FUNDAMENTAL VARIABLES DETERMINANTS OF STOCK PRICE MOVEMENT IN THE NIGERIAN CAPITAL MARKET

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ABSTRACT

The aim of this study was to investigate fundamental variables determinants of stock price movement in the Nigerian capital market. The study covered a period of twenty (20) years (1997 – 2016). The specific objective of this study was to determine the extent to which interest rate, money supply, inflation rate, exchange rate, and GDP and Stock prices. Two empirical methodologies were used in this study. The first is the Granger causality test analysis which aims at determining the direction of cause-effect between the stock prices and the fundamental variables indicators. The second methodology follows the Cointegration and error correction modelling (ECM) techniques. Based on the analysis, we find that level of income and general economic performance is the greatest determinant of stock price changes both in the short run and in the long run. Real income seemed to slow down stock prices in the short run while it stimulates the prices in the long run. That money supply has a high positive effect on stock price changes especially in the short run. As money supply rises, short term stock prices also tend to rise. That bank interest rate has a strong negative impact on stock price changes. As interest rate rises, stock prices seem to fall by a more than proportionate rate as is shown by the highly elastic coefficient. That inflation does not have a significant effect on changes in stock prices in Nigeria. General Price level is not considered when investors make decisions in the market. That a strong reverse causality exists between stock prices and money supply as well as real income level. When stock prices change, money supply tends to change significantly. This shows a monetary transmission channel that includes the stock market in Nigeria. In line with the findings, we recommend that investors can weigh the behaviour of stock prices by observing the level of economic activities in the country. They should participate more in the market when there is boom in the economy. In particular, investors will maximize returns if they buy during a downturn in the economy and sell during a boom. This kind of behaviour also helps to strengthen the stabilization of the stock market in the economy.

Keyword: Interest rate, money supply, inflation rate, exchange rate, GDP and Stock prices.

Introduction

The investment process in any country provides opportunity for companies to finance their operations and thus ensure that they do not go bankrupt due to paucity of fund (Inegbedion, 2008). But investors' preference for the shares of a company is a function of stock price behaviour. This underscores the need to study the behaviour of share prices. Furthermore, investors seek to analyse securities thoroughly, with a view to establishing the basis for efficient allocation of resources. It is believed

that thorough security analysis will predispose the investors to make adequate decision regarding the appropriate security or securities to invest in, with a view to maximizing their returns. Nevertheless, the ability of the investor to enhance his/her earnings through security analysis is a function of the nature of the capital market in which he/she operates. The capital market is an integral component of the financial system of any country. It is a market for medium to long-term funds for investment, which means it provides opportunities for investors to invest their funds.

According to Al-Faki (2006), the capital market is a network of specialised financial institutions, series of mechanisms, processes and infrastructure that, in various ways, facilitate the bringing together of suppliers and users of medium to long-term capital for investment in socio-economic development projects. Osaze (2000) defines it as a network of institutions and mechanisms existing for the mobilization and exchange of long and medium term funds in the form of shares, bonds and derivatives. On his part, Dauda (2006) defines the capital market as consisting of the network of institutions and mechanisms through which intermediate and long-term funds are pooled together and made available to businesses, governments and individuals. Consequently, the capital market is the pivot upon which any economy revolves especially as regards its role of creating, mobilizing and rationing long-term funds for economic growth and development. Thus, whether an economy develops or not depends, among other things, on the existence of a capital market or the extent of development of the existing capital market and its ability to fund regenerative investments that are self-sustaining (Osaze, 2006). The traditional view of the Stock Exchange used to be that the stock market was the hand maiden of the industry. However, this view has long given way to a modern perception that the industry is the handmaiden of the capital market (Odife, 2002). This explains why any study on the workings of the capital market such as stock price behaviour, is worthwhile because stock prices are important indicators of the workings of the capital market. Stability or volatility of stock prices have implications on the confidence of the investing public because investors' motive of investing in shares is to be able, at least, earn a fair return. To this end, policy makers in government and regulatory authorities of the capital market must do everything possible to ensure that fluctuations in stock prices are put under control so that the stock market is not exposed to jeopardy that may prove catastrophic. In so doing, there is the need to identify major determinants with a view to ensuring that policies which affect these variables are not formulated in a manner that will stimulate adverse effects on stock prices; as such will be inimical to the objectives of the capital market. It can be conjectured that stock price changes have implications for the level of vibrancy of the capital market and by implication economic development. This underscores the importance of the problem definition of this study.

Changes in stock prices and the pattern of changes is of particular importance to investors and security analysts. Empirical studies abound which seek to ascertain the pattern of stock price changes and the factors that are mainly responsible for such changes (Inegbedion, 2008). Some analysts are of the opinion that stock prices are one of the best indicators of changes in economic activities (Aisein, 2007). Owing to the importance of stock price behaviour to the investing public and capital market participants, security analysis has become a major practice among speculators and some other market participants. The essence of security analysis is to advice the investors on how to make purchasing decision that will assist them to optimise the returns from their investment. If a market is not efficient, then it is possible to beat the market (gain permanent advantage over other investors) either through privileged information or through a study of the systematic behaviour of stock price movements. Despite the relevance of the capital market to economic development, it appears that the market is not receiving adequate attention from stakeholders in Nigeria. This probably explains why there are scanty studies that seek to link stock price changes to economic development. The intention of this therefore, is to determine the major factors that influence stock price movement as well as the extent

to which these factors affect stock price movement and, hence, have a proper understanding of the pattern of stock price behaviour in the Nigerian capital market.

Specifically, this study seeks to provide answers to the following questions:

1. What is the relationship between stock price movement and interest rate?
2. What is the relationship between stock price movement and Money supply?
3. What is the relationship between stock price movement and inflation rate?
4. What is the relationship between stock price movement and exchange rate?
5. What is the relationship between stock price movement and GDP?

Objectives of the Study

The main objective of the study is to determine the fundamental variables determinants of stock price movement in the Nigerian capital market. Specifically, the study seeks to determine the impact of interest rate, Money supply, inflation rate, exchange rate and GDP on stock price behaviour within the context of the Nigerian stock market.

Research Hypotheses

The following hypotheses will be tested:

1. there is no relationship between Interest rate and share prices.
2. there is no relationship between money supply and share prices
3. there is no relationship between Inflation rate and share prices
4. there is no relationship between Exchange rate and share prices in the Nigerian stock market
5. There is no relationship between changes in the prices of shares traded on the floor of the Nigerian Stock Exchange and GDP.

