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Impact of Market Efficiency in the Capital Market Context

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Abstract
This study examines the impact of market efficiency in the capital market context. The objectives of this research work are to examine the impact of the Nigerian stock exchange on economic development in Nigeria, to provide adequate liquidity to investors, broaden the ownership base of asset and to investigate the effort of the stock market in funds mobilization. Secondary data were source through the use of CBN Statistical Bulletin. Data was processed using the Electronic View [E- VIEW] and was estimated using co-integration. The result above shows that the constant parameter is directly related with gross domestic product, it has a positive coefficient of 8.995583 which implies that if all explanatory variables are held constant in the short-run, gross domestic product will increase by 8.995583 units. The inflation rate (INFR) showed a positive coefficient of 0.013562 which implies that a unit increase in the level of inflation rate will result into 0.013562 units increase in the value of gross domestic product. Also, the coefficient of All Share Index (ASI) showed a figure of 0.330390 which implies a positive relationship between all price index and economic growth. A unit increase in all share index will lead to 0.330390 units increase in the value of GDP. In the overview, the study shows significant relationship between variables both in the short-run and long-run. The study therefore concluded that there is a need to restore confidence to the market by regulatory authorities' activities that portray transparency, fair trading transactions and dealings in the stock exchange.

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I. Introduction

A capital market of any nation is believed to be efficiency if it has the capability and capacity to pools and channels the required resources for economic growth and industrials development. The importance of capital market as an efficient channel of financial intermediation has been well noted by researchers, academicians, and policy makers as a primary determinant of the economic growth of a country, both developed and developing. Recent theoretical literature on financial development and growth identifies three fundamental channels through which capital markets and economic growth may be linked Pagano, (2006): First, capital market development increases the proportion of savings that is funneled to investments; Second, capital market development may change the savings rate and hence, affect investments; Third, capital market development increases the efficiency of capital allocation. In compliance to these channels, introducing an efficient capital market to link between the net savers (households) and net investors (entrepreneurs) results in reduction of transactions costs associated with funneling savings, making the household savings highly liquid, enabling selection of efficient investments by gathering information on investment returns efficiently, and providing markets for diversification of risks by households and corporate. Ekineh, (2014). If the capital markets are not efficient, the public offering largely disappears as a result of high transaction costs or the uncertainty of getting a fair price in the stock market. Thus, inefficient capital markets may reduce the incentive to enter new ventures, reducing overall long-term productivity of the economy. On the other hand, an efficient capital market reduces the transaction costs of trading the ownership of the physical assets and thereby paves the way for the emergence of an optimal ownership structure.

Thus, efficient and liquid capital markets provide avenues for the effective utilization of funds for long-term investment purposes by mobilizing them from the surplus spending economic units to the deficit spending economic units Ekineh, (2014). In short, an efficient capital market is essential for long-term growth in capital formation Osaze, (2012). Ekundayo (2011) argues that a nation requires a lot of local and foreign investments to attain sustainable economic growth and development. The capital market provides a means through which this is made possible. In addition, capital markets provide the opportunities for the purchase and sale of existing securities among investors thereby encouraging the populace to invest in securities and fostering economic growth Ezeoha,Ebele & Ndidi Okereke, (2009). Therefore, efficiently functioning capital market affects liquidity, acquisition of information about firms, risk diversification, savings mobilization and corporate control Anyanwu, (2008). Osaze, (2012) sees the capital market as the driver of any economy to growth and development because it is essential for the long-term growth capital formation. It is crucial in the mobilization of savings and channeling of such savings to profitable self-liquidating investment. The Nigerian capital market

provides the necessary lubricant that keeps turning the wheel of the economy. It not only provides the funds required for investment but also efficiently allocates these funds to projects of best returns to fund owners. This allocative function is critical in determining the overall growth of the economy. Therefore, by altering the quality of these services, the functioning of stock markets can alter the rate of economic growth Equakun, (2005). Okereke - Onyiuke (2000) posits that the cheap source of funds from the capital market remain a critical element in the sustainable development of the economy. She enumerated the advantages of capital market financing to include no short repayment period as funds are held for medium and long term period or in perpetuity, funds to state and local government without pressures and ample (much) time to repay loans.

Statement of the Problem

Considering the number of years, since the Nigerian capital market has been established and the substantial financial resources available in the country, coupled with the existing institutions, one can say that the entire spectrum of the capital market has not been sufficiently active especially when compared with the capital unit of similar or lesser aged units in others developing countries. Emenuga (1998) for instance believed that the stock market is illiquid and blamed the ownership structure in the Nigeria stock market. He concluded that the stock market is small and has few listed companies, low capitalization and low volume of transactions. Ariyo and Adelegan (2005) contend that the liberalization of the capital market has contributed to the growth of the market, but that it impact has not been felt at the macroeconomic level of the nation. Every nation view economic growth and development to be the focus of their government as no nation wants to be behind in terms of development pace. This is why all policies including fiscal and monetary centers on resource allocation distribution aiming at improving the channeling process of gearing savings into investment. Since the capital market is the medium for long-term fund acquisition, therefore its activities and performance requires stringent study to enhance improvement and encourage or foster economic growth and development.

Capital market being a vital institution facilitates economic development. It is true that so many parties are interested in knowing the efficiency of the capital market. The small and medium investors can be motivated to save and invest in the capital market only if their securities in the market are appropriately priced. This information content of events and its dissemination determine the efficiency of the capital market, that is, how quickly and correctly security prices reflect these information show the efficiency of the capital market. The problem of this study is to ascertain the correlation between market efficiency in the capital market and industrial development in Nigeria.

Objectives of the Study

The objective of the study is to undertake a comparative analysis of the efficiency of the stock market. This purpose can be viewed from the following stated objectives below:

i. To examine the impact of the Nigerian stock exchange on economic development in Nigeria.
ii. To provide adequate liquidity to investors, broaden the ownership base of asset.
iii. To investigate the effort of the stock market in funds mobilization.
iv. To examine the factors militating against the efficiency of Nigerian capital market operation?

Research Hypotheses

The hypotheses tested in the course of this research work are the followings; which are presented in null form.

Hypothesis One

Ho: The Nigerian Stock Exchange has no significant effect on economic development in Nigeria.

Hypothesis Two

$H_{o:}$ Government and Investors has no confidence in the market source of funds protection

Hypothesis Three

$H_{o:}$ Capital market has no significant impact in mobilizing funds in Nigeria

Significance of the Study

An efficient market is a market in which price fully reflect all information. This means that no possibility exists of making sustainable excess returns and the price follow a random walk. An efficient and integrated stock market is an important infrastructure that facilitates capital formation. The efficiency with which the capital formation is carried out depends on the efficiency of the capital markets and financial institutions. A capital market is said to be efficient with respect to corporate event announcement, stock split, buy back, right issue, bonus announcement, merger and acquisition dividend e.t.c. contained information and its disseminations. Since the capital market is the medium for long-term fund acquisition, therefore its activities and performance requires stringent study to enhance improvement and encourage or foster economic growth and development. The study will be useful to scholars of financial discipline, the government of this nation, participants or operators in the capital market and other stakeholders as it will provide policy recommendations

on the basis of its findings.

