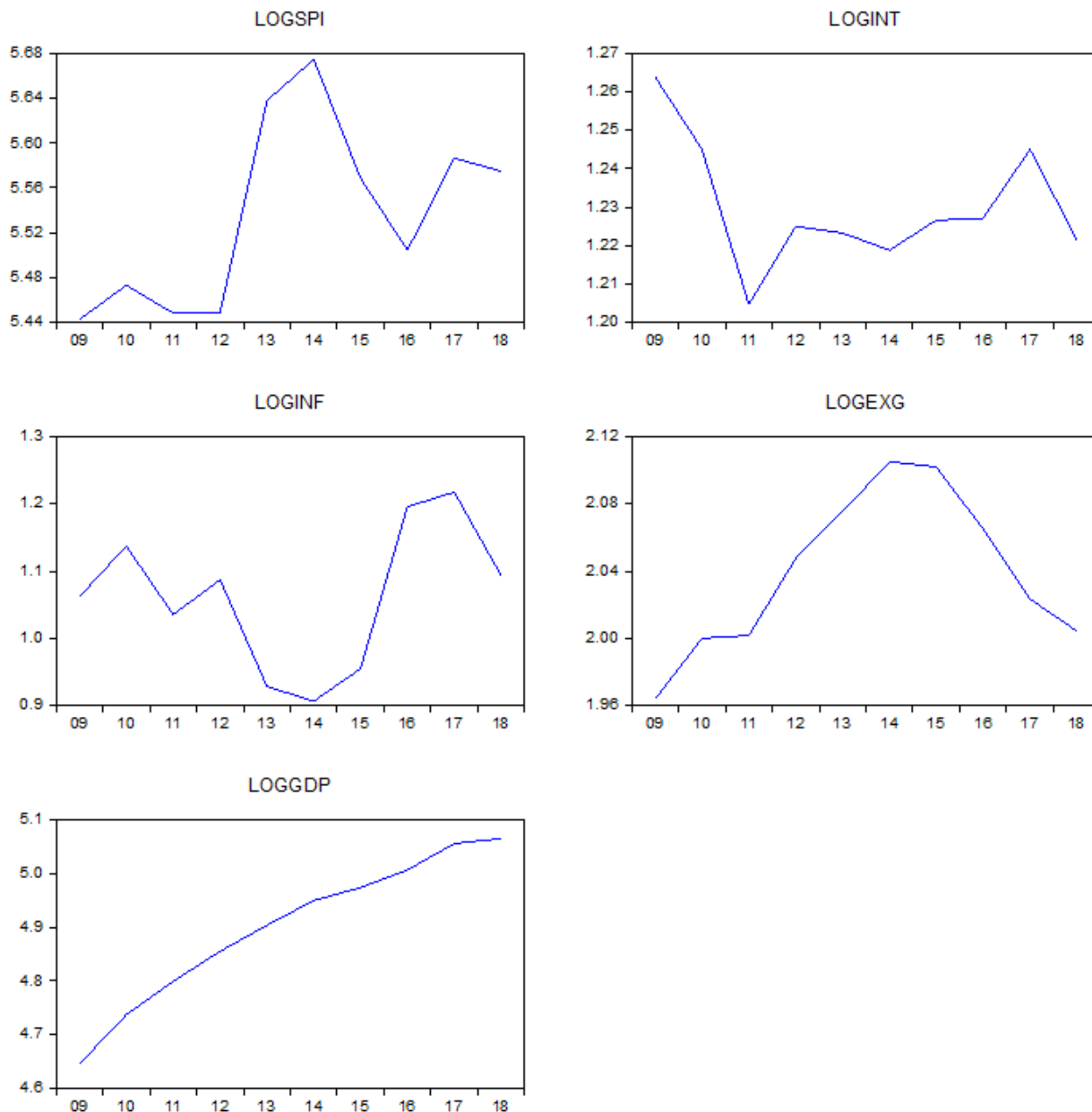
5.2. Recommendations

Based on the findings of the study, the following suggestions are provided:

- The government should try to enhance the value of the local currency in order to ensure that investors always have value for their investments and firms listed on the stock exchange will not continually have their share prices devalued.

- There should be a harmony between the official Central Bank lending rate and that of the Deposit Money Banks in the country. When this is reconciled and kept under check, the volatility of interest rate in the country will reduce and investors will not have to pay so much price for getting credits for investment in stocks.
- The Central Bank of Nigeria should employ the relevant monetary and fiscal tools to control the scourge of inflation in the economy by ensuring an equilibrium between money supply and economic activities. It is obvious that when too much money is being circulated in an economy it ignites inflation which reduces the value of money.
- The economic health of the country which is reflected in the GDP growth should always be monitored by the relevant authorities since GDP determines the performance of the stock market to a large extent.

Appendix 1: Trend of individual variables from 2009 – 2018



Source of Data: World Bank Development Indicators, IMF and CBN Statistical Bulletin.