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

From the point of view of marketing, price is one of the elements of the marketing mix. In any market economy where goods and services are traded, price is very crucial as the prime mover of trade (Agbonifoh, Ogwo and Nnolim, 1998). The importance of price and pricing to markets is not an obscure one. It is for this reason that microeconomics, which is sometimes referred to as price theory, is devoted to the study of the determinants and dynamics of price under various market structures. From the macroeconomic stand point, price plays an allocative role. The general scenario in which this happens is one in which goods are generally scarce in relation to the demand for them. To this end, the role of price is to allocate these goods among the competing demanders. The willingness and ability of the demanders to pay the reigning price determines the quantities which they get. From the micro-economic stand point, the price of a product is of vital significance to both the seller and buyer. For the seller, the price of a product determines the quantity that can be sold in a given period, the seller's total revenue, the profit or loss margin of the seller, as well as the seller's overall public image. To the consumer, the price is, sometimes, used as a measure or indicator of quality (Agbonifoh, Ogwo and Nnolim, 1998). It is for this reason that microeconomics is also defined as the study of the theory of value, since it is also referred to as price theory.

A critical question which most economic and financial analysts seek to answer is what determines a price? In the standard economic paradigm, the rice of a particular good is determined by the intersection of the supply and demand curves (O'Hara, 1995) through a process referred to as the

invisible hand by Adam Smith, the father of classical economics (Inegbedion and Agbadudu, 2010), and this must be the case at equilibrium. But how, exactly, is this equilibrium actually attained? What is it in the economy that coordinates the desires of demanders and suppliers to agree on a price and thus execute transaction? Perhaps, surprisingly, economics provides few answers to this question and this necessitated the market microstructure research. Market microstructure is the study of the process and outcomes of exchanging assets under explicit trading rules (O' Hara, 1995). Market microstructure literature analyses how specific trading mechanisms affect the price formation process. These mechanisms may involve a specific intermediary such as a stock specialist or stock broker, an order clerk, employer and centralised location such as an exchange or a future pit, or be simply an electronic bulletin board in which buyers and sellers indicate an interest in trading. Interest in the role of trading mechanism, especially in the securities market, was undoubtedly spurred by the fragility of markets revealed by the stock market crash in 1987 (O' Hara, 1995). Furthermore the proliferation of new markets and exchanges occurring now with remarkable speed underscore the need for the study of market microstructure, which has a fundamental goal – the desire to know how prices are formed in the mechanism.

The price mechanism of any system has, overtime, assumed significant importance (Heman, 2001), and has become a reliable indicator of the extent to which a market can be classified as emerging, developing or advanced. The reason is that the price mechanism has significant implications on the stability of earnings as well as the stability and continuity of the market. The remaining part of this chapter is examined under the following headings – Security Analysis, Theories of Stock Price Movement; Models of Stock Price Movement; and the Nigerian Capital Market.

Theories of Stock Price Behaviour

Emerging from the theories of stock price behaviour are four schools of thought namely, the fundamental school; the technical school; the Efficient Market Hypothesis; and the Macroeconomic Hypothesis School (Inegbedion, 2009).

Fundamental Theory of Stock Price Behaviour

The fundamental analysts forecast stock prices on the basis of economy, industry and company statistics. The principal decision variables often take the form of earnings and dividends (Fisher and Jordan, 2005). The fundamental school believes that the value of a stock is determined by expectations regarding future earnings and the rate at which those future earnings are discounted. Furthermore, the fundamentalists make a judgement on the value of a stock with a risk-return framework based upon earnings power and economic environment (Fisher and Jordan, 2005). In determining the intrinsic value of an equity stock, the security analyst must forecast the earnings and dividends expected from the stock and choose a discount rate which reflects the riskiness of the stock (Chandra, 2004). Financial analysts like Fama (1965), as well as Bower (1977) tested the fundamental theory empirically and their findings were consistent within theory.

Technical Theory of Stock Price Behaviour

The technical analysts believe that security price movements follow a definite and re-occurring pattern, which can form a reliable basis for formulating trading rules. The technical theory of stock price behaviour relies on market forces, rational or irrational, for the prediction of security price movement. Thus, unlike the fundamentalists, the technical analysts are not interested in generating intrinsic values of shares, but assume relationship between successive share prices of any firm over a study period.

Owing to their belief that security prices follow a definite and re-occuring pattern, the technical analysts can derive methods for predicting future price movements based on past observations of price movements (Herman, 2001). They also believe in the use of volume of trading and stock market indices. The technical analysts use various interesting tools for security analysis and forecasting, such as charting and non-charting techniques. The charting techniques include analysis of stock market indices e.g. Dow Jones Industrial and Transportation Indices, Financial Times, All-share Index of Nigerian Stock Exchange (Heman, 2001). The construction of line charts, Bar charts as well as point and Figure charts are common tools to chartists. Fama (1965), however, identified the Dow as the most essential and applied tool of technical analysts. The non-charting techniques are based primarily on market volume analysis and secondarily on the indicators of market sentiment and investor's confidence. According to Smith (1990), the technical analysts undertake a thorough study of changes in market prices, volume of trading, and investors' attitude with a view to making excess returns from information asymmetry.

The Behavioural Theory of Stock Price Behaviour

Proponents of this view believe that the market might fail to reflect economic fundamentals under three conditions. When all three apply, the theory predicts that pricing biases in financial markets can be both significant and persistent (Maku and Atanda, 2009). The first behavioural condition assumes that investors behave irrationally when they fail to process all the available information correctly while forming their expectations of the future performance of a company. The second condition examines systematic patterns of behaviour and holds that if individual investors decide to buy or sell shares without consulting economic fundamentals, the impact of their action on share prices would be limited. The third condition holds that limits to arbitrage in financial markets show that when investors assume that a company's recent strong performance alone is an indication of future performance, they may bid for the company's shares on the basis of this belief and thus drive up the share price (Maku and Atanda, 2009). By the same token, some investors will expect a company that sprang surprises in the market in one quarter to continue exceeding expectations in subsequent quarters.

