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Full Length Research Paper

Stock Prices, Stock Market Operations and Nigerian Economic Growth: A Granger Causality Modelling

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This study examined stock prices, stock market operations and economic growth in Nigeria using time series from 1980-2010 with the adoption of granger causality modelling to test the direction of granger relationship among the variables. Augmented Dickey Fuller methodology was adapted to test for the stationary of the data used and error correction modelling was adopted. The study showed that the present value of stock price adjust rapidly to changes in interest rate, inflation rate, exchange rate, broad money supply, gross domestic product, market capitalisation and volume of transaction of the Nigeria stock exchange. The lagged value of Error correction model given as 23.9% indicates a feedback of or an adjustment of 23.9% from the previous period disequilibrium of the present level of stock price in the determination of causality between the past level of stock price and the present and past level of the explanatory variables. The study concluded that the activities of the stock market are statistically significant with the stock prices and economic growth. It is recommended that stock prices should be monitored as to prevent volatility in the prices which could drastically affects the performance of the stock exchange market.

Keywords: Stock Price, Stock Market Operations, Economic Growth

INTRODUCTION

The stock market plays a major role in financial intermediation in both developed and developing countries by channelling idle funds from surplus to deficit units in the economy. As the economy of a nation develops, more resources are needed to meet the rapid expansion. Apart from the banking sector which serve as the intermediary between the surplus earners and deficit earners in the economy, the stock market serves as a channel through which savings of the surplus earners are

mobilized and efficiently allocated to achieve economic growth, the allocation of such surplus fund helps in enhancing capacity utilization and promoting productive activities in the economy. The banking system and the stock exchange works together to achieve the macroeconomic objective of the economy, the bank being the custodian of money help through the stock exchange to pool large and long term capital resources through issuing of shares and stocks by industries in dire need of finance for expansion purposes. Thus, the overall development of the economy is a function of how well the stock market performs.

The important of stock market operations and collaborative role of the financial institutions in

determining stock prices have been examined by several researchers. For example Rouseau and Wachtel (2000) in (Riman, 2008) advanced four reasons for the importance of stock market on financial institutions even when equity issuance is a relatively minor source of funds. First, an equity market provides investors and entrepreneurs with a potential exit mechanism. According to them, venture capital investments will be more attractive in countries where an equity market exists than one without an adequately functioning public equity market. Secondly, capital inflows – both foreign direct investment and portfolio investments – are potentially important sources of investment funds for emerging market and transition economies. Thirdly, the provision of liquidity through organized exchanges encourages both international and domestic investors to transfer their surpluses from short term assets to the long-term capital market, where the funds can provide access to permanent capital for firms to finance large, indivisible projects that enjoy substantive scale economies. Thus, given this scenario the importance of domestic resource mobilization cannot be underestimated. Finally, the existence of a stock market provides important information that improves the efficiency of financial intermediation generally.

However the role of the stock market operations and equity prices in determining economic growth needs to be investigated because stock markets had the tendency to reveal information through frequent instability and changes in equity prices. This situation could result to problems for investors which include the tendency to reduce investor's incentives, increases in uncertainty and further exposes market participants to the tendency of conducting costly research in attempt to predict future market behaviour. The question of whether or not stock prices can be predicted by macroeconomic indicators in an economy is of serious concern both to the academics as well as the practitioners all over the world. This line of thought is what researchers in the field of finance refer to as the macroeconomic approach. The effects of stock market operations and stock prices cannot be empirically investigated on economic growth without examining its likely impact on some macroeconomic variables which have links with the growth of any economy.