II. Literature Review

2.1 Stock Market and Economic Development

There exists a voluminous literature concerning the impact of stock market in the process of economic development of a country. The most important and systematic early contribution on financial and economic development came from Joseph Schumpeter. Schumpeter (1912) contended that financial development causes economic development that financial markets promote economic growth by funding entrepreneurs and in particular by channeling capital to the entrepreneurs with high return projects. However, a systematic approach to the issue has been addressed with the empirical study by Goldsmith (1969). He demonstrated a positive correlation between financial development (measured by the value of financial intermediary assets relative to GNP) and economic growth. But the seminal work of McKinnon (1973) and Shaw (1973) brought to the forefront the role of financial development in promoting economic growth. Their argument was that the financial liberalization and deepening in countries that suffer from 'shallow finance' or 'financial repression' are critically important to the economic growth of these countries. Ever since this pioneering contribution, the relationship between economic growth and financial development remained an important issue of debate among academicians and policy makers De Gregorio and Guidotti,(2005). There is now a growing theoretical and empirical body of literature on how financial intermediation mobilizes savings, allocates resources, diversifies risks, and contributes to economic growth Jbili, Enders, and Treichel, (2008); Greenwood and Jovanovic, (2000). These early works, though insightful, lacks rigor analytical structures. Starting from the beginning of 1990s, a growing body of work builds a series of analytical frameworks which show how the financial intermediaries and markets appear endogenously to contribute to long-run economic growth. Levine (2008), Jacque (2011), Tufano (2013), Chou (2007), Agarwal (2000) and Chakraborty (2008) have contributed a lot to the literature in this direction. This theoretical and empirical explanation on the nexus between capital market and economic growth of a country has been given a new tint with the development of Efficient Market Hypothesis (EMH) by Fama (1965). Then it has been argued that for capital market to contribute to economic growth and development of a country, it must operate efficiently. If the market operates efficiently, confidence will be generated in the minds of the public and thus, investors will be willing to part with hard earned funds and invest them in securities with the hope that in future they will recoup their investment. On the other side, where the market is highly and unreasonably speculative, investors will be discouraged to invest their funds. The implication is that the entrepreneurs cannot raise additional capital for expansion. Such a situation would have detrimental effect on economic growth of any country. Thus, it suffices to say that capital market efficiency is a necessary condition for growth and development of a country.

In an exposition, Gabriel (2012) as enunciated by Nyong (2013) lay emphasis on the Romanian capital market and conclude that the market is inefficient and hence, it has not contributed to economic growth of Romania. Demiurgic-Kunt and Maksimovic (2008) have shown and re-emphasized the complementary role of the stock market and banks that they were not rival or alternative institutions using 30 countries from 1980 to 1991. Levine and Zervos (2009) used pooled cross country time series regression of 47 countries from 1976 to 1993 to evaluate whether stock market liquidity is related to growth, capital accumulation and productivity. They towed the line of Demiurgic-Kunt and Levine (1996) by conglomerating measures such as stock market size, liquidity and integration with world market, into index of stock market development. The rate of gross domestic product (GDP) per capita was regressed on a variety of variables designed to control for initial conditions, political instability, investment in human capital and macro-economic condition and then, included the conglomerated index of stock market development. They found empirically that the measures of stock market liquidity were strongly related to growth, capital accumulation and productivity while stock market size does not seems to correlate to economic growth. Oke and Adeusi (2012) stated that the Nigeria capital market provides the necessary lubricant that keeps turning the wheel of the economy. It is not only providing the funds to projects of best returns to fund owners. This allocation function is critical in determining the overall growth of the economy. In a study carried out by Barlett (2000), he stated that a rising stock prices have two main-effects on the economy; first it raises wealth in the economy. This increase in wealth raises the amount of consumer spending and thereby increases the wealth of the nation. Secondly, rising stock prices can increase investment spending. We see that one way a firm can finance investment spending, is to issue stock. If stock prices rise, it can raise more money per share of the stock issued. Oke (2012) in his research work examining the effect of capital market on economic growth; a case of the oil and gas sector in Nigeria, he found that there exists a positive relationship between stock market and the oil and gas sector and the economy as a whole. He further suggested the followings for better capital market operation and performance; the market should be operated in a transparent manner, there should be a review downward on the cost of raising funds in the market, so to enhance its competitiveness and improve attractiveness to the major, and the determination of stock prices should be deregulated. Osaze (2012) sees the capital market as a driver of any economy to growth and

development because it is essential for long-term growth capital formation. It is crucial in the mobilization of savings and channeling of such funds i.e. savings to profitable self-liquidating investment. Therefore, the Nigeria stock market provides the necessary lubricant that keeps turning the wheel of the economy. Okereke (2008) states that the capital market is make up of markets and institutions which facilitate the issuance and secondary trading of long-term financial instruments. Unlike the money market which functions basically to provide short term funds, the capital market provides the industries and governments long term funds to meet their long term capital requirement such as financing of fixed investment like buildings, plants, machinery, bridges, etc. Therefore, the capital market plays a very active role in the stimulation of economic growth and development. However, in the absence of well-functioning capital market, economic growth and development would be hampered, as the money market is not designed to provide such funds. Hence, the stock market is at that core of the capital market development in any country. Abu (2009) examines whether stock market development raises economic growth in Nigeria, by employing the error correction approach.

2.1.1 Capital Market

Capital market is described as the market where medium and long terms finance can be raised Akingbohungbe, (1996). Capital market offers a variety of financial instruments that enable economic agents to pool, price and exchange risk. Through assets with attractive yields, liquidity and risk characteristics, it encourages saving in financial form. This is very essential for government and other institutions in need of long term funds Nwankwo, (1999). According to Al-Faki (2006), the capital market is a network of specialized financial institutions, series of mechanism, processes and infrastructure that, in various ways facilitate the bringing together of suppliers and users of medium to long term capital for investment in economic developmental project". The capital market is divided into the primary and the secondary market. The primary market or the new issues market provides the avenue through which government and corporate bodies raise fresh funds through the issuance of securities which is subscribed to by the general public or a selected group of investors. According to Soyede (2005) Primary market is a market for new securities. It is a platform where the company or government can raise money for investment or where already quoted companies can raise fresh funds for expansion. Both the Securities and Exchange Commission (SEC) and the Nigerian Stock Exchange (NSE) are involved in primary market activities.

The secondary market provides an avenue for sale and purchase of existing securities. According to Pandey (2006), it is a type of market where existing securities of a market are traded on daily and continuous basis. It is the market for existing securities. This consists of exchanges and over-the counter markets where securities are bought and sold after their issuance in the primary market. According to Oba (2009) money market is a forum where short term capital is sourced. Therefore the corporate body that requires such fund creates instruments with which to source such funds. The life span of such funds usually ranges from few hours to about twenty-four months or two years. According to Olowe (1997), money market is the market where money is invested for periods of up to one year maturity. The instrument or securities traded in the market are called money market instruments. Osaze (2010) sees the capital market as the driver of any economy to growth and development because it is essential for the long-term growth capital formation. It is crucial in the mobilization of savings and channeling of such savings to profitable self-liquidating investment. Capital market is defined as the market where medium to long-term finance can be raised Akingbohungbe, (1996). In another exposition, Ekezie (2012) noted that capital market is the market for dealings (i.e. lending and borrowing) in longer-term loanable funds. Mbat (2001) described it as a forum through which long-term funds are made available by the surplus to the deficit economic units. Nyong (2007) viewed the stock market as a complex institution imbued with inherent mechanism through which long-term funds of the major sectors of the economy comprising households, firms, and government are mobilized, harnessed and made available to various sectors of the economy.