References

- Arnes, S. K. (2014). *Impact of macroeconomic indicators on stock market performance: The case of the Istanbul Stock Exchange*. M.Sc. Thesis submitted to Copenhagen Business School.
- Barakat, M. R., Elgazzar, S. H., & 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. <https://doi.org/10.5539/ijef.v8n1p195>
- Barno, C. (2014). *The effect of macroeconomic variables on stock market returns in Ghana (2000-2013)*. PhD Dissertation submitted to Walden University Scholar Works.
- Chen, N. F., Roll, R., & Ross, S. A. (1986). Economic forces and the stock market. *Journal of Business*, 59, 383-403. <https://doi.org/10.1086/296344>
- Epaphra, M., & Salema, E. (2018). The impact of macroeconomic variables on stock prices in Tanzania. *Journal of Economic Library*, 5(1), 12-41.
- Fama, E. (1970). Efficient capital markets: A review of theory and empirical work. *The Journal Of Finance*, 25(2), 383-417. <https://doi.org/10.2307/2325486>
- Gatsimbazi, I., Jaya, S., Mulyungi, P., & Ochieng, A. (2018). Effects of macroeconomic variables On stock market performance in Rwanda. Case study of Rwanda Stock Exchange. *European Journal of Economic and Financial Research*, 3(1), 104-125.
- Giri, A. K., & Joshi, P. (2017). The impact of macroeconomic indicators on India Stock Prices: An Empirical analysis. *Studies in Business and Economics*, 12(1), 61-78. <https://doi.org/10.1515/sbe-2017-0005>
- Golam, M., Wali, U., Ashraful, I., Alam, S., & Khan, K. (2017). Effect of macroeconomic variables On stock market performance of SAARC countries. *Asian Economic and Financial Review*, 7(8), 770-779. <https://doi.org/10.18488/journal.aefr.2017.78.770.779>
- Gurioveleen, K., & Bhatari, B. S. (2015). An impact of macroeconomic variables on the functioning Of Indian Stock Market: A study of manufacturing firms of BSE 500. *Journal of Stock & Forex Trading*, 5(1), 1-7.
- Issahaku, H., Ustarz, Y., & Domanban, P. B. (2013). Macroeconomic variables and stock market Returns in Ghana: Any causal link? *Asian Economic and Financial Review*, 3(8), 1044-1062.
- Khalid, W., & Khan, S. (2017). Effects of macroeconomic variables on the stock market volatility: The Pakistan Experience. *International Journal of Econometrics and Financial management*, 5(2), 42-59. <https://doi.org/10.12691/ijefm-5-2-4>
- Khan, J., & Khan, I. (2018). The impact of macroeconomic variables on stock prices: A case study Of Karachi Stock Exchange. *Journal of Economics and Sustainable Development*, 9(13), 15-25.
- Khodaparasti, R. B. (2014). The role of macroeconomic variables in the stock market in IRAN. *Polish Journal of Management Studies*, 10(2), 54-64.
- Kolapo, F. T., Oke, M. O., & Olaniyan, T. O. (2018). Unravelling the impact of macroeconomic Fundamentals on stock market performance in Nigeria: An ARDL-bound testing approach. *Journal of Economics, Management and Trade*, 21(3), 1-15. <https://doi.org/10.9734/JEMT/2018/40177>
- Kothari, C. (2004). *Research methodology: Methods & techniques*, (2nd Ed.). Newage International Publishers, New Delhi, India.
- Mburu, D. M. (2015). *Relationship between exchange rate volatility and stock market Performance*. M.Sc. research project submitted to the University of Nairobi.
- Mechri, N., Hamad, S. B., Peretti, C., & Charfi, S. (2019). *The impact of the exchange rate Volatilities on stock markets dynamics: Evidence from Tunisia and Turkey*. Hal archives. Hal id: hal-01766742v2.
- Megaravalli, A.V., & Sampagnaro, G. (2018). Macroeconomic indicators and their impact on stock Markets in ASIAN 3: A pooled mean group approach. *Cogent Economics & Finance*, 6, 1-14. <https://doi.org/10.1080/23322039.2018.1432450>
- Muthike, S. W., & Sakwa, M. M. (2012). *Can macroeconomic indicators be used as predictors of The stock exchange index trends? A look at the Nairobi stock exchange*. In Scientific Conference Proceedings. Available online at: <http://elearning.jkuat.ac.ke/journals/ojs/index.php/jsdp/article/view/731>.
- Naik, P. K., & Padhi, P. (2012). The impact of macroeconomic fundamentals on stock prices Revisited: Evidence from

- Indian Data. *Eurasian Journal of Business and Economics*, 5(10), 25-44.
- Nijam, H. M., Ismail, S. M. M., & Musthafa, A. M. M. (2015). The impact of macroeconomic Variables on stock market performance: Evidence from Sri Lanka. *Journal of Emerging Trends in Economics and Management Sciences*, 6(2), 151-157.
- Nopphon, T. (2012). Macroeconomic factors of emerging stock market: The evidence from Thailand. *International Journal of Financial Research*, 3(2), 105-114. <https://doi.org/10.5430/ijfr.v3n2p105>
- Ouma, W. N., & Muriu, P. (2014). The impact of macroeconomic variables on stock market returns In Kenya. *International Journal of Business and Commerce*, 3(11), 1-31.
- Ross, S. A. (1976). The Arbitrage Theory of Capital Asset Pricing. *Journal of Economic Theory*, 13, 341-360. [https://doi.org/10.1016/0022-0531\(76\)90046-6](https://doi.org/10.1016/0022-0531(76)90046-6)
- Talla, J. T. (2013). *Impact of macroeconomic variables on the stock market prices of the Stockholm Stock Exchange (OMXS30)*. M.Sc. Thesis submitted to Jonkoping International Business School, Jonkoping University.
- Winful, C. E., Sarpong, D. Jnr., & Sarfo, A. K. (2016). Macroeconomic variables and stock market Performance of emerging countries. *Journal of Economics and International Finance*, 8(7), 106-126. <https://doi.org/10.5897/JEIF2016.0743>

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the [Creative Commons Attribution license](#) which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.