The focus of the macroeconomic approach is to examine how sensitive are stock prices to changes in macroeconomic variables. This approach maintains that the performance of stock is influenced by changes in money supply, interest rate, inflation rate, exchange rate, external debt, external reserve, economic growth etc. The approach, believing on the economic logic that everything does depend on everything else, stresses the interrelations between sectors as central to the understanding of the persistence and co-movement of macroeconomic time series. In Nigerian, the few empirical evidences produce mixed results. Maku and

Atanda (2009) in (Adaramola 2011) posit that the Nigerian Stock Exchange (NSE) all share index is more responsive to changes in macroeconomic variables herein referred to as external shock. Asaolu and Ogunmakinwa (2010) in Adaramola (2011) maintain that a weak relationship exists between Average Share Price (ASP) and macroeconomic variables in Nigeria. Their findings have not produced mixed result on the interrelationship between stock market operations, stock prices and economic growth. In view of this, the question still remains. To what extent and in what ways can movement in stock prices be determined by changes in macroeconomic variables in Nigeria? Do stock prices affects economic growth in Nigerian? Will the operations of the stock market be determined by stock prices volatility? It is in an attempt to answer these research questions that the study aims at using a granger causality modelling, to examine the relationship between stock market operations, stock prices and some macroeconomic variables on economic growth in Nigeria employing time series data from 1985 to 2011 which capture the adjustment, post adjustment and reform periods in Nigeria. The purpose of the paper to test to whether stock prices granger causes stock market operations and economic growth and vice versa to make an empirical and reliable predictive recommendations. The next section considered the theoretical framework, followed by the literature review. Thereafter, we have methodology and lastly, the empirical result and conclusion.

Theoretical Review

The theoretical review for this study is based on Keynesian Approach to Liquidity Preference. Keynes in his general theory used a new term "liquidity preference" for the demand for money. The three motives suggested by Keynes are: the transactionary demand, precautionary demand and speculative demand which are all germane to this research work. The transaction demand for money according to Keynes, relates to "the need of cash for the current transactions of personal and business exchange". It arises from the medium of exchange function of money in making regular payments for good and services. It depends upon the level of income, interest rate, business turnover e.t.c For this analysis, the oil consumed by the economic agents will be a relevant example.

The precautionary motive relates to "the desire to provide for contingencies requiring sudden expenditures and for unforeseen opportunities of advantageous purchase. The post – Keynesian economists believe that it is also dependent on level of income and inversely related to interest rate.

The speculative demand for money sees money as an

asset that is capable of yielding returns for future benefit. Individuals and businessmen having funds, after keeping enough for transactions and precautions like to make a speculative gain by investing in stock and bond.

Application of Keynes theory

According to Keynes, before an individual nurture the idea of investing, provision for transaction demand would have been made. Therefore, if there is prospect for stock price to increase, household and business owners will incur higher part of their income on transaction in expectation of future gain. That is if the stock price falls, the amount that will be available for investment would increase and this will lead to economic growth through capital accumulation. Theoretically, Keynes reveals an inverse relationship that exists between stock price and economic activities in the country. Therefore, if stock price increases, economic activity will be affected with multiple effects and if stock price decreases, economic activities will smoothly operate with minimum disruptions in the economy.

LITERATURE REVIEW

This section reviews previous studies on the link between stock market and economic growth. For example, in Nigeria, some authors have also attempted to examine the relationship between stock market development and economic growth. For instance, Adam and Sanni (2005) examined the roles of stock market on Nigeria's economic growth using Granger-causality test and regression analysis. The authors discovered a one-way causality between GDP growth and market capitalization and a two-way causality between GDP growth and market turnover. They also observed a positive and significant relationship between GDP growth turnover ratios. The authors advised that government should encourage the development of the capital market since it has a positive effect on economic growth.

Osinubi and Amaghionyeodiwe (2003) also examined the relationship between Nigeria stock market and economic growth during the period 1980-2000 using ordinary least squares regression (OLS). The result indicated that there is a positive relationship between the stock market and economic growth and suggest the pursuit of policies geared towards rapid development of the stock market.

Obamiro (2005) investigated the role of the Nigeria stock market in the light of economic growth. The authors reported that a significant positive effect of stock market on economic growth. He suggested that government should create more enabling environment so as to increase the efficiency of the stock market to attain higher

economic growth.

