

**IKPEFAN OCHEI AILEMEN<sup>1</sup>**

E-mail: ochei\_ikpefan@yahoo.co.uk

**IKWUETOUGH OGOCHUKWU CYNTHIA<sup>2</sup>**

E-mail: aresforyou@yahoo.com

**OKAFOR TOCHUKWU<sup>3</sup>**

E-mail: tochukwu.okafor@covenantuniversity.edu.ng

**ISIBOR AREGHAN<sup>4</sup>**

Email: areghan.isibor@covenantuniversity.edu.ng

# AN INVESTIGATIVE ANALYSIS INTO CAPITAL MARKET AND ECONOMIC GROWTH IN NIGERIA

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## ABSTRACT:

*The study aims at investigating the impact of capital market on economic growth in Nigeria. The research adopts a time-series research design depending comprehensively on secondary data with coverage from 1983 to 2013. The study employs regression analysis as data analysis method including unit root test using Augmented Dicker Fuller (ADF). The findings from this study suggest that three exhibit positive while one exhibit inverse relationship with economic growth. Also, two variables were statistically significant while the other two were statistically insignificant. We recommend that there should be an improvement in the negativity of All Share Index by encouraging extension of long term funds to investors in the capital market rather than short term funds as it will help to boost the economic growth as more funds would be invested in the economy. Also, there*

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1 Department of Banking & Finance, Covenant University, Ota, Ogun State, FCA, FCIB, ACSI, FNIM

2 Post graduate student, Department of Banking & Finance, Covenant University, Ota, Ogun State

3 Department of Banking & Finance, Covenant University, Ota, Ogun State

4 Doctoral student, Department of Banking & Finance, Covenant University, Ota, Ogun State

*should be an increase in the availability and sufficiency of investment instruments such as options, derivatives, future and convertibles for investors as this will boost the value of transactions in the market.*

**KEY WORDS:****CAPITAL MARKET, ECONOMIC GROWTH, MARKET CAPITALIZATION, LISTED SECURITIES**

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# 1. INTRODUCTION

Years ago, various researches on the capital market acknowledged great attention from modern finance and economics literature bringing about its responsibilities in the establishment of long-term, non-debt financial capital which supports establishments to elude overdependence on debt financing, hence refining company debt-to-equity ratio and equally in the deployment of wealth for national growth. According to Ndako (2010), the capital market is regarded as a multifaceted institution through whereby the long term funds of the key areas of the economy which consist of the households, firms, and government are organized, connected and completely accessible to different segments of the economy. Funds must be resourcefully utilized to maintain businesses and the economies to award their human, material, and controlling resources for ideal productivity in other to conserve economic growth.

The capital market has been known to be an institution that enhances the socio-economic growth and development of both the evolving and well-known economies. This is achieved by means of some of the critical functions which includes; controlling resources, encouraging transformations to advance the financial sectors, financial intermediation services to combine shortage to the surplus sector of the economy, and a genuine device that mobilizes and distributes savings among economical purposes which are needed for the growth and development of the economy (Alile, 1984). This market also aid to transfer investments or long-term funds to companies with increasing output thereby causing economic growth and development (Alile, 1997). Ekundayo (2002) contends that in other for a nation to accomplish viable growth and development, there has should be several local and foreign investments made in the country.

This growth is made possible via the channels suggested by the capital market which could be provided directly or indirectly. Still, long term capital deficiency has caused most African nations, including Nigeria to struggle for economic development. Despite this deficiency, some of the vital roles performed by the capital market include; liquidity formation, savings deployment, risk modification, better reassurance for corporate control, and improved delivery and information system. An increase in the efficiency and usefulness of these functions via quick service distribution can expand the growth rate of the economy (Okereke-Onyiuoke, 2000; Levine and Servos, 1996; Obadan, 1998; McKinnon, 1973).