Macroeconomic Hypothesis School

Proponents of this school of thought believe that stock prices are influenced by major macroeconomic variables such as interest rate, GDP, Inflation rate, Money supply and Exchange rate amongst others. Some analysts have measured macroeconomic factors to explain stock return and found that changes in interest rate are related to risk premium. The macroeconomic approach seeks to examine the sensitivity of stock prices to changes in macroeconomic variables. It adopts a general equilibrium approach, stressing the interrelations between sectors as central to the understanding of the persistence and co-movement of macroeconomic time series. Empirical studies of Fama (1981, 1990; Chen, 1991; Amadi and Odubo, 2002), are all consistent with existing theory which holds that macroeconomic variables affect stock price movements.

Efficient Market Hypothesis

In spite of the arguments of the fundamental analysts, the technical theorists, the macroeconomic hypothesis and the behavioural school of thought; about the behaviour of stock prices, which make profiteering possible, there is the major underlying theory of stock price behaviour which contends that the market is efficient; so efficient that any investor cannot beat it with fundamental or technical analysis (Osaze, 2000). This is the major thrust of the efficient Market Hypothesis. According to Maku and Atanda (2009), the Random Walk hypothesis, which is the weak form of the efficient

market hypothesis, is a consequence of the challenge on the technical and fundamental analysis by scholars who subscribe rapid adjustment of security prices to the infusion of new information.

Market efficiency is a description of how prices in competitive markets respond to new information: the arrival of new information in a competitive market can be likened to the arrival of a lamb chop to a school of flesh-eating piranhas, where investors are plausible enough – the piranha. The instant the lamb chop hits the water, there is turmoil as the fish devour the meat. Very soon, the meat is gone, leaving only the worthless bone behind and the water returns to normal. Similarly, when new information reaches a competitive market, there is much turmoil as investors buy and sell securities in response to the news, causing prices to change. Once prices adjust, all that is left of the information is the worthless bone. No amount of gnawing on the bone will yield any more meat and no further study of old information will yield any more intelligence (Higgings, 1992).

The implication is that security prices adjust instantly and without bias to any new information released to the market and that expected return is compatible with the risk involved. According to Reily (1989), an efficient market is one in which security prices adjust rapidly to the infusion of new information and current stock prices fully reflect all available information, including the risks involved. To this end, a stock market is said to be efficient if information is widely and cheaply available to investors such that share prices are fair (Inegbedion, 2009). A fair share price is one which reflects all available, relevant and ascertainable information in the market (Investor Home, 2008). Proponents of the efficient market hypothesis argue that stock prices are essentially random and therefore, leave no chance for profitable speculation in the stock market. An interesting characteristic of the random walk theory is the persistence of random shocks. Early Empirical tests of the random walk hypothesis by scholars like Moore (1962) and Fama (1965) showed significant departure from randomness and were both inconclusive and insufficient (Maku and Atanda, 2009). By the same token, there have been conflicting findings from previous studies conducted in the Nigerian Capital Market. Odukwe (1988) conducted a study using prices of shares traded on the floor of the Nigerian Stock Exchange and concluded that the market is efficient in the weak form. Ekechi (2002) investigated a sample of firms listed in the Nigerian Stock Exchange and concluded that with more than half the serial correlation coefficients significant, the prices were not stable, thus the market is not efficient. Olowe (2002) conducted a study for the period 1981 – 1992 and concluded that the Nigerian Stock Market is efficient in the weak form. Inegbedion (2009) also conducted a study using 20 securities listed on the floor of the Nigerian stock market and concluded the Nigerian stock market is not efficient, even in the weak form.

Empirical Tests of the Random Walk Hypothesis

Generally, the techniques for testing the random walk hypothesis fall into two categories: those that test for trends in stock prices and thus indicate whether profitable trading systems could be developed; and those that test such mechanical systems directly.

Interest Rate and Stock Prices

Interest rate, according to Chandra (2004), refers to the return or yield for investment and it varies with time, default risk, inflation rate, productivity of capital, special, and so on. The interest rates in the organized financial sector of the economy are guided within preferred range through monetary policy (Kelvin, 2000). But for the unorganized financial sector, the rates are not controlled and may fluctuate considerably, depending upon the demand and supply of funds in the market. Low interest rate stimulates investment by making credit available easily and cheaply with implication for capacity utilization and profitability. Long-term interest rates do relate to short-term interest rates within term

structure, but they do differ, and so need to be studied. According to Oaikhena (2002), the prevailing interest rate regime has significant implications for stock prices in that economy. A rise in interest rate depresses corporate earnings and thus leads to an increase in the discount rate applied to equity investors both of which has an adverse impact on stock prices and vice versa (Chandra, 2004). Thus, a rise in interest rate is expected to create a negative impact on the performance of the organization. In a regulated interest rate regime, there is limited room for movement in interest rate in response to changes in its determinates. To this end, an analysis of the influence of changes in interest rate on stock prices constrained because in such an interest rate regime, competing interest earning assets do not constitute a viable alternative to investment in stock. On the other hand, in deregulated interest rate regime, changes in its relevant determinate. Consequently, investment in interest earning assets is seen as viable alternatives to investment in securities (Udgbunam) and Oaikhena, 2001).

Empirical evidence suggest that there is a negative relationship between interest rate and stock prices since the interest rate variable that is considered most relevant to stock price behaviour is the deposit rate. This position is informed by the fact that deposits constitute an alternative investment outlet to investment in stock. Thus, it is logical to assume that increases in the returns to deposit facilities tend to make them more attractive investment outlets than investment in shares. By the same token, decreases in the returns to deposit facilities (deposit rates) discourages people from putting their money in deposit accounts, preferring other investment outlets with relatively higher returns. One of such outlets is investment in stocks and shares, especially if stock returns are more attractive than investment in the form of deposit account in financial institutions. It is for this reason that we expect stock prices to rise when deposit rates fall and vice versa; and thus conclude that interest rates impact stock prices negatively. Amadi and Odubo (2002) empirically showed that interest rate has a significant influence on stock price behaviour in the Nigerian stock market.

Inflation Rate and Stock Prices

Inflation refers to the continuous and persistent upward movement in the general price level, thus leading to a continuous and persistent fall in the value of money (Osamwonyi, 2009). Variation in the rate of inflation has significant implications for the level of economic activities because it affects aggregate supply. Consequently, inflation rates have considerable impact on the performance of companies. Higher rate tend to distort investment plans, push up cost of production and reduce profit margins as well as erode effective demand. On the other hand, low rates favour industries and companies except real estate investments which tend to perform well during inflationary periods. Empirical evidence abounds on the relationship between inflation and stock prices. Feldstein (1980) argues that increase in inflation rate reduces share prices because of the interaction of inflation with the tax system. The above effect, according to summers (1981), can explain a large fraction of the decline in share prices during inflationary periods. This effect is a consequence of the "historical cost" method of depreciation and the tax on nominal capital gains which, together, cause the net return on stocks to fall when inflation rises (Amadi and Odubo, 2002). Furthermore, it has been argued that investors undervalue corporate stock during inflationary period because they fail to reckon with capital gain on corporate debt, and also tend to price stock to give a price earnings ratio that is comparable to nominal rather than real interest rates.