2.1.3 Functions of Nigerian Capital Market

There are salient functions which are performed by capital market in any economy. According to Ezeoha,Ebele & Ndidi Okereke, (2009), functions of the Nigerian Capital Market include, among others, the following:

i. Provision of an additional channel for engaging and mobilizing domestic savings for productive investment
ii. Fostering the growth of the domestic financial services such as life insurance and pension funds
iii. Improving the efficiency of capital
iv. Facilitating the transfer of business enterprises from the public sectors to the private sector
v. Providing access to finance for small and medium companies (Real Sector and Financial Analysis Sector Division, 2007).
vi. It provides opportunities for companies to borrow funds needed for long-term investment purposes.
vii. It provides avenue for the marketing of shares and other securities in order to raise fresh funds for expansion of operations leading to increase in output/production.

viii. It provides a means of allocating the nations real and financial resources between various industries and companies. Through the capital formation and allocation mechanism, the capital market ensures an efficient and effective distribution of scarce resources for the optimal benefit to the economy.
ix. It reduces the over reliance of the corporate sector on short term financing for long term projects and also provides opportunities for government to finance projects aimed at providing essential amenities for socioeconomic development.
x. The capital market can aid the government in its privatization programme by offering her shares in the public enterprises to members of the public through the stock exchange.
xi. The capital market also encourages the inflow of foreign capital when foreign companies or investors invest in domestic

2.1.4 Functions of the Nigeria Capital Market

i. The promotion of rapid capital.
ii. It is machinery for mobilizing long-term financial resources for industrial development.
iii. The provision of an alternative source of fund other than taxation for government.
iv. The mobilization of savings from numerous economic units for growth and development.
v. The provision of liquidity for any investor or growth of investors.
vi. The broadening of the ownership base of assets and the creation of a healthy private sector.
vii. It is an avenue for effecting payment of debts
viii. The encouragement of a more efficient allocation of new investment through the pricing mechanism.
ix. The creation of a built in operational and allocation efficiency within the financial system to ensure that resources are optimally utilized at relatively little cost.
x. It is a necessary liquidity mechanism for investors through a formal market for debt and equity securities.

2.1.5 The Nigerian Stock Exchange

As one of the constituencies of the capital market, the exchange is a private, nonprofit making organization, limited by guarantee. It was incorporated via the inspiration and support of businessmen and the federal government. But owned by about 350 members. The membership includes financial institution, stockbrokers and individual Nigerians of high integrity, who have contributed to the development of the stock market and Nigerian economy.

The Nigerian stock exchange started with the incorporation of the then Lagos stock exchange in September 1960. Trading commenced on the exchange in 1961 after the enactment of the Lagos stock exchange Act of 1961, the self regulatory organization was subsequently reorganized and renamed the Nigerian stock exchange in December 1977, based on the report and recommendation of Pius Okigbo financial system review commission.

The stock exchange is thus an institution of capital market, which provides trading floors where all dealing members operates on every business day. The exchange now has Thirteen (13) branches including the head office and all the branches function principally as trading floor namely: Lagos, Abuja, Kaduna, Port Harcourt, Kano, Onitsha, Ibadan, Yola, Benin, Uyo, Abeokuta, Owerri and Ilorin. Companies listed on the exchange cut across the economic sectors of Nigeria and include local affiliates or subsidiaries of multinationals, such as Mobil, Total, Guinness, Unilever, Glaxo Smithkline, Dunlop, Cadbury Schwepps, Chevron, Texaco, Nestle and Coca-Cola e.t.c.

2.2 Theoretical Review

2.2.1 Capital Market Theory

In finance, the efficient market hypothesis (EMH) asserts that financial markets are ‘‘informationally efficient’’. That is one cannot consistently achieve returns in essence of average market returns on risk adjusted basis, given information available at the time the investment is made. There are three major versions of the hypothesis: ‘‘weak’’, ‘‘semi strong’’ and ‘‘strong’’. The weak hypothesis claims that prices on traded assets already reflect all past publicly available information. Semi strong EMH claims that prices reflect all publicly available information and that prices instantly change to reflect new public information. The strong EMH on the other hand additionally claims that prices instantly reflect hidden or insider information. Various studies have pointed out signs of inefficiency in financial markets. Critics have blamed the belief in rational market for much of the late 2000s financial crises. In response, proponents of the hypothesis have stated that market efficiency does not mean having no uncertainty about the future, that market efficiency is a simplification of the world which may not always hold true, and that the market is practically efficient for investment purposes for most individuals. Historically, there was a very close link between EMH and the random-walk model and then the Martingale model. The random character of stock market prices was first modeled by Jules Regnault in 1863 and then by Louise Bachelier in 1900.

Criticism of the EMH

Investors and researchers have disputed the efficient market hypothesis both empirically and theoretically. Behavioral economist attributes the imperfections in financial markets to a combination of cognitive biases such as overconfidence, over-reaction, representative bias, information bias and various other predictable human errors in reasoning and information processing. This has been researched by psychologist such as Daniel Kahneman, Amos Tversky and Paul Slovic. These errors in reasoning lead most investors to avoid value stock and buy growth stocks at expensive prices which allow those who reason well to profit from bargains in neglected value stocks.

Burton Malkiel a well known proponent of the general validity of EMH, has warned that certain emerging market such as China are not empirically efficient, that the Shanghai and Shenzhen market unlike in United State exhibit considerable serial correlation (price trend), non-random walk and evidence of manipulation.

2.2.2 Capital Asset Price Theory

Capital Asset Price theory developed by William (1964). In exposition, Capital Asset Pricing theory predicts the behavior of capital market in absence of a positive micro economic theory dealing with the condition of risk involved in the market. A number of economists have maintained that the capital market has little or nothing to offer to real economic activity Stiglitz, (1989); Mayer, (1989); Harris and Raviv, (1991). Bekaert and Harvey (1997) have a different opinion. They outlined what an efficient capital market would mean for an economy and a country at large. Ability to Diversify: Investors would have means to diversify their portfolios. Individuals can diversify firm specific risks, thus making investment in firms more attractive. This is possible in an efficient market. Change of Ownership: managers are disciplined indirectly through this means. Non-competent managers make stock prices to decline below the potential value of the assets. Efficiently, these managers are removed and replaced with one that can increase the value of the assets. Managers with productivity-decreasing actions are weeded out. Innovation: An efficient capital market affects entrepreneurs in whole positive dimension. Entrepreneurs considers, not only profits generated in a new venture to the public. This provides long term productivity for the economy. Applegarth (2004) highlighted areas where the capital market makes input as to developing and growing the economy; Private Sector Development: The prospects for private sector growth in developing economies are being influenced by the access to and ease in movement of financial resources. Economic growth entails amongst other things, the extent at which existing firms can borrow and grow, the ability of emerging firms to act entrepreneurially, their willingness to invest in assets and the ability to allocate their assets freely. Liquidity: liquidity has a proven relationship with economic growth. Liquidity is generated by the increase in the number of firms and investors participating in the market.