The theoretical framework on the significances of capital market on economic growth dates back to the period of Schumpeter, (1911) which justified that a deep-rooted financial system can assist technical revolution and economic growth by way of providing financial services and resources to investors. The above contention f Schumpeter, (1911) was later improved as the McKinnon-Shaw, (1973) hypothesis, which is a strategy analysis device for evolving economies with concrete approval and extreme importance on the usefulness of financial systems in assisting capital accretion and financial intermediation.

In mid-1961, Nigerian capital market began operations with few securities specifically eight equities and stocks; with seven British corporations listed on the Nigerian Stock Exchange (NSE). These corporations at the same time had double quotations on the London stock Exchange. The market progressed with 0.3 million shares valued at N1.5m in 334 deals at the commencement of its operations. This value continued to rise progressively

in 2009 to N685,717.3m in 1,739,365 deals and dropped to 1,211,269 deals worth N1,334,783.1 million in 2014 (CBN, 2014). According to the NSE report (NSE, 2009), in 1995 the Federal Government initiated some laws that avoided investors from foreign countries from partaking in the domestic capital market. These laws include; The Foreign Exchange; Nigerian Investment Promotion Commission Degree No 16, 1995; Monitoring and Miscellaneous Provision Decree No 17, 1995; Companies and Allied Matters Decree of 1990 and Investment and Security Act (ISA) 45 of 1999. These laws gave both the Nigerian local investors and foreign investors the equal rights, freedoms and chances to invest in Nigerian capital market securities. An additional crucial procedure included is the Central Security Clearing System (CSCS) which commenced operations in April 1997. It is an essential depository system for all the share certificates of quoted securities new issues.

With a market size of over 233 listed equities and regular strength of the market causing the outcome of the instability induced by global economic crisis, there is a need to study theoretical outlooks regarding the effects of Nigerian capital market on economic growth. From evidence in existing literature across different countries, the arguments are fairly questionable and with mixed results regarding the effects of capital market on economic growth. For example Ben and Ghazouani (2007), and Irving (2005) discovered that capital market does not affect growth. While others maintained that there exists a positive effect between the capital market and economic growth (Mishra et al, 2010; Vazakidis and Adamopoulos, 2009; Brasoveanu et al, 2008), yet others noted that it is negative (Eichengreen and Leblang, 2003). Certain studies viewed the effects to be diverse across countries at various phases of institutional and economic growth (Bekaert et al., 2003; Edwards, 2001) and countries with diverse macroeconomic structures (Arteta et al, 2001). Rancière et al. (2008) found that we could assume the growth effect of capital markets to be lesser in countries with high-income than in countries with middle-income. This study aims at exploring the influence of capital market on Nigerian economic growth. Above is the introduction in Section one. Section two reviews some related literature, Section three deals with the methodology, section four analyzes the data and interprets the results, and lastly, section five summarizes, concludes and recommend based on the findings of the study.

## 2. LITERATURE REVIEW/THEORETICAL AND EMPIRICAL FRAMEWORK

Capital market is the market for raising both medium and long term funds. This market is an institution that provides the services of both lending and borrowing of long term funds. The capital market comprises of two types of market which includes the primary and the secondary market. The primary market is the market where new securities are transacted for cash via investment agents. The resources are then used for capital investment in form of reserved outstanding securities of the company, funding of new plant or equipment, protection of additional working capital, fixing of modern IT infrastructure, enlargement of branches etc. Cash created in the primary market goes to the issuing

company. While, in the secondary market, present securities are transacted and the cash generated goes to the selling investors.

The securities transacted in the capital market can be grouped into fixed income securities and variable income securities. Fixed income securities are instruments that offers fixed income to their investors and these securities include; bonds, debenture, mortgage-backed securities and asset-backed securities. Variable income securities include equities, preference shares and derivative securities. Mbat (2001) defined it as an aid out of which long term funds can be accessible by the via the process of financial intermediation. Nevertheless, not all deficit economic divisions have an easy contact with the capital market even though all surplus economic divisions have contact the capital market. The security of the investors' funds is imposed by limiting the number of debtors in the market. The debtors of the market need to fulfill some specific conditions so as to guarantee that investors are not exposed to excessive risks. This has an intense consequence for the economic growth of any country. Nigerian capital market helps in the revolution of the economy. Savings mobilization, liquidity, corporate control, risk diversion, and procurement of information is modified through capital market operation (Anyanwu, 1998). Thus the operation of the stock market can adjust the speed of economic growth by means of modification of the value of these services (Equakan, 2005). Okereke-Onyuike (2000) speculates that the little financial resources from the capital market is a risky element for the viable growth of the economy.