Conclusively, there is a negative relationship between inflation rate and stock prices. Chen, Roll and Ross (1986) conducted an elaborate search for the macroeconomic variables that have effect on stock returns. Their findings, among others, showed that inflation was a relevant variable. Mukherjee and Naka (1995) detected co-integration among stock price and six macroeconomic variables, inflation rate inclusive.

Money Supply and Stock Prices

In economics, the money supply or money stock is the total amount of money available in an economy at a specific time. There are several ways to define "money," but standard measures usually include currency in circulation and demand deposits (depositors' easily accessed assets on the books of financial institutions). Money supply data are recorded and published, usually by the government or the central bank of the country. Public and private sector analysts have long monitored changes in money supply because of its possible effects on the price level, inflation and the business cycle.

The behaviour of monetary aggregates is critical to the maintenance of economic stability. Whereas an expansion in the money supply facilitates economic growth, excessive increases in the rate of growth of money supply have an adverse effect on the price level and the level of income in an economy. This calls for close monitoring of the movement in money supply by the monetary authorities. In order for central banks to control the money supply, they have to firstly, determine its components and then measure these monetary aggregates at regular intervals. Economists have proposed a functional definition of money, i.e. any object that is generally acceptable in facilitating the exchange of goods and services. The emphasis here is on liquidity or the ease with which an asset can be used for payment or converted into an accepted form for payment.

Central bankers around the world have employed measures that are unique to their institutions and designed to provide more relevant estimates for their country's circumstances. Despite variations in the measurement of money supply, it is important that consistency be maintained. Countries with fairly developed financial and money markets tend to include a broader range of less liquid securities in their calculations, while others confine their measurement to a more narrow range of highly liquid assets. This underscores the point that only items that are deemed to have a relatively strong actual or potential impact on people's spending should be included in a country's money supply measurement.

Exchange Rate and Stock Market

There are several ways in which the exchange rate can affect the stock market. First, a depreciating currency causes a decline in stock prices because of expectations of inflation (Ajayi and Mougoue, 1996).

(2.9) $RER = E \times P^*$

Where *RER* is the real exchange rate

Higher nominal exchange rate in the short run is consistent with a decrease in the price ratio *P^*/P* towards a long run equilibrium level, where the real exchange rate equals unity. A lower *P^*/P* ratio implies relatively higher domestic prices. Therefore, a depreciation of the nominal exchange rate creates expectations of inflation for the future. Inflation is seen as negative news by the stock market, because it tends to curb consumer spending and therefore company earnings.

Second, foreign investors will be unwilling to hold assets in currency that depreciates as that would erode the return on their investment. In a case of USD depreciation, investors will refrain from holding assets in the US, including stocks. If foreign investors sell their holdings of US stocks, share prices ought to drop.

Third, the effect of exchange rate depreciation will be different for each company depending on whether it imports or exports more, whether it owns foreign units, and whether it hedges against

exchange rate fluctuation. Heavy importers will suffer from higher costs due to weaker domestic currency and will have lower earnings, thus lower share prices. Multinational corporations based in the US will have higher income when the US currency depreciates. The income realized by the foreign subsidiary is converted into dollars at the higher exchange rate. Companies that have hedged adequately will have their earnings and stock price unaffected by a fluctuating currency. The stock market, which is a collection of a variety of companies, will tend to react ambiguously to currency depreciation.

Last, on a macroeconomic level, a depreciated dollar will boost the export industry and depress the import industry. The impact on domestic output will be positive. Increasing output is seen as an indicator of a booming economy by investors and tends to boost share prices.

Overall, the effect of exchange rates on stock prices is quite inconclusive as there is some support for both a positive and a negative relationship. Based on Ajayi and Mougoue's (1996) work, I assume that the negative link will be predominant. In the short run, it will be the expectations of investors that affect the stock market, rather than the fundamentals of the economy.

Based on the discussion above, we can specify the factors that influence stock prices as follows:

(2.10) SP = f (Y, INF, E) + - -

Where *Y* is output, *INF* is inflation, and *E* is the exchange rate.

Stock Prices and the Economy/GDP

Economic theory suggests that there should be a strong link between economic activity and security prices, given that the stock price is the discounted present value of the firm's pay-out. If this pay-out is ultimately a function of real activity, such a link should prevail. The standard discounted-cash-flow model implies that stock prices lead real economic activity if investors' expectations about firms' future pay-outs are correct on average. This is one theoretical argument as to how stocks and economic output may be related.

There are three other theoretical propositions as to how stock prices can have a direct effect on economic output, further strengthening the link in the relationship between these two variables. The first link was suggested by Tobin (1969). It focuses on the impact that share prices have on the cost of capital, and is captured by a coefficient known as Tobin's Q, which is the ratio of the market value of current capital to the cost of replacement capital. When share prices are high, the value of the firm relative to the replacement cost of its stock of capital (Tobin's Q) is also high. Consequently, this leads to increased investment expenditure and thus to higher aggregate economic output as firms find it easier to finance investment expenditures. This occurs because investment would be easier as it would require a lower share offering in a situation of a high share price. The second channel through which stock market performance may influence GDP was suggested by Modigliani (1971). His proposition operates through the impact that the wealth variable has on consumption. A permanent increase in security prices results in an increase in the individual's wealth holdings, and therefore in higher permanent income.