Ezeoha et al (2009) investigated the nature of the relationship that exists between stock market development and the level of investment (domestic private investment and foreign private investment) flows in Nigeria. The authors discovered that stock market development promotes domestic private investment flows thus suggesting the enhancement of the economy's production capacity as well as promotion of the growth of national output. However, the results show that stock market development has not been able to encourage the flow of foreign private investment in Nigeria.

Abu N. (2009), examined whether stock market development raises economic growth in Nigeria, by employing the error correction approach. The econometric results indicate that stock market development (market capitalization GDP ratio) increases economic growth. He however, recommended the removal of impediment to stock market development which include tax, legal and regulatory barriers, development of the nation's infrastructure to create enabling environment where business can thrive, employment policies that will increase the productivity and efficiency of firms as well as encouraging of the Nigerian Securities and Exchange Commission to facilitate the growth of the market, restore the confidence of stock market participants and safeguard the interest of shareholders by checking sharp practices of market operators.

Ewah et al (2009) appraised the impact of capital market efficiency on economic growth in Nigeria, using time series data on market capitalization, money supply, interest rate, total market transaction, and government development stock between 1961-2004 using multiple regression and ordinary least squares estimation techniques. The result of the study shows that the capital market in Nigeria has the potential to induce growth, but it has not contributed meaningfully to the economic growth of Nigeria because of low market capitalization, low absorptive capacity, illiquidity, misappropriation of funds among others.

Some authors focus on the causal relationship between stock market development and economic growth for example; Hondroyannis et al (2005) reported a bi-directional between stock market development and economic growth. This study is very important because the Nigerian stock market which witnessed a boom in the last few years is now experiencing a meltdown, as market capitalization has declined from over N13trillion in 2007 to N9.918trillion in 2010. The all-share index has also fallen from 57,990.22 points to approximately 24,770.52 points in the same period. Moreover, the confidence of shareholders and investors seems to be eroding. Thus, it is expected that this study would complement the efforts of government and policy makers in reviving the Nigeria stock market and restoring the confidence of

shareholders and other participants in the market. In addition, it is believed that a vibrant and well developed stock market would attract foreign investors and enhance the attainment of higher economic growth.

Review of works that showed links between stock price and other macroeconomic variables includes: for example Smith (1990) did a study on the United States' economy and found that stock prices jump immediately after (and sometimes before) the Federal Reserve announces a cut in the interest rate or discount rate, or Chase Manhattan announces a drop in its prime loan rate. Also, Goswami and Jung (1997), in a study on Korea economy found that stock prices are negatively correlated to long-term interest rates and positively related to short-term interest rate. Chandra (2004) submits that a rise in interest rate depresses corporate profitability and also leads to an increase in the discount rate applied to equity investors; both of which have adverse impact on stock prices, and vice-versa. Therefore a rise in interest rate is expected to impact negatively on the performance of the organization.

(Osamwonyi 2003) opined that supply of money affects economic activities and that is why its control has been the chief function of the central monetary authority of any given economy. Kevin (2000) classifies the supply of money as a leading indicator. M1 refers to currency in circulation plus demand deposits; while M2 is M1 plus near monies, for example, time deposit. The researchers will adopt M2 for this study. Many studies conducted using data from developed countries, came up with the interesting conclusion that money growth affects stock prices adversely (Rozeff 1992). The consensus of opinion in this regard proceeds from the reasoning that money growth, except accompanied by growth in output of goods and services, serves to unleash inflationary spiral on the economy, driving stock prices downwards as a consequence; as rational economic agents diversify their wealth holdings away from financial assets (such as stocks and shares) to real (tangible) assets. This strategy is often adopted to hedge against the erosive effect of inflation on financial assets (Udegbunam and Oaikhenan 2002). Following the widely held view and given the explosive growth in the Nigeria's money supply, we expect stock prices to be adversely and significantly affected by changes in this variable.