The researchers listed some of the benefits of capital markets funding, some of which are; no short term repayment period, funds are held for medium and long term period, funds are giving to state and local government with no tensions and these governments are given sufficient time to repay the loan. Nigeria supported the Structural Adjustment Programme (SAP), originated by World Bank in 1986 which motivated economic rules and has led to several transformations in the capital market.

## Performance of the Nigerian Capital Market

Since 1986, studies about the capital market indicators exhibited that the market has faced an outstanding improvement. Originally, dealings in equities in the market were weak due to the level of information distribution and dispensation which has impacted poorly on market behaviours. Nevertheless, via the computerization of transaction and improved transparency in the provision of corporate information, there has been a change in terms of competency in the market. For instance, the market transactions especially the number of listed companies, market capitalization and all share index. The formation of the Second-tier Securities Market (SSM) in 1985 and the deregulation of interest rates in 1989, combined with the sale of some government owned companies in 1991 led to the better performance of all four key indicators such as the number of listed companies, number of listed securities, all share index, and market capitalization. Additionally, the deregulation of interest rate made many private investors to source funds in the equity market as bank lending came to be costly. At the beginning of 2000, the number of registered companies grew by 22.0 percent from 195 to 217 at the end of December. Also in 1987, the number of total securities registered and transacted grew from 244 to an ultimate of 276 in 1996 before falling to 264 in 2010. The major securities transacted in the market during this period were government development stocks, corporate bonds,

debentures, and equities. As at December 2010, securities registered and transacted in the market were 47 government bonds, 7 industry loan and preference shares, and 217 equities (SEC, 2010). A lot was done in the year 2013 that brought the investors' confidence back into the market. Part of the features that drove the market during the year 2013 was the institution of a new electronic trading platform by the Nigerian Stock Exchange (NSE) known as the X-Gen, which will pave way for investors, stockbrokers and other stakeholders to access the market from everywhere at all times.

The NSE took innovative step in its objective of becoming an enormous and planned market by launching a catalyst for enhancing transaction on the exchange, the X-Gen. In addition, the platform should facilitate NSE's 2016 \$1.0tn market capitalization target. This should equally drive the Nigerian capital market's aspirations to move from a frontier market to an emerging market, acquiring participation at the World Federation Exchanges (WFE) and confirm its inclusion on the Morgan Stanley Capital International (MSCI) Emerging Market Index.

The X-Gen will serve as a feasible networking platform for stakeholders and players to gain additional understanding into the fastest developing instrument. The expansion is related to accepting the movement of the global exchanges which emphasizes on scale, scope and efficacy in servicing its markets. Another issue that brought about market growth was the full compliance on the post listing requirement for the companies listed on the exchange. This effort makes the companies to sit tight and comply with the information disclosure and adhere to full corporate governance. Experience has revealed that in various progressive nations, new technology initiation has made it likely to combine stocks without essentially developing it through the addition of more markets and stock exchanges. The Security and Exchange Commission (SEC) registered two Over-the-Counter (OTC) markets in order to maintain the OTC market and tackle the issue of trading platform restrictions. These markets which are; National Association of Securities Dealers (NASD) and Financial Market Dealers Quotation (FMDQ) were created to give unlisted companies an opportunity to transact in the market. The NASD OTC platform offers financial performance of non-listed companies and corporate governance of companies that till now might not be in the public province. Most essentially, this platform provides a prospect for non-listed securities to be traded in a structured and transparent market and