Through the permanent income hypothesis, Modigliani postulated that inter-temporally, consumers smoothen consumption in order to maximize their utility. An increase in permanent income will therefore enable consumers to re-adjust upwards their consumption levels in each period. The third possibility through which stock prices impact output is referred to as the financial accelerator

(Bernanke and Gertler, 1989; Kiyotaki and Moore, 1997). This channel focuses on the impact that stock prices have on firms' balance sheets. Due to the presence of asymmetric information in credit markets, the ability of firms to borrow depends substantially on the collateral they can pledge. The collateral value firms can offer increases in scenarios where their stock price value increases. As the collateral they can offer increases, higher credit can be raised, which in turn can be used for investment purposes and thereby triggers an expansion in economic activity. Campbell (1998) uses the log-linear asset pricing framework to study the empirical relationship between stock prices and output. In his work, the log-price dividend ratio is regressed against output growth. The results are statistically insignificant in France, Germany, the UK, Japan and the US. According to Campbell, stock prices have little predictive content with respect to output. Binswanger (2004) comes to a different conclusion. In his paper he uses the OLS method and runs regressions using growth rates of industrial production as the dependent variable and contemporaneous and lagged real stock returns as the explanatory variables on datasets for the G7 countries. A statistically significant relationship between the variables is found in all the G7 nations except for Italy and France. Stock and Watson (2001) use a forecasting regression consisting of real GDP against lagged explanatory variables that are theoretically relevant predictors for each of the seven most industrialised economies (Canada, France, Germany, Italy, Japan, the UK and the US) and find results that provide some evidence that stock prices have a small marginal predictive content for output at the two, four and eight quarter horizon. However the ability of stock prices as predictors varies across countries and over decades. Humpe and Macmillan (2005) analysed the extent to which macroeconomic variables explained stock market movements in the US and Japan. Using a log-linear model, they found that a 1 per cent increase in industrial production triggered a 1.09 per cent increase in US stock prices whilst a 1 per cent increase in Japanese industrial production triggered a 0.4 per cent increase in Japanese stock prices. Both parameters were highly statistically significant. Schwert (1989) attempted to study the relationship between economic activity and stock returns by examining the correlation between volatility in economic activity and volatility in stock prices. Schwert finds evidence that stock market volatility depends on the health of the economy. Using monthly data the model showed that average volatility increased by a significant 189 per cent in times of recession. Hence, given these divergent views and results, the debate in the literature on the link between stock prices and the economy remains inconclusive.

METHODOLOGY

The study relies solely on secondary data, which were sourced from various issues of the statistical Bulletin and Annual Reports of the Central Bank of Nigeria (CBN), the purview of the data covered a period of twenty (20) years (1997-2016)

Model Specification

The model specified in this study follows a simple stock price determination analysis, where major macroeconomic factors are assumed to critically exert pressure on the stock market. Consequently, four related macroeconomic variables are selected in the model. Stock prices (ASI) respond to the general level of economic activities which is proxied by real GDP (RGDP), the level of money supply defined in broad terms (M2), the rate of interest on loanable funds (INTR), the rate of inflation (INFL) and the nominal naira exchange rate against the dollar (EXRT). The functional form of the model is therefore specified as:

ASI = f (RGDP, M2, INTR, INFL, EXRT)

Moreover, stock prices are highly responsive to the rate of returns. This is the internal factor in stock price determination. Thus, in order to have a control for the model and avoid omitted variable problem in the model, returns on stock prices (RT) are included in the model.

The econometric form of the model is specified as:

$$ASI_t = \beta_0 + \beta_1 RGDP_t + \beta_2 M2_t + \beta_3 INTR_t + \beta_4 INFL_t + \beta_5 EXR_t + \beta_6 R_t + u_t$$

Where u_t is the stochastic error term in the model which obeys all the OLS assumptions.

It is expected that the elasticity parameters $\beta_1, \beta_2, \beta_5, \beta_6 > 0$ and $\beta_3, \beta_4 < 0$.

The variables selected in the estimation are pertinent as veritable indicators of economic performance. RGDP and INFL show the level of aggregate demand in the real sector of the economy at any given time, while the other variables are primary financial sector indicators. Movements in these variables all exert a high level of influence on the other macroeconomic aggregate and on general welfare in the economy.

In order to obtain direct elasticities from the regression results, the model is estimated in log linear form where the data is initially transformed into natural logarithms and then estimated.

Method of Data Analysis

Two empirical methodologies were used in this study. The first is the Granger causality test analysis which aims at determining the direction of cause-effect between the stock prices and the macroeconomic indicators. Indeed, it is generally argued that the stock market could have a reverse effect on macroeconomic factors. The Granger causality test uses the F-statistic to test for causality among variables. Usually, the variables are initially tested for unit roots before the causality tests are performed.

The second methodology follows the Cointegration and error correction modelling (ECM) techniques. According to Johnson (2007), the general procedure in this technique involves the following:

1. Test the order of integration for the variables.
   - If they are stationary then use any standard estimation technique, but not ECM.
   - If they are integrated of different orders, then look for cointegration between subsets and proceed to the next step.
   - If they are I (1) then proceed to the next step.
2. Estimate the LR equilibrium relationship. Check that the residual is stationary (i.e., cointegration test).
3. Estimate the ECM where the lagged residual from step 2 is used as the error correction term. Determine the lags using the AIC or SBC; check if there is a drift term, intercept, and if the residual is stationary (if not you can increase the lag number).

We thus pursue this method in the study.

Unit Root Testing

Generally, unit root test involves the test of stationarity for variables used in regression analysis. The importance of stationarity of time series used in regression borders on the fact that a non-stationary time series is not possible to generalize to other time periods apart from the present. This makes forecasting based on such time series to be of little practical value. Moreover, regression of a non-stationary time series on another non-stationary time series may produce spurious result.

A time series is stated as non-stationary if mean and variance of the time series is depend over time. On the other hand, a time series is stated as stationary if the mean and variance is constant over time. According to Gordon (1995), most economic time series are non-stationary and only achieved stationary at the first difference level or at a higher level.

The Augmented dickey Fuller (ADF) test is employed in order to analyse unit roots. The results are presented in levels and first difference. This enables us determine in, comparative terms, the unit root among the time series and also to obtain more robust results.

Short-run Dynamics

Cointegration refers to long run relation among the variables. Often we are interested in the short run dynamics. However, it is expected that this short run movement convergence to the long run equilibrium position after sometime. So we need a richer model that incorporates both. The contegration test finds out if this long run behaviour of the relationships is present in the time series.

Short-run Dynamics (Error Correction Model) and Long Run Equilibrium

The error correction specification requires that the variables are I (1) and cointegrated. Then their first difference is I (0), and the ECM term is I (0), hence the error term is stationary. Thus the spurious equation situation will no longer exist since all stochastic trends disappear. The ECM model thus shows that the dependent variable is explained by the growth in the independent variables and past disequilibrium between these variables.