Chandra (2004) stated that the effects of inflation rate on stock prices are negatively related and the theoretical postulation states that there is a positive relationship between exchange rate and stock prices. Maku and Atanda (2010) shows that stock prices and depreciating Naira rate are positively related. Exchange is the price of a unit of a given currency in relation to other currencies. The performance and profitability of industries and companies that are major importers or heavy users of imports are considerably affected by the exchange rate of the Naira against major currencies of the world

(Osamwonyi 2003). Exchange rate is a product of a country's external trade and directly related to the balance- of payments. Balance- of- payments deficit and the level of external reserve usually influence exchange rate. There is paucity of literature on the effect of exchange rate on stock price behaviour.

(Chandra, 2004) opined that the growth rate of the Gross Domestic Product (GDP) and the growth rate of the economy have positive relationship. The higher the growth rate of GDP, other things being equal, the more favourable it is for the stock market. Equity prices may rise due to the potential for higher profits from a healthy business climate.

METHODOLOGY AND INTERPRETATION OF RESULTS.

The data requirements for this methodology include secondary information on key Nigerian macroeconomic variables such as stock prices, inflation rate, interest rate, money supply, Gross Domestic Product, exchange rate, market capitalisation and, volume of total transaction of the Nigerian stock exchange. All Data were sourced from various issues of the Statistical Bulletin and Annual Report and Statement of Accounts of the Central Bank of Nigeria. However, data on stock prices were sourced from the Fact Book published by the Nigerian Stock Exchange (various issues). The sample period covers 1985 to 2011, consisting of 26 annual observations for each variable.

The methodology adopted for this study was based on the improvement on the model suggested by Ifuero Osad Osamwonyi and Esther Ikavbo Evbayiro-Osagie (2012) which states as follows:

$$SMI = f (IR, IFR, FD, ER, Ms, GDP) \dots\dots\dots (1)$$

$$SMI = \beta_0 - \beta_1 IR_t - \beta_2 IFR_t + \beta_3 FD_t + \beta_4 ER_t - \beta_5 Ms_t + \beta_6 GDP_t + \mu_t \dots\dots\dots (2)$$

With the variables defined as follows:

- SMI - Stock market index
- IR - Interest Rate
- IFR - Inflation Rat
- FD - Fiscal Deficit
- ER - Exchange Rate
- Ms - Money Supply
- GDP - Gross Domestic Product

The present study modify the model to include the operations of the Nigeria stock exchange as follows

The model can be restated as:

$$SP = f (IR, IFR, ER, Ms, GDP, MC, VTNSE) \dots\dots\dots (1)$$

$$SP = \beta_0 - \beta_1 IR_t - \beta_2 IFR_t + \beta_3 ER_t + \beta_4 Ms_t + \beta_5 GDP_t + \beta_6 MC_t + \beta_7 VTNSE_t + \mu_t \dots\dots (2)$$

With the variables defined as follows:

- SP- Stock Price

IR - Interest Rate
 IFR - Inflation Rate
 ER - Exchange Rate
 Ms - Money Supply
 GDP - Gross Domestic Product
 MC - market capitalisation,
 VTNSE - Volume of total transaction of the Nigerian stock exchange

A priori signs are:

$\beta_1 < 0$, $\beta_2 < 0$, $\beta_3 > 0$, $\beta_4 > 0$, $\beta_5 > 0$, $\beta_6 > 0$, $\beta_7 > 0$

For the method of analysis, this study will employ granger causality to test the direction of causality among the aforementioned variables and ordinary least square to test the overall statistical significance and therefore Error Correction Modeling technique would also be adopted because time series by their nature are non-stationary. There are similar studies that have applied ECM technique with data from other capital markets such as Maysami et al. (2005), Maysami and Koh (2000). Application of the normal OLS regression may yield spurious result. Therefore, this procedure involves determining the time series properties of the data and thereafter specifying an error correction model, which will help in investigating both the short and long run impacts of the identified variables on the stock prices.

DATA ANALYSIS AND INTERPRETATION OF RESULTS

This section provides in detail the analysis of data used in the study and interpretation of the empirical results. The unit root test was performed to confirm the stationarity of data; while the error correction mechanism shows the speed of adjustment of the dependent variable to changes in the independent variables.