2.3 Empirical Studies

There has been growing concern on the market efficiency of the capital markets of any nation's economy Oyejide, (2004); Levine and Zervos, (2009); Demirgue-Kunt and Levine, (1996); Nyong, (2007); Sule and Momoh, (2009); Ewah, Esang and Bassey, (2009). There have been mixed results; while some are in support of a positive relationship, some negative relationship and others do not find any empirical evidence to support such conclusion. For instance,

Ezeoha,Ebele & Ndidi Okereke, (2009). Using quantitative research designs to investigate the relationship that exists between stock market development and the private investment growth in Nigeria. They discovered that stock market development promotes domestic private investment growth and that the stock market development has not been able to encourage the flow of foreign private investment into Nigeria.

Akpeta and Ramah (2012) they examined the impact of the capital market in the development of the Nigerian economy. The main objective includes; identifying the importance of the capital market using time series data span from 1992 to 2007 and the Ordinary Least Square and Cochrane-Orcutt iterative methods were used to analyze the data. It was discovered that the capital market has not contributed positively to the development of the Nigerian economy. However, there is a positive correlation between the rate of transactions in the capital market and the development of Nigerian economy. It is recommended that stringent requirement for entry into the capital market should be relaxed and adequate publicity should be given to the activity at the capital market, it is believed that when these recommendations are implemented, the impact of capital market on the economy will be positive.

Mishra, (2010) in their study examined the impact of capital market efficiency on economic growth in India using the time series data on market capitalization, total market turnover and stock price index over the period spanning from the first quarter of 1991 to the first quarter of 2010. The application of multiple regression model shows that the capital market in India has the potential of contributing to the economic growth of the country. This is as a result of high market capitalization and relatively high market liquidity. Thus, the market organizations and regulations should be such that large number of domestic as well as foreign investors enters

the market with huge listings, investments, and trading so that the very objective of optimal allocation of economic resources for the sustainable growth of the country can be ensured.

Usman and Adejare (2012) their study empirically examined the effect of capital market operations on Nigeria economy, in line with the objectives of this study, secondary data were obtained from central bank of Nigeria statistical bulletin covering the period of 1990 to 2010. In concluding the analysis, multiple regressions were employed. Following the outcome of this study, it is therefore concluded that the Nigerian capital market has tremendous influence on the growth rate of the economy and the performance in terms of capital mobilization accessibility to savers and users of funds with the aim of mobilization and allocation of productive resources to aid national economic development.

Nyong (2007) developed an aggregate index of capital market development and used it to determine its relationship with long-run economic growth in Nigeria. The study employed a time series data from 1970 to 1994. Four measures of capital market development ratio of market capitalization to GDP (in %), ratio of total value of transactions on the main stock exchange to GDP (in %), the value of equities transactions relative to GDP and listing were used. The four measures were combined into one overall composite index of capital market development using principal component analysis. The financial market depth was included as control. It was found that the capital market development is negatively and significantly correlated with the long-run growth in Nigeria.

Demiurgic-Kunt and Maksimovic (1998) cited in Henry (2000) found a relationship between economic growth and the stock market activity in the field of transmission of security (secondary market) more than in funds channeling (primary market). Ewah, Esang and Bassey, (2009) appraise the impact of the capital market efficiency on the economic growth of Nigeria using time series data from 1961 to 2004.They found that the capital market in Nigeria has the potential of growth inducing but it has not contributed meaningfully to the economic growth of Nigeria because of low market capitalization, low absorptive capitalization, illiquidity, misappropriation of funds among others. Harris (1997) did not find hard evidence that stock market activity affects the level of economic growth.

Demirgue-kunt and Levine (1996) using data from 44 countries for period 1986 and 1993 found that different measures of stock exchange size are strongly correlated to other indicators of activity levels of financial, banking, non-banking institutions as well as to insurance companies and pension fund. They concluded that countries with well-developed stock markets tend to also have well developed financial intermediaries. Again,

Levine and Zervos (2009) used pooled crossed country time series regression of 47 countries from 1976 to 1993 to evaluate whether stock market liquidity is related to growth, capital accumulation and productivity. They towed the line of Demiurgue-Kunt and Levine (1996) by conglomerating measures such as stock market size, liquidity and integration with world market, into index of stock market development. The rate of Gross Domestic Product (GDP) per capital was regressed on a variety of variables designed to control for initial conditions, political instability, investment in human capital and macroeconomic condition and then included the conglomerated index of stock market development. They found empirically that the measures of stock market liquidity were strongly related to growth capital accumulation and productivity while stock market size does not seems to correlate to economic growth.

Ujunwa and Salami (2010) used ordinary least square regression to investigate stock market development and economic growth in Nigeria. They found out that stock market size and turnover ratios are positive in explaining economic growth while stock market liquidity coefficient was negative in explaining long-run growth in Nigeria.

Aremu, Suberu and Ladipo (2011) used quantitative research design to investigate the impact of Nigerian capital market operations on the local investment in Nigeria. The result shows that there is a strong empirical relationship between Nigerian capital market operations and the local investors in the market.

Kolapo and Adaramola (2012) used Johansen co-integration and Granger causality tests to investigate the impact of the Nigerian capital market on economic growth. Their result shows that the Nigerian capital market and economic growth are co-integrated; meaning that there is relative positive impact the Nigerian capital market on the economic growth of the country.

Oke and Adeusi (2012) in a study "Impact of Capital Market Reforms on Economic Growth: The Nigerian Experience" using co-integration and ordinary least square regression. The study reveals that capital market reform positively impact on the growth of Nigerian economy on the long run.

In a recent study by Mondher, Olivier and Omar (2013) on impact of macroeconomic factors on stock exchange prices: Evidence from USA, Japan and China using Autoregressive Distributive LAG ARDL Co-integration approach. The study found different result from one country to another. The result shows that USA Economy was most affected by financial crises in 2007; Japanese economy slump after 1990 and China is least affected economy by financial crises, 2007.

Osinubi and Amaghionyeodiwe (2003) examined the relationship between the Nigerian stock market

and economic growth during the period 1980- 2000. Unfortunately, their results did not support the claim that stock market development promotes economic growth.

Adam and Sanni (2005) examined the role of stock market in Nigeria's economic growth using Granger-Causality test and regression analysis. The study 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 study advised that government should encourage the development of the capital market since it has a positive relationship with economic growth.

Obamiro (2005) investigated the role of the Nigerian stock market in the light of economic growth. The author reported 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, and to attain higher economic growth.

Ewah, Esang and Bassey (2009) appraised the impact of the Nigeria capital market efficiency on the economic growth of the nation using time series data from 1961 to 2004. They found that the capital market in Nigeria has potential of growth inducing but it has not contribute meaningfully to the economic growth of Nigeria because of low market capitalization, illiquidity, misappropriation of funds among others.