Data Presentation and Analyses

The goal of this study is to empirically estimate a model that helps explain the long run (steady state) causes of stock price changes in the Nigerian stock exchange as well as the interim short term behaviour of the price changes in the face of temporary movements in some macroeconomic aggregates. The nature of the research therefore requires that the time series properties of the data used in the study are to be investigated. This implies that the stationarity and long run properties of the data are examined in order to ensure that the estimates are representative of the time series being studied. This will give a good background for the Granger Causality testing. Also, following this procedure, the processes of the cointegration and error correction modelling techniques are rigorously pursued. As examined in the previous chapter, the procedure for this analysis involves testing for unit roots among the time series in the analysis; the cointegration analysis which involves the investigation of the long run relationships among the variables; the estimation of the short run dynamic model; and then, the estimation of a long run behavioural relationship.

Unit Root Analysis

A time series is stated as non-stationary if mean and variance of the time series is depend over time. On the other hand, a time series is stated as stationary if the mean and variance is constant over time.

According to Gordon (1995), most economic time series are non-stationary and only achieved stationary at the first difference level or at a higher level.

Generally, unit root test involves the test of stationarity for variables used in regression analysis. The importance of stationarity of time series used in regression borders on the fact that a non-stationary time series is not possible to generalize to other time periods apart from the present. This makes forecasting based on such time series to be of little practical value. Moreover, regression of a non-stationary time series on another non-stationary time series may produce spurious result.

Table 1 Unit Root Test for Variables in Levels

Variable	ADF Test Statistic	95% Critical ADF Value	Remark
LASI	-2.0758	-2.8991	Non- Stationary
LRGDP	1.5960	-2.8991	"
LINFL	-3.4907	-2.8991	Stationary
LINTR	-2.6773	-2.8991	Non-stationary
LM2	-1.4718	-2.8991	"
LEXRT	-1.6463	-2.8991	"
RT	-3.4705	-2.9886	Stationary

Result extracted from the Eviews 9.0 output.

The Augmented dickey Fuller (ADF) test is employed in order to analyse unit roots. The results are presented in levels and first difference. This enables us determine in, comparative terms, the unit root among the time series and also to obtain more robust results. Table 4.1presents results of ADF test, in levels, without taking into consideration the trend in variables. The reason for this is that an explicit test of the trending pattern of the time series has not been carried out. In the result, the ADF test statistic for each of the variables is shown in the second column, while the 95 percent critical ADF value is shown in the third column. The result indicates that most of the variables have ADF values that are less than the 95 percent critical ADF value of 2.8991. The implication of this is that the time series for these variables are non-stationary in their levels.

The variables LINFL and RT are both shown to be stationary in levels. Of particular interest is the stationarity of the returns variable. This shows that disequilibrium in stock returns are not persistent in the stock exchange. Any abnormal returns are quickly mopped up by investors, thus suggesting a high level of efficiency in the stock market.

Table 2 Unit Root Test for Variables in First Difference

Variable	ADF Test Statistic	95% Critical ADF Value	Remark
DLASI	-3.5351	-2.8996	Stationary
DLRGDP	-14.5465	-2.8996	"
DLINFL	-6.5056	-2.8996	"
DLINTR	-5.0688	-2.8996	"
DLM2	-5.9833	-2.8996	"
DLEXRT	-4.8400	-28996	"
DRT	-7.1408	-2.9001	"

Result extracted from the Eviews 9.0 output.

Moving forward, we take the first differences of the respective variables and perform the unit root test on each of the resultant time series. The result of the unit root test on these variables in first differences is reported in table 4.2 above. From the result, it is seen that the ADF test statistic for each of the variables is greater than the 95 percent critical ADF values (in absolute values). With this result, these variables are adjudged to be stationary. This implies that the variables are actually difference-stationary, attaining stationarity after the first differences of the variables. Thus, we would accept the hypothesis that the variables possess unit roots. Indeed, the variables are integrated of order one (i.e. I [1]).

Cointegration Analysis

Engle and Granger (1987) have argued that given that time series are integrated of the same order, any linear combination of such time series would yield a cointegrated series. The economic interpretation of integration is that if two or more variables are linked to form an equilibrium or long run relationship between them, even though the series themselves in the short-run deviate from equilibrium, they will move together in the long run. Indeed, a non-stationary variable might have a long run relationship with other non-stationary variables and this does not create a spurious regression if the deviation of this long run relationship is stationary. It implies that these variables are cointegrated.

The Engle and Granger two-step method is employed for the test of cointegration. This method follows a simple procedure. First, the dependent variable is regressed on all the independent variables and the residuals are obtained. If the variables are cointegrated, then, the residual from the cointegrating equation must be integrated to order zero (stationary). In this analysis, the cointegration tests are performed on the basis of the individual models that were specified in chapter three. The result of the cointegration tests are summarized in Table 4.3 below.

Table 3: Results of Engle and Granger Residual Based Cointegration Tests

ADF Lag	ADF Test Statistic	95% Critical ADF Value	Remark
2	-2.2472	-1.9445	Stationary

Result extracted from the Microfit output.

Note: The selection of lag is based on minimum Akaike Information Criterion

From Table 3 using the Engle and Granger cointegration procedure, the null hypothesis of no cointegration among the variables at the 5 percent level cannot be accepted. This is shown from the fact that, in absolute values, the ADF test statistic of the residual for each of the models is greater than the respective 95 percent critical ADF value (in absolute values). This, again, implies that each of the residuals is stationary. Thus, the variables are cointegrated and therefore, a long run relationship exists between the respective dependent variables and the selected regressors. A long run inter temporal model can therefore be estimated for the relationships.

Granger Causality Test

Table 4: Pairwise Granger Causality Tests

Sample: 1997:1 2016:4
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
EXRT does not Granger Cause ASI	78	2.60007	0.08114
ASI does not Granger Cause EXRT		1.31136	0.27572
RGDP does not Granger Cause ASI	78	6.39509	0.00276
ASI does not Granger Cause RGDP		2.96881	0.05760
INFL does not Granger Cause ASI	78	0.20556	0.81466
ASI does not Granger Cause INFL		0.78183	0.46136
INTR does not Granger Cause ASI	78	0.11794	0.88892
ASI does not Granger Cause INTR		2.16605	0.12194
M2 does not Granger Cause ASI	78	2.96533	0.05778
ASI does not Granger Cause M2		10.0182	0.00014

Result extracted from the Eviews 9.0 output.