Unit Root Test

Non-stationary data produces spurious regression; hence the result may be misleading. Therefore, it is cognizant to establish the stationarity of data. This is carried out using the Augmented Dickey-Fuller (ADF) unit root test. The decision rule is that the ADF test statistic value must be greater than the Mackinnon critical value at 5% and at absolute value.

The table below shows the summary of unit root test conducted on the parameter at level.

Time series data are often assumed to be nonstationary and thus it is necessary to perform a pretest to ensure there is a stationary relationship among variables to avoid the problem of spurious regression. Based on the error correction mechanism, it is necessary for the variables to be of the same order of integration. For the testing of unit roots, the Augmented Dickey-Fuller

(ADF) was used. The result of the ADF to determine the presence of unit roots is reported in Table 1. Interestingly, it can be observed that on application of the ADF test on the level series only Market capitalisation and money supply was not stationary (that is, it contains a unit root) as indicated by the fact that its respective critical value is larger (in absolute terms) than the calculated ADF statistics, thus the null hypothesis of the presence of a unit root could be rejected, as it is integrated of the order one. The remaining variables, stock price is stationary at 2nd difference, interest rate is stationary at 1st and 2nd difference, inflation rate is stationary at 1st and 2nd difference, exchange rate is stationary at 2nd difference, GDP and volume of total transaction are stationary at 2nd difference. The null hypothesis of the presence of unit root in the series was rejected as indicated by the values of their calculated ADF (in absolute terms) statistics which were higher than their critical values. In this direction, we say that their series are integrated of the order zero that is 1(0).

Consequently, the ADF test was applied on the log of the differenced series (MS2) and Market capitalisation (MC) to make them stationary.

Error Correction Mechanism

ECM(-1) involves leading and lagging of the variables while ECM2 introduces short-run dynamism into the long-run equilibrium. The result of the error correction model is presented below:

Interpretation of the ECM and Major Findings

The ECM otherwise known as speed of adjustment is significant with the appropriate sign i.e. negative sign. This can be seen on the ECM that shows ECM value of -0.239. This implies that the present value of stock price adjust rapidly to changes in interest rate, inflation rate, exchange rate, broad money supply, Gross domestic product, market capitalisation and volume of transaction of the Nigeria stock exchange. The lagged value of ECM given as 23.9% indicates a feedback of or an adjustment of 23.9% from the previous period disequilibrium of the present level of stock price in the determination of causality between the past level of stock price and the present and past level of the explanatory variables.

The coefficient of the lagged error-correction term, however, is a short-term adjustment coefficient and represents the proportion by which the long-term disequilibrium (or imbalance) in the dependent variable is being corrected in each short period.

The empirical result showed that there is negative insignificant relationship between stock prices and interest rate. The magnitude of the relationship implies

Table I. SUMMARY OF ADF STATISTICS

Variables	ADF Test Statistic Value			P-value			Remark
	At Level	p-Value	1 st difference	p-value	2 nd difference	P-value	
SP	1.208	0.65			15.16	0.000 **	Stationary at 2 nd difference
IR			5.09	0.004	8.32	0.000 **	Stationary at 1 st and 2 nd difference
IFR			4.21	0.003	4.55	0.002 **	Stationary at 1 st & 2 nd difference
ER	0.079	0.94			4.35	0.002 **	Stationary at 2 nd difference
Ms2			27.46	0.999	1.422	0.99	Not stationary
GDP	0.280	0.914	0.68	0.833	11.98	0.00 **	Stationary at 2 nd difference
MC			1.704	0.999	0.016	0.993	Not stationary
VTNSE	1.63	0.44			9.92	0.000**	Stationary at 2 nd difference
Log(ms2)			3.98	0.006 **			Stationary at level
Log(VTNS E)	4.41	0.02 **					

that a percent increase in interest rate would cause stock prices to fall by 133.0 percent; however, this is statistically insignificant at 5% level of significance using t-test and standard error for decision making. This study corroborate the findings of Chandra (2004) who submits that a rise in interest rate depresses corporate profitability and also leads to an increase in the discount rate applied to equity investors; both of which have adverse impact on stock prices, and vice-versa. Therefore a rise in interest rate is expected to impact negatively on the performance of the organization.