Afees and Kazeem (2010) critically and empirically examined the causal linkage between stock market and economic growth in Nigeria between 1970 and 2004. The indicator of the stock market development used are market capitalization ratio, total value traded ratio and turnover ratio while the growth rate of gross domestic product is used as proxy for economic growth, using the granger causality (GC) test, the empirical evidence obtained from the estimation process suggests a bidirectional causality between turnover ratio and economic growth, a uni-directional relationship from market capitalization to economic growth and no causal linkage between total value traded. The result of the causality test is sensitive to the choice of variable used as proxy for stock (capital) market. Overall the result of the G.C test suggested that capital market drive economic growth.

Samina and Ayub (2013) used co-integration and error correction techniques to investigate the impact of bank specific and macroeconomic indicators on the profitability of commercial banks. The study found out that there is significant impact of bank specific variables (asset size, total deposits to total assets, credit) and macroeconomic variables on ROE and credit risk and interest rate have also a significant impact on ROA. This study falls to recommend the next line of action after identifying the effect of macroeconomic variables and bank specific indicators on bank profitability and did not state whether the effect is negative or positive which is a research gap. Therefore, this study will be subjected to extend the work of Kolapo and Adaramola in order to update their data and some reviews used by them.

III. Methodology

This study adopts an econometric approach in the analysis of the market efficiency in the capital market context, using Nigeria as a case study. It adopts the Ordinary Least Square (OLS) and Error Correction Mechanism (ECM) techniques to test for both the short and long-run relationship between stock market variables and the economic position of Nigeria. The technique will help in the determination of the relationship subsisting between the economic growth of a nation and important capital market weapons like market capitalization, all price index, Value of Transaction and Inflation rate aimed at achieving objective economic solution. This is in bid to establish the core determinants of economic growth both on the short and long-run in developing countries using Nigeria as a case.

3.1 Model Specification

The research method adopted in this study is based on the modification of Adaramola and Kolapo (2012).The model for this study assumes an underlying relationship between same long-term securities control variables that can influence or determine the level of economic growth of a nation. This is backed up by the plethora of evidence given in various literatures and theoretical framework that underlies the concept of economic growth.

In respect of this, the model that is aimed at determining the level of economic growth with peculiarity to the Nigerian is given as: -

$GDP = f(MCAP, API, VTS, INFR, \mu)$ .....(I)

This model can for the purpose of simplicity be stated in equation terms as depicted below: -

$GDP = \delta + \beta MCAP + \alpha API + \gamma VTS + \lambda INFR + \mu$ ……(II)

Where: -

GDP - Gross Domestic Product
MCAP - Market Capitalization
ASI - All Share Index
VTS - Value of Transaction

INFR - Inflation Rate
F - Funtional Notation
μ - Error Term
β,δ,α,ɮ and ƛ - Coefficients of Estimates

To avoid spuriousity in estimation, the model can also be stated in it log-linearized form as depicted below: -

Log(GDP) = δ + βLog(MCAP) + αLog(API) + ɣLog(VTS) + ƛLog(INFR) + μ ….(III)

Where: -
Log - Natural Logarithm

Also from equation III above, an error correction mechanism (ECM) model can be formulated as depicted below: -

$$\Delta \, \mathrm{Log(GDP)} = \delta + \sum_{i=0}^{n} \beta \, \mathrm{Log(MCAP)}_{t-1} + \delta + \sum_{i=0}^{n} \alpha \, \mathrm{Log(ASI)}_{t-1} + \delta \quad + \sum_{i=0}^{n} \gamma \, \mathrm{Log(VTS)}_{t-1} + \delta + \sum_{i=0}^{n} \lambda \, \mathrm{Log(INFR)}_{t-1} + \delta + \sum_{i=0}^{n} (\mathrm{ECM})_{t-1} + \delta + \sum t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{(IV)}$$

Where: -
Δ - Change
t-1 - Lagged value of each variables
$\sum_t$ - White noise residual
$\sum_{i=0}^{n}(\mathrm{ECM})_{t-1}$ - Error Correction Model

In testing the long-run relationship between the dependent and the independent variables, equation V can be conducted by placing some restrictions on estimated long-run coefficient of variables. Hence, the hypothesis for testing in this study is given as:-

H_0: - δ = β = α = ɮ = ƛ … (No Long-run relationship)
H_1: - δ ≠ β ≠ α ≠ ɮ ≠ ƛ … (There is Long-run relationship)

3.3 Estimation Techniques

This study adopts the Augmented Dickey Fuller (ADF) test of the Unit Root to test the presence of unit root culminated in order to further test for the co-integrating relationship among variables. The Johansen's co-integration framework will be adopted with respect to the ECM model specified above for the study.

If co-integration exists alongside its extents and forms, the next step is to develop an over-parametized Autoregressive distribution model (ECM 1) and a Parsimonious Error Correction Model (ECM 2) that incorporates long-run equilibrium relationship and short-run dynamics. This is in bid to determine the long-run determinants and relationship among variables unlike the usual Ordinary Least Square analysis that is prone to spuriousity of result and short-run oriented.

3.4 Sources of Data

The study is carried out using a time series annual data of Nigeria from 1985 through 2015. The data needed in carrying out this research work were sourced from secondary sources. This source includes; Central Bank of Nigeria (CBN) Statistical Bulletin, 2016. These data where painstakingly extracted from the soft copy of the above names sources as made available by the authorities and via the internet. They were carefully analysed and the appropriate calculations where made where necessary based on the derivation formular given in the literatures.

IV. Results and Discussion

4.1 Presentation of Ordinary Least Square Result

In the respect of the objective of the study to establish the short-run and long-run relationship between variables, the ordinary least square result showing the short-run relationship is presented in the table below: -

Table 4.1: **- Ordinary Least Square (OLS) Results**

GDP	Coefficient of Estimates	T- Statistics	Probability Value
C	8.995583	15.72244	0.0000
MCAP	0.645400	4.946076	0.0001
ASI	0.330390	3.301098	0.0031
VTS	-0.082990	-1.088370	0.2877
INFR	0.013562	0.356620	0.7246

R^2 = 0.989339 **Adjusted R^2 =** 0.987485 **F-Stat =** 533.6100 **DW* Stat=** 1.297932

Sources: - OLS result computed (See Table B in appendix)

From the above table, it could be inferred that the short-run relationship between gross domestic product and the explanatory variable can be expressed mathematically below: -

GDP = $8.995583 + 0.645400_{\mathbf{MCAP}} + 0.330390_{\mathbf{ASI}} - 0.082990_{\mathbf{VTS}} + 0.013562_{\mathbf{INFR}}$

4.2 Interpretation of Ordinary Least Square Result

The result above shows that the constant parameter is directly related with gross domestic product, it has a positive coefficient of 8.995583 which implies that if all explanatory variables are held constant in the short-run, gross domestic product will increase by 8.995583 units. The inflation rate (INFR) showed a positive coefficient of 0.013562 which implies that a unit increase in the level of inflation rate will result into 0.013562 units increase in the value of gross domestic product. Also, the coefficient of All Share Index (ASI) showed a figure of 0.330390 which implies a positive relationship between all price index and economic growth. A unit increase in all share index will lead to 0.330390 units increase in the value of GDP. The coefficient of volume of transactions (VTS) showed a negative figure of 0.082990 which implies a negative relationship with the dependent variable. It therefore implies that a unit increases the level of transactions volume will result into 0.082990 units decrease in the value of GDP. Meanwhile, the coefficient of market capitalization (MCAP) showed a figure of 0.645400 which implies a positive relationship between market capitalization and economic growth. An increase in market capitalization value therefore will lead to 0.645400 units increase in the level of Gross Domestic Product (GDP).