The result of the |Granger causality test with respect to ASI and al the independent variables are presented in table 4.4 above. We consider the F values and their corresponding probabilities in examining the direction of causality. The results for the null hypothesis that RGDP does not Granger because ASI has a significant \f value at the 1 percent level. Hence, we reject the null hypothesis and agree that RGDP actually Granger causes ASI In other words causality runs from GDP to ASI. The reverse null hypothesis passes the test at the 10 percent level. This goes to show that the effect of ASI on RGDP may not be as high as that of RGDP on ASI. The null hypothesis for causality running from M2 to ASI is also significant at the 10 percent level. However, it is the reverse hypothesis that is more significant since it passes the test at the 1percent level. Thus, it is seen that stock price changes has a very strong effect on the level of money supply in Nigeria. The other hypothesis that is significant at the 10 percent level is that of causality running from EXRT to ASI. This shows that exchange rate actually influences the stock prices.

The Error Correction Mechanism (ECM) (Short-Run Analysis)

Table 5: The Short-run Dynamic Model for Macroeconomic Determinants of Stock Prices.

Variables	Coefficient	T-Ratios	P. Value
Constant	-0.219	-0.12	0.9008
LRGDP	-0.767	-5.673	0.0000
LM2	0.919	16.24	0.0000
LINFL	0.007	0.638	0.5254
LINTR	-1.037	-7.007	0.0000
LEXRT	0.107	1.985	0.0510
RT	7.991	6.606	0.0000
RESIDUAL(-1)	0.906	17.28	0.0000
$R^2 = 0.989$		R2 = 0.987	
F = 904.7		DW Statistic = 1.73	

Result extracted from the Eviews 9.0 output.

The short-run dynamics of the behaviour of the macroeconomic aggregates in the context of short term movements in taxation as well as the other variables in Nigeria is captured within an error correction model (ECM). We now turn to this analysis. The autoregressive distributed lags (ARDL) approach is used for the ECM. The error correction representations for the selected ARDL models is presented in Table 5 above. The R-Bar squared criterion was used for the selection of the parsimonious equation.

The error correction mechanism result for stock prices changes indicates a quite impressive goodness of fit. The R-squared value of 0.989 indicates that over 98 percent of the systematic variation in stock prices at any given time is explained by the explanatory variables and the ECM term. Less than 2 percent of such variation is stochastic in nature. This indicates that the model possesses a high explanatory ability in terms of stock price changes in the Nigerian stock market.

In the same vein, the F-statistic value of 904.7 is very high and easily passes the significance test even at the 1 percent level, since this value is greater than the percent critical F-value. The model therefore exhibits a high overall significance. Thus, we cannot reject the hypothesis of a significant linear relationship between stock price changes and all the independent variables combined in the short run.

In order to determine the level of relevance of each of the explanatory variables in determining share price changes, we consider each of their coefficients in terms of their signs and significance level. A close investigation of the individual coefficients of the variables reveals that apart from the coefficients of RGDP and INFL, all the slope coefficients have the expected apriori determination signs. More importantly, the test of significance for each coefficient reveals that those of RGDP, M2, INTR and RT are significant at the 1percent level while that of EXRT manages to pass the test at the 6 percent level. This underscores the fact that these variables are the critical determinants of temporary changes in stock prices at any given time. The coefficient of INFL however fails the significance test, indicating that inflation is not a strong causative factor in stock price changes in Nigeria.

Indeed, the level of economic performance is seen to exert negative short run impact on stock prices, while money supply and the rate of returns on stocks tend to lead to increase in stock prices in the short run. Interest rate increases also tends to push down stock prices in the short term.

The error correction term has a positive sign and is also significant at the 1 percent level. The positive sign is rather pervasive and implies that any short-term deviation of stock prices from equilibrium in the short-run may not be restored in the long run. The factors outlined in the estimation procedure don not ensure a long run adjustment to equilibrium for the share prices. The high value of the error correction term means disequilibrium in stock prices may persist for very long periods.

The DW statistic value of 1.73 shows absence of autocorrelation in the model. The implication of this is that the short-run estimates in the model above are reliable for structural analysis and policy directions.

The Long Run Relationships

Table 4: The Long Run Relationship between macroeconomic factors and stock prices.

Variable	Coefficient	T-Ratio	P.Value
Constant	-0.275	-0.127	0.900
LRGDP	0.1758	2.044	0.045
LM2	0.1723	1.654	0.102
LINTR	-0.1431	-1.424	0.159
LINFL	0.0024	0.041	0.968
LEXRT	-0.0529	-1.107	0.272
RT	4.693	13.168	0.000
R^2	0.997		
F	2579		
D.W.	1.70		

Result extracted from the Eviews 9.0 output.

The ordinary least squares estimate of the long run equations are presented in Table 6 above. The results show that the model explained over 99 percent of the behaviour of the stock prices changes in the long run. Moreover, the overall goodness of fit of the model is also impressive. The F-statistic in the model is significant at the 1 percent level, thereby establishing the assertion of a significant long run relationship between stock price changes and the independent variables.

The examination of the individual coefficients of the explanatory variables shows that the coefficients of RGDP is significant at the 5 percent level and also possesses the correct positive sign while the coefficient of RT is significant at the 1 percent level. All the other coefficients in the result fail the significance test at the 5 percent level. Thus, it can be seen that though the level of economic performance may have negative effects on stock price changes in the short run, its long run effect is positive and strong. Indeed, among the macroeconomic factors in the model only RGDP has any effect on sock price changes in the long run.

The DW statistic value of 1.7 is quite close to 2 and indicates the absence of serial correlation in the errors of the model. The results are therefore reliable for structural analysis.

Discussion of Findings

These findings are generally in agreement with the theoretical and empirical literature. For instance, Garcia and Liu (1999) found that income level and financial intermediary development have positive impacts on stock market development in a sample of Latin American and Asian countries. Demirguc-Kunt and Levine (1996) examined the relationship between stock market development and financial

intermediary development in developing countries and found that most stock market indicators are highly correlated with financial intermediary development.

In this section, we discuss the policy implications of the outcome of the empirical analysis that has been carried out in the previous section. The results obtained are quite interesting and apt for policy directions. First, the result clearly indicates the dominant role played by stock returns in determining movements in stock prices in the Nigerian stock market. This implies that internal factors in the stock market have a stronger impact on stock price changes than external factors. Indeed, investors place a higher premium on information generated within the market in making their buying decisions than on information that are from external sources. This also indicates the level of efficiency of the stock market since the unit roots test shows the non stationarity of stock price movements.