Also, there is positive insignificant relationship between inflation rate and stock prices which imply that increase in inflation rate will bring increase in the stock prices and magnitude of the relationship showed that a percent increase in the inflation rate would result on average to 13.47 percent increase in the growth of stock prices. This study contradicts the findings of Chandra (2004) who stated that the effect of inflation rate on the corporate sector has been found to be negative. The statistical significance showed that the t-calculated is less than the t-critical and the standard error is greater than half of the parameter estimate, there is sufficient evidence to conclude that there is statistical negative insignificance relationship between inflation rate and stock price.

Also, exchange rate showed negative relationship with stock prices, increase in exchange rate will reduce the stock prices. The findings showed that a percent increase in exchange rate would result on average to about 20.76 percent decrease in stock price. This study contradict the findings of Maku and Atanda (2010) who shows that stock prices and depreciating Naira rate are positively

related. This is statistically insignificant as shown with the t-test and standard error estimate, the t-test calculated is less than the t-test critical and the standard error is greater than half of the parameter estimate, there is sufficient evidence to conclude that there is no statistical significance between exchange rate and stock price.

Money supply also showed significant positive relationship with the stock price which showed that increase in money supply will increase stock prices and the magnitude of the relationship is explained with the value of the parameter estimate which states that ten percent increase in money supply will result on average to about 0.05% decrease in the stock price. The t-test is greater than the t-tabulated and the standard error is less than half of the parameter estimate, therefore, the study concludes that there is statistical significance between stock prices and money supply.

More so, the study showed that there is positive relationship between Gross domestic product and stock prices which imply that one hundred percent increase in gross domestic product will result on average to 0.2 percent increase in the stock prices. However, this is statistically significance at 5% level of significance as shown with the t-calculated which is greater than the t-critical and the standard error is less than half of the parameter estimate. Therefore, there is positive significant relationship between gross domestic product and stock prices. This findings corroborated the findings of (Chandra, 2004), he opined that the growth rate of the Gross Domestic Product (GDP) and the growth rate of the economy have positive relationship, the higher the growth rate of GDP, other things being equal, the more

Table 2. Regression Result

Dependent Variable: STOCK_PRICE
 Method: Least Squares
 Date: 09/11/12 Time: 14:33
 Sample (adjusted): 1989 2010
 Included observations: 22 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1839.268	3468.982	0.530204	0.6049
IR	-133.0043	264.2260	-0.503373	0.6231
INF	13.47197	47.87522	0.281398	0.7828
EXR	-20.76130	39.44417	-0.526346	0.6075
MS2	-0.005426	0.001126	-4.816398	0.0003
GDP	0.002108	0.000624	3.379314	0.0049
MC	2.678870	0.546635	4.900651	0.0003
VTNSE	0.013734	0.003558	3.860095	0.0020
ECM	-0.238942	0.220932	-1.081519	0.2991

SP = 1839.27 – 133.00IRt + 13.47IFR t – 20.76ERt – 0.0054MSt + 0.0021GDPT + 2.679MCt + 0.014VTNSE

S.E = (3468.98) (264.22) (47.87) (39.44) (0.0011) (0.00062) (0.0137)

T-Test = (0.53) (0.50) (0.28) (0.52) (4.81) (3.37) (4.90) (3.86)

ECM(-1) = 0.23

R-squared 0.969274 Adjusted R-squared 0.950366

F-statistic 51.26210 Durbin-Watson stat 2.262590

Prob(F-statistic) 0.000000

favourable it is for the stock market.