Only two explanatory variables (ASI and MCAP) are in conformity with the prior expectation in the short-run as they show expected results from the analytical result while other two variables (VTS and INFR) are not in conformity with prior expectation result. Meanwhile, the coefficient of multiple determinants (R^2) showed a coefficient of 0.989339 which implies 98.93% explanation of the behaviour of Gross Domestic Product by the totality of the explanatory variables (MCAP, ASI, VTS and INFR) on the short-run. The Adjusted R^2 further prove this with the adjusted value of 0.987485 which implies a 98.75% explanation of the behaviour of economic growth by the totality of the explanatory variables with the remaining 1.25% behaviour attributed to other variables outside the model otherwise referred to as the stochastic variables.

4.3 Tests of Stationarity of Variables (Unit Root Test)

Performing a unit root test for time series model is considered mandatory to establish the stationarity of the variables in such model. This is more reason why this study considers it necessary to test for the stationarity of the variables in this model based on the following hypothesis.

H_0: - X_t has a unit root i.e. data is non-stationary

H_1: - X_t has no unit root i.e. data is stationary

Decision Rule: If the Augmented Dickey Fuller (ADF) statistics is greater than 5% Mackinnon critical value (in absolute terms), X_t is stationary, we accept the alternate hypothesis (H_1) and reject the null hypothesis (H_0). The Augmented Dickey Fuller as duly presented in Table C in the appendix is summarized in table 4.2 and 4.3 below.

***Table 4.2*: -Unit Root Result at Level**

Variables	ADF Statistics Value	Mackinno Critical Value @ 5%	H_0	H_1	Remarks
GDP	-2.488146	-2.9798	Accept	Reject	Non-Stationary
MCAP	-0.634560	-2.9798	Accept	Reject	Non-Stationary
ASI	-1.881748	-2.9798	Accept	Reject	Non-Stationary
VTS	-0.318155	-2.9798	Accept	Reject	Non-Stationary
INFR	-3.020315	-2.9798	Reject	Accept	Stationary

***Source*: -** See URT result @ level (Table C in Appendix)

The table above shows that all variables except inflation rate (INFR) are non-stationary before differencing. The ADF statistics of the four variables shows a value less than 5% Mackinnon critical value (at absolute value) and therefore, we reject the alternative hypothesis (H_1) and accept the null hypothesis (H_0). In order to ensure the stationarity of data for all the four variables found to be non-stationary at level, we proceed to test for stationarity at first difference. The result of the first differencing as duly presented in the appendix C is summarized below.

***Table 4.3*: - Unit Root Test @ First Difference**

Variables	ADF Statistics Value	Mackinno Critical Value @ 5%	H_0	H_1	Remarks
GDP	-3.260307	-2.9850	Reject	Accept	Stationary
MCAP	-4.087441	-2.9850	Reject	Accept	Stationary
API	-3.398487	-2.9850	Reject	Accept	Stationary

VTS	-4.087441	-2.9850	Reject	Accept	Stationary

***Source*: -** See URT result (Table Din Appendix)

Table 4.3 above shows that all variables are stationary at first difference. This is proven by the ADF statistics of each variable (GDP, MCAP, ASI and VTS) that shows a value greater than the 5% Mackinnon critical values respectively. Hence, we reject their respective null hypothesis (H_0) and accept their alternate hypothesis (H_1).

4.4 Summary of Order of Integration

The summary of the Augmented Dickey Fuller (ADF) test of the unit root is presented in Table 4.4 below.

***Table 4.4*: -Summary of Order of Intergration**

Variables	Order of Integration
GDP	I(1)
ASI	I(1)
VTS	I(1)
INFR	I(0)
MCAP	I(1)

4.5 The Augmented Dickey Fuller Test Equations

The result of the ADF test equation carried out on each of the variables is presented in Table 4.5 alongside their respective level of stationarity and lagged period and the corresponding co-efficient of multiple determination (R^2).

***Table 4.5:* -ADF Test Equation**

Variables	Coefficients	Standard Error	T-Statistics	Probability	R^2
D(GDP(-1))	-0.965184	0.296041	-3.260307	0.0036	0.457669
D(GDP(-1),2)	0.054954	0.207434	0.264924	0.7935	
C	0.229214	0.082721	2.770928	0.0111	
INFR(-1)	-0.761610	0.252162	-3.020315	0.0061	0.394217
D(INFR(-1))	-0.032789	0.189414	-0.173108	0.8641	
C	2.034099	0.702766	2.894417	0.0082	
D(VTS(-1))	-1.048495	0.275948	-3.799611	0.0010	0.472515
D(VTS(-1),2)	0.185397	0.207976	0.891436	0.3823	
C	0.325191	0.131275	2.477169	0.0214	
D(ASI(-1))	-0.876723	0.257974	-3.398487	0.0026	0.390244
D(ASI(-1),2)	0.183234	0.218352	0.839171	0.4104	
C	0.178941	0.081928	2.184128	0.0399	
D(MCAP(-1))	-1.181899	0.289154	-4.087441	0.0005	0.512046
D(MCAP(-1),2)	0.211876	0.210176	1.008089	0.3244	
C	0.353222	0.107310	3.291593	0.0033	

***Source*: -** URT *result Computed (See table D in the Appendix)*

4.6 Co-Integration Test

The co-integration test is used in the determination of the long-run relationship that exists between variables. It is in line with the proposition of the Johansen in 1991.

Decision rule: -If the trace statistics (Likelihood ratio) is greater than the 5% critical value at none**, we reject the Null hypothesis (H_0) which says that there is no long-run relationship and accept the Alternate hypothesis (H_1) which says that there is long-run relationship between the variables. The table below shows the result of the Johansen co-integration test obtained from the co-integration result as duly presented in the appendix.

***Table 4.6:* -Presentation of Johansen Co-Integration Results**

Eigen Value	Likelihood Ratio	5% Critical Value	1% Critical Value	Hypothesised No. of (Ce_s)
0.758287	86.37613	68.52	76.07	None **
0.603817	49.45602	47.21	54.46	At most 1 *
0.409889	25.38314	29.68	35.65	At most 2
0.356117	11.66960	15.41	20.04	At most 3
0.008556	0.223424	3.76	6.65	At most 4

*(**) denotes rejection of hypothesis @ 5% (1%) Significant level

L.R. test indicates 2 co-integrating equations @ 5% significant level

***Source*: -** *Co-integration result Computed (See table E in the Appendix)*

The table above shows that long-run relationship (co-integration) exist among gross domestic product and it identified determinants; Market Capitalization (MCAP), All Share Index (ASI), Volume of Transaction (VTS) and Inflation Rate (INFR). This is reflected in the likelihood ratio of the first three rows of the second column of the table that shows a value greater than that of the 5% critical value in the first three rows of the third column respectively. Hence, the hypothesis of no co-integration (H_0) is rejected and that of presence of co-integration (H_1) is upheld.