Second, the result shows that the level of economic performance has the greatest impact on stock price changes among the external factors in the model. Though the effect of this factor was negative in the short run, it became positive in the long run and also significant. This implies that in the long run, after all adjustments have been made, stock price changes heavily depends on the level of growth of the economy. As the economy grows, stock prices also tend to increase in the long run. However, if the economy slows down, stock prices have the tendency of falling. This result is in line with numerous studies that have found that the stock market follows developments in the macroeconomic.

In the same vein, the result implies that increase in income levels tends to stimulate stock prices. Indeed, as income rises, the rational individual tends to allocate some his resources into a portfolio of investment in order to diversify risk and increase his savings. Thus, income growth is critical if stock prices and the stock market would experience any development.

Third, the result shows that money supply is a very potent factor in determining short term changes in stock prices. Indeed, the elasticity of stock prices with respect to if the money supply is almost unitary (as seen in the coefficient of 0.919). Any one percent rise in money supply leads to increases in stock prices by over 9 percent. This implies that the temporary growth in stock prices is tied to expansion of the monetary base. When money supply expands due to factors like increased government spending, increase in salaries and wages or greater access to credit, and the stock market tends to experience greater volume of activities and the stock prices grow. On the other hand, contraction in money supply fuels lower interest rates, lower firm investment and subsequently, reduce the attractiveness to invest in the stock market.

Fourth, the result shows an inverse relationship between lending rates and stock prices in Nigeria, especially in the short run. This suggests a trade-off between capital market and money market participation. As interest rate rises, it becomes difficult to secure funds in the money market, hence, investors turn their attention to the stock market and this tends to push up prices. The stock is therefore seen to provide a formidable alternative for investment funds in Nigeria. However, this is apparently so in the short run. In the long run, this process becomes insignificant.

Fifth, stock market plays a strong role in monetary policy implementation in Nigeria. The result shows that the stock market is another crucial source of money supply in the economy. This implies that monetary policy pursuit that does not take the direct or indirect role of the capital market into cognizance may not be very effective in Nigeria.

Finally, the results indicate that the exchange rate has a positive and significant impact on stock prices in Nigeria. This implies that exchange rate depreciation tends to enhance stock market volume. This

is so because, it becomes cheaper for foreign investors to participate in the stock market when exchange rate falls.

Summary of Findings, Recommendations and Conclusion

This study set out to investigate in an empirical pattern, the fundamental variables determinants of stock prices in Nigeria. Apparently, both internal factors (within the stock market) and external factors exert persistent effects on the behaviour of stock prices at any given period. Policy makers as well as stock analysts may want to know both of these factors in order to operate a more efficient market. It is argued that the factors behind changes in stock prices may be potent enough to create necessary directions in overall stock market performance in Nigeria. In order to obtain the dynamic properties of the analysis, time series estimation techniques were applied in the study. Essentially, the Granger Causality testing and the cointegration and error correction methods were employed in the analysis. Moreover, quarterly time series data was used in the estimation. Results from the empirical analysis show that generally, stock prices possess a unit root in which case disequilibrium in prices may persist for a very long time in the market.

Specifically, the following findings were made in the study:

- That level of income and general economic performance is the greatest determinant of stock price changes both in the short run and in the long run. Real income seemed to slow down stock prices in the short run while it stimulates the prices in the long run.
- That money supply has a high positive effect on stock price changes especially in the short run. As money supply rises, short term stock prices also tend to rise.
- That bank interest rate has a strong negative impact on stock price changes. As interest rate rises, stock prices seem to fall by a more than proportionate rate as is shown by the highly elastic coefficient.
- That inflation does not have a significant effect on changes in stock prices in Nigeria. General Price level is not considered when investors make decisions in the market.
- That a strong reverse causality exists between stock prices and money supply as well as real income level. When stock prices change, money supply tends to change significantly. This shows a monetary transmission channel that includes the stock market in Nigeria.

Recommendations

The implications of the findings raise various areas of recommendations for policy:

(i) Investors can weigh the behaviour of stock prices by observing the level of economic activities in the country. They should participate more in the market when there is boom in the economy. In particular, investors will maximize returns if they buy during a downturn in the economy and sell during a boom. This kind of behaviour also helps to strengthen the stabilization of the stock market in the economy.

(ii) Investors should not base their investment decisions in the market only on macroeconomic variables. In fact, the result indicates that stock return is the most significant factor in determining stock prices. The investor should seek ways to balance his approach to market watching by combining economic factors with core market indicators in order to maximize returns.

(iii) The conduct of monetary policy should effectively incorporate the role of the stock market. Being an emerging economy, Nigeria needs to place a greater level of importance on the stock market as a channel for monetary policy transmission.

(iv) In order to stimulate the growth of the stock market, government should boost income levels and increase its drive for poverty eradication in the country. A high income economy will generally experience high growth in its stock market activities.

(v) Financial authorities should also develop and strengthen the synergy between the money market and the stock market as veritable sources of investible financing in the country. Policies that aim at adjusting the interest rate should take into account the indirect impact on the stock market as an alternative means of funds.

(vi) Finally, the exchange rate should be well managed so as to provide leverage for increased foreign capital inflow into Nigeria.

Conclusion

It has become obvious that the factors behind changes in stock prices may be potent enough to create necessary directions in overall stock market performance in Nigeria. In this study, it has been shown that both monetary and real sector variables exert pressure on the stock prices in Nigeria. The analyses demonstrate that the Nigerian stock market is actually an emerging one where a strong competition is beginning to develop between the stock market and the other financial sector in terms of their instruments. However, this pace of development should be handled with care because any false movements in the stock market may have resounding impact in the whole financial sector and even the entire economy. Findings of this paper suggest that the government should be circumspect with how interest rates, money supply, and inflation rate are managed since they have ramifications for the budding stock price. In the years to come, it is likely that central banks will be required to include financial stability among their macroeconomic responsibilities more directly and explicitly.

Although the linkages in the fundamental variables and the movement of the stock prices have been well researched in the developed countries, there are still avenues for research in this area for emerging economies. As in the case of Nigeria, further research could be conducted to examine the relationship between the fundamental variables and the various sectors in the stock market. Nevertheless, stock market is one of the most contentious components to both economic and financial development. Both theoretical and empirical contributions will continue to chart the menu *pari passu* with liberalization and globalization of the financial intermediaries, and the proliferation of new financial products.

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