The study showed that market capitalisation has positive significant relationship with stock prices and that increase in the market capitalisation has positive relationship with the growth of stock prices. The t-test and standard error estimate justifies the acceptance of this finding. The magnitude of the relationship showed that a percent increase in market capitalisation will result on average to 2.67 percent increase in stock prices. And the total volume of transaction of the Nigerian stock exchange showed that there is positive relationship with the stock prices, ten percent increase in the total transaction of the Nigerian stock exchange would result on average to about 0.14 percent increase in the stock price.

The R-squared showed that the variables are of good fit to measure variations in the stock price, the high value of R-squared is an indication that inflation rate, interest rate, exchange rate, money supply, gross domestic product, market capitalisation and volume of transaction of the Nigerian stock exchange accounts for 96.9 percent systematic variation in stock prices whereas other factors which affect the stock prices not captured in the model account for about 3.1 percent. The F-statistics also showed that there is joint statistical significance among

the variable in consideration and it implies that inflation rate, interest rate, exchange rate, money supply, gross domestic product, market capitalisation and volume of transaction of the Nigerian stock exchange are important in policy formulation regarding stock prices.

The test of serial correlation showed that there is no evidence of positive serial correlation in the model as shown with the Durbin Watson statistics of 2.26.

Interpretation of granger causality

The result of the granger causality showed that there is unidirectional relationship between exchange rate and stock price, exchange rate granger causes stock price but stock price does not granger cause exchange rate. Also, money supply does not granger cause stock price whereas stock prices granger cause money supply. This implies that exchange rate and can predict stock price and stock price can predict money supply in Nigeria. Also, the findings showed that gross domestic product granger cause stock price but stock price does not granger cause gross domestic product. Stock price granger cause volume of transaction of the Nigerian stock exchange but the volume of transaction does not

granger cause stock prices. This implies that gross domestic product can predict stock prices and stock prices can predict volume of transaction of the Nigerian stock exchange.

The result showed bi-directional relationship with the following variables: interest rate does not granger cause stock price and stock price does not granger cause interest rate. And also, inflation does not granger stock price and stock prices does not granger causes inflation rate, market capitalisation does not granger cause stock price but market capitalisation granger cause stock price. This implies that market capitalisation can predict stock prices and vice versa.

CONCLUSION AND RECOMMENDATION

The study has examined the interrelationship among stock prices, stock market operations and the economic growth in Nigeria using annual data from 1985-2010. To establish a short-run relationship between the variables, the study had to initially establish that the variables are stationary. To establish study established that 23.9 percent adjustment is need to bring the economy into equilibrium. The study further revealed that stock prices and stock market operations had the tendency to increase economic growth and thus the central bank of Nigerian and Nigerian stock exchange should work collaboratively with Nigerian commercial banks to effectively mobilize investible funds from the private and public sector, efficiency in financial intermediation, increasing social marginal productivity of capital and influencing private savings. Therefore, to invigorate and strengthen the financial market, more companies should be encouraged to get listed in the floor of the market. Since the activities of the stock market are statistically significant with the stock prices, it is suggested that stock prices should be monitored as a to prevent volatility in the prices which could drastically affects the performance of the stock exchange market.