4.7 Long-run Model

From the co-integration result in the Johansen co-integration test above, it could be inferred that there is long-run relationship among the dependent and the explanatory variables. This prompted the need for the establishment of a co-integration model. This is derived from the Johansen co-integration result from which the equation with the lowest log-likelihood ratio is chosen. The equation with the lowest log-likelihood ratio is the first equation with the corresponding value of -1.137710. It is therefore presented below:

$GDP = - 0.749648_{\mathbf{MCAP}} - 0.331999_{\mathbf{API}} + 0.069078_{\mathbf{VTS}} + 0.075971_{\mathbf{INFR}} - 8.491486$

(0.11102) (0.08711) (0.05632) (0.03818)

Source: *See Johansen Co-integration result in table E in the appendix*

Note: *Standard error statistics are given in parenthesis*

From the above long-run equation, market capitalization (MCAP) and all share index (ASI) showed a negative relationship with foreign gross domestic product on the long-run while the remaining two variables (VTS and INFR) showed a positive relationship with GDP. The constant parameter also maintained a negative value of 8.491486 implying that if all explanatory variables are held constant, gross domestic product will decrease by 8.491486 units on the long-run. This can be explained by the variations of reasons like the capital market performance and other factors like the inflation rate as supported by various studies. Meanwhile, only inflation rate gave the same effect on gross domestic product as in the short-run on the long-run while other variables (including the constant parameter) showed contrary effect on the short-run.

4.7 Error Correction Mechanism

In line with the result obtained in the unit root rest, above, the error correction mechanism showed that the ECM is stationary at level, therefore, an over-parameterized error correction model is required in this analysis and was obtained by using the lag length to ensure that the dynamics of the model is not compromised and properly captured. The result of the over-parameterized error correction model (ECM1) is presented in table 4.7 below:

Table 4.7: Over-Parametized Model (ECM 1)

Dependent Variable = D (GDP, 2)

Variables	Coefficients	Standard Error	T-Statistics	Prob. Value
D(GDP(-1),2)	-0.406125	0.208376	-1.948997	0.0716
C	-0.007451	0.044026	-0.169248	0.8680
D(MCAP,2)	0.483110	0.601587	0.803061	0.4354
D(MCAP(-1),2)	0.441556	0.530505	0.832331	0.4192
D(ASI,2)	0.014164	0.619022	0.022882	0.9821
D(ASI(-1),2)	-0.242546	0.503589	-0.481634	0.6375
D(VTS,2)	-0.103817	0.150078	-0.691758	0.5004
D(VTS(-1),2)	-0.021381	0.120743	-0.177081	0.8620
D(INFR,2)	0.014321	0.034022	0.420928	0.6802
D(INFR(-1),2)	0.007706	0.033805	0.227954	0.8230
ECM(-1)	-0.577276	0.319465	-1.807010	0.0923

$\mathbf{R^2}$ = 0.534037 **DW*-Statistics** = 2.251591 **F-Stat** = 1.604533

Source: *See Over-parameterized ECM result in table F in the appendix*

The summary of the over-parameterized ECM above shows that the coefficient of the ECM is significant with the negative sign (-). It implies it effectiveness in the correction of any deviation that may occur in the long-run. The coefficient is -0.577276 which implies a sharp adjustment rate of approximately 58% to any changes that may occur on the long-run and rate of correction of past deviation in the present period. These means that the present value of GDP adjust very sharply to changes in MCAP, ASI, VTS and INFR.

In order to attain effectiveness of the model, there is the need to simplify the model to a more parsimonious model. The parsimonious model would be gotten by estimating the equation of only those variables that appear significant in the over-parameterized ECM. The table below shows the result of the parsimonious model estimated.

Table 4.8:Parsimonious Model (ECM 2)

Dependent Variables = D (GDP, 2)

Variables	Coefficients	Standard Error	T-Statistics	Prob. Value
C	-0.019317	0.052313	-0.369259	0.7160
D(MCAP(-1),2)	0.377272	0.339596	1.110943	0.2805
D(API(-1),2)	-0.443297	0.406033	-1.091775	0.2886
D(VTS,2)	-0.010451	0.088173	-0.118533	0.9069
D(INFR,2)	-0.000849	0.023962	-0.035413	0.9721
ECM(-1)	-0.054263	0.267419	-0.202914	0.8414

R^2 = 0.776917 **DW* Statistics** = 2.649788 **F-Stat** = 6.316639

Source: *See Parsimonious ECM result in table G in the appendix*

From the result above, the coefficient of the ECM is further proven significant with it conformity to the over-parameterized ECM. The value of the ECM shows a negative of -0.054263. This coefficient in it negative form implies that the speed of adjustment of any past deviation to long-run equilibrium in present period. It therefore indicates that the value of the GDP adjust more sharply to changes in the explanatory variables that it was in the over-parameterized model. However, the parsimonious model shows all the variables is proved insignificant. This is determined by the evaluation of the probability value of each variable. The corresponding probability of a variable must be less than 10% before it is said to be significant. Therefore, it can be deduced from the parsimonious model above that changes in the dependent variable (GDP) are determined by all the variables both in the short-run and long-run.

Furthermore, the table also reveals that all the variables except MCAP are inversely related with GDP with a negative coefficient of 0.443297, 0.010451 and 0.000849 respectively, while MCAP gives a positive coefficient of 0.377272. These therefore implies that an increase in any of the variables except MCAP in the long-run will result into an decrease in the value of gross domestic product (GDP) on the long-run while, the MCAP will increase GDP on the long-run. The coefficient of multiple determinants (R^2) showed an approximate value of 0.776917 which implies that the variables that makes up the model can account for approximately 78% of the behaviour of gross domestic product (GDP). The remaining 22% can be linked to white noise which is usually captured by other variables not present in the model.

4.8 Tests for the Statistical Significance of Parameters

In testing for the statistical significance of each variable, the standard error test is usually employed in long-run analysis. This is done by comparing the standard error statistics with half the coefficient of each variable as given in the Johansen co-integration result in absolute terms. The table below displays the test accordingly in there absolute terms respectively.

Table 4.9: Standard Error Test

Variables	Coefficient	Coefficient/2	Standard error	Decision
MCAP	-0.749648	0.374824	0.11102	Significant
ASI	-0.331999	0.165999	0.08711	Significant
VTS	0.069078	0.034539	0.05632	Insignificant
INFR	0.075971	0.037986	0.03818	Insignificant

The table above indicates that two variables (MCAP and ASI) are statistically significant. This implies that volume of transactions (VTS) and inflation rate (INFR) are not statistically significant in the explanation of the determination of Gross Domestic Product.

4.9 Implication of Findings

The compass of this study is focused on the determination of the core relationship between capital market and economic growth in developing countries with valid evidence from Nigeria. A radical analysis on the study revealed that only one explanatory variable MCAP and the lead value of ASI are in conformity with the prior expectation in the over-parameterized model while other variables including lagged value of ASI are not in conformity with prior expectation and in the parsimonious model MCAP and INFR are in conformity with prior expectation while VTS and ASI are against the a prior stated in chapter three. This implies that MCAP maintain a positive relationship with GDP at present and future while VTS maintains negative relationship with GDP at present and future but ASI and INFR remain unstable on the long-run.

Surprisingly in the long-run equation, all price index and volume of transactions showed a negative relationship with GDP, this is contrary to the prior expectation and the implication is that the price index and transactions of capital market of Nigeria has no significant contribution to the increase in the economic growth of the country likewise the inflation rate. Meanwhile, the test of statistical significance of variables reveals that two variables are statistically significance and the remaining two are statistically insignificant in the explanation

of the behavior of GDP. Also, the F-test reveals that identified variables are sufficient enough in the explanation of the behavior of a nation's economic growth.

V. Conclusion and Recommendations

5.1 Conclusion

The study which focuses on the market efficiency in the capital market in Nigeria, analytical approach to draw meaningful conclusion and also ameliorate the discrepancies that might exist between the two approaches adopted, this is done both on the short-run and long-run. In the overview, the study shows significant relationship between variables both in the short-run and long-run. It then implies that all variables fused together in this research work are significant in the explanation of the behaviour of gross domestic product as proposed by the Yartey and Adjasi (2007). The coefficient of multiple determination, both in the short-run and long-run presents the model adopted as a veritable tool capable of explaining the behaviour of the dependent variable (GDP), hence, emphasizing the importance of each explanatory variable present in the model.

Although, not all explanatory variables show statistical significance, but nevertheless, there is still significant relationship (direct and cross) that cannot be under-estimated between them all. Gross Domestic Product is grossly affected by the level of Nigerian capital market performance and inflation rate in the short-run and long-run respectively. This therefore echoed the need for a nation (most especially developing nations) to pay more serious attention to it inflation rate in order to attain economic development capable of sustaining the economy for whatever motive for which such economy may be increasing. Meanwhile, the main market capitalization of developing nations shows that it can be beneficial to capital market level of such nation in the short-run and passing a positive signal in the long-run. This implies that developing nations should endeavour to desist from depending too much on domestic product as major export, but rather work on measures to diversify the economy such that a change in the market condition of such main market capitalization will have significant effect on gross domestic product level and economy at large.

5.2 Recommendations

Sequel to the conclusion drawn from this study is the need for the recommendation of policies that this study considered necessary for developing countries on the need, reason and management of the Nigerian capital market. It is of necessity to recall that the international monetary fund (IMF) established it in one of its publications the need for effective and stabilize inflation rate to appreciate the value of a nation currency over another nation and encourage the international investors. It is to the backdrop of this assertion that this study in bid to foster effective accumulation, management and usage of capital market by developing nations that the following recommendations were made available;

i. The government of this nation should give more concentration on inflation rate stabilization in order to foster both domestic and international trade
ii. All share index may not be useful in fostering the gross domestic product but the policy makers should make use of capital market in increasing economic growth level because a positive relationship exist between the gross domestic product (GDP) and market capitalization (MCAP). Also, there should be adequate financial resources through equity and debt to boast the economy which will provide opportunity for foreigners to make their share available for public interest.
iii. Monetary policy maker should focus more on regulation of inflation rate because inflation rate has a positive impact on GDP in the short-run which indicate that inflation rate has a power to adjust the gross domestic product sharply. The inflation rate must be stabilizing for investors to be interested in this Nation's investment.
iv. Volume of transactions has no significant impact on the economic growth and also maintains negative relationship with gross domestic product both in the short and long-run therefore, transactions in the capital market channel to another sector like formal financial institutions in order to foster the growth of economy.
v. Improvement in the dealing market capitalization by encouraging more foreign investors to participate in the market, maintain and improve it state of act of technology like automated trading and settlement practices, electronic fund clearance and eliminate physical transfer of shares.
vi. There is also need to restore confidence to the market by regulatory authorities' activities that portray transparency, fair trading transactions and dealings in the stock exchange. It must also address the reported cases of abuses and sharp practices by some companies in the market.
vii. The total listing in the NSE is still a far cry compared to other stock exchanges like South Africa and Egypt. Therefore to increase the number of listed companies; which will also lead to increase in total new issues and market capitalization, there is need to ensure stable macroeconomic environment, encourage foreign multinational companies (MNCs) or their subsidiaries to be listed on the Nigeria Stock Exchange relax the listing requirement to the first her market to encourage quotation and also ensure tax rationalization in the capital market to encourage public interest in shareholdings for new issues, increase the minimum equity

capital requirement for companies other than banks, insurance companies and other financial institutions ,encourage merger, acquisition and consolidation, discriminatory income tax in favour of public quoted companies and aggressive enlightment programme to increase awareness of the benefits of investing in the stock market and seeking quotation at the stock exchange

viii. There is also need to restore confidence to the market by regulatory authorities through ensuring transparency and fair trading transaction and dealing in the stock exchange. It must also address the reported case of abuse and sharp practices by some companies.

ix. Given the present political dispensation, all the tiers of government should be encouraged to fund their realistic developmental programme through the capital market. This will served as a leeway to freeing the resources that may be used in other sphere of the economy.

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Appendix
Raw Data

YEARS	GDP	MCAP	ASI	VTS	INFR	YEARS
1985	67908.6	6.60	127.00	316.60	1.03	1985
1986	69147	6.80	163.80	497.90	13.67	1986
1987	105222.8	8.20	190.90	382.40	9.69	1987
1988	139085.3	10.00	233.90	850.30	61.21	1988
1989	216797.5	12.80	325.30	610.30	44.67	1989
1990	267550	16.30	513.80	225.40	3.61	1990
1991	312139.7	23.10	783.00	242.10	22.96	1991
1992	532613.8	31.20	1107.60	491.70	48.80	1992
1993	683869.8	47.50	1543.80	804.40	61.26	1993

1994	899863.2	66.30	2205.00	985.90	76.76	1994
1995	1933211.6	180.40	5092.20	1838.80	51.59	1995
1996	2702719.1	285.80	6992.10	6979.60	14.13	1996
1997	2801972.6	281.90	6440.50	10330.50	10.21	1997
1998	2708430.9	262.60	5672.70	13571.10	11.91	1998
1999	3194015	300.00	5266.40	14072.00	0.22	1999
2000	4582127.3	472.30	8111.00	28153.10	14.53	2000
2001	4725086	662.50	10963.00	57683.80	16.49	2001
2002	6912381.3	764.90	12137.70	59406.70	12.17	2002
2003	8487031.6	1359.30	20128.90	120402.60	23.81	2003
2004	11411066.9	2112.50	23844.50	222820.00	10.01	2004
2005	14572239.1	2900.10	24085.80	262935.80	11.57	2005
2006	18564594.7	5121.00	33189.30	470253.40	8.55	2006
2007	20657317.7	13294.50	57990.20	1076020.40	6.56	2007
2008	24296329.3	7105.20	31450.80	603069.90	15.06	2008
2009	24794238.7	7030.80	20,827.2	685,717.3	13.93	2009
2010	33984754.1	9918.20	24,770.6	799,910.9	11.80	2010
2011	37543654.7	9672.70	20,730.6	638,925.7	10.30	2011
2012	40544099.9	14800.90	28,078.8	808,994.3	12.00	2012
2013						
2014						
2015						

Source: Central Bank Of Nigeria (CBN)

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