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REFERENCES

- Abeyratna G, Pisedtasalasai AD, Power P (2003). Macroeconomic influence on the stock market: Evidence from an emerging market in South Asia. *J of Emerging Market Finance*, (2003), 3(3): 85-304.
- Abu A (2009). Does stock market development raise economic growth? Evidence from Nigeria. *Journal of Banking and Finance*. (2009) 1(1), 15-26
- Adamu JA, Sanni I (2005). Stock market development and Nigerian economic growth. *Journal of Economic and Allied Fields*, (2005) 2(2), 116-132
- Adaramola AO (2012). Oil Price Shocks and Stock Market Behaviour: The Nigerian Experience. *Journal of Economics*, (2012), 3(1): 19-24 (2012)
- Ashaolu TO, Ogunmuyiwa MS (2011). An econometric analysis of the impact of macro economic variables on stock market movement in Nigeria. *Journal of Business management*, (2011),3(1): 72-78.
- Chandra P (2004). Investment Analysis and Portfolio Management. New Delhi: McGraw-Hill. Chen N 1991. Financial investment opportunities and the macroeconomy. *J of Finance*, (2004), 46(2): 529-554.
- Goswami G, Jung SC (2012). Stock Market and Economic Forces: Evidence from Korea. IMF Working Paper. From <<http://papers.ssrn.com/sol3/Delivery.cfm?abstractid=1937914>> (Retrieved on April 6, 2012).
- Hondroyannis G, Lolos S, Papapetron E (2005). Financial market and economic growth in Greece, 1986-1999. *Journal of International Financial Markets, Institutions and Money*, (2005), 15(2), 173-178.
- Ifuero OO, Esther IE (2010). The Relationship between Macroeconomic Variables and Stock Market Index in Nigeria. *Journal of Economics*, (2012), 3(1): 55-63 (2012)
- Kevin S (2000). *Portfolio Management*. Delhi: Prentice-Hill. (2000)
- King G, Levine R (1993).. Finance and growth: Schumpeter might be right. *The Quarterly Journal of Economics*, (1993) 108(3), 717-737.
- Maku OE, Attanda AA (2009). 'Does Macroeconomic Indicators Exert shock on the Nigerian Capital Market? (2009), Online at <http://mpra.ub.uni-muenchen.de/17917/>
- Maku OE, Atanda AA (2010). Determinants of stock market performance in Nigeria: Long run analysis. *Journal of Management and Organisational Behaviour*, (2010). 1(3): 1-16.
- Maku OE, Atanda AE (2010). Determinants of stock market performance in Nigeria: Long run analysis. *Journal of Management and Organisational Behaviour*, (2010) 1(3): 1-16.
- Maysami RC, Koh TS (2000). A Vector Error Correction Model of the Singapore Stock Market. *International Review of Economics and Finance*,(2000) 9: 79- 96.
- Maysami RC, Lee CH, Mohamed AH (2005). Relationship between macroeconomic variables and stock market indices: Cointegration evidence from Stock Exchange of Singapore's All-S Sector Indices. (2005).*J Pengurusan*, 24: 47- 77.
- Maysami RC, Sim HH (2001). Macroeconomic forces and stock returns: A general –to-specific ECM analysis of the Japanese and South Korean markets. *International Quarterly J of Finance*, (2001).1(1): 83-99. Nigerian Stock Exchange 1975-2005. *Fact Book*. Lagos. Nigeria.
- Maysami RC, Sim HH (2002). Macroeconomic variables and their relationship with stock returns: Error Correction evidence from Hong Kong and Singapore. *The Asian Economic Review*,(2002). 44 (1): 69-85.
- Osamwonyi IO (2003). Forecasting as a Tool for Securities Analysis. A Paper Presented at a Three-day Workshop on Introduction to Securities Analysis, Organized by Securities and Exchange Commission, Lagos August 17th.(2003)
- Osamwonyi IO (2003).. Forecasting as a Tool for Securities Analysis. A Paper resented at a Three-day Workshop on Introduction to Securities Analysis, Organized by Securities and Exchange Commission, Lagos August 17th.(2003)
- Osinubi TS, Amaghionyeodiwe LA (2003). Stock market development and long-run growth in Nigeria. *Journal of African Business*, (2003). 4(3), 103-129.

- Rousseau PL, Wachtel P (2000). "Equity Markets and Growth; Cross Country Evidence on timing and outcomes, 1980-1995" *Journal of Banking and Finance*,(2000). 24, 1933-1957.
- Rozeff MS (1994). Money and stock prices. *J of Financial Economics*,(1994). 65-89.
- Smith G (1990). *Investments*, Illinois & London: Glenview. Summers LH 1981. Inflation, the stock market, and owneroccupied housing. *American Economic Review, Proceedings*,(1990). 71, May: 423-430.
- Udegbonam RI, Oaikhenan HE (2002). Fiscal deficits, money stock growth and the behaviour of stock prices in Nigeria: An empirical investigation. *J of Financial Management and Analysis*, (2002). 4 (1 and 2): 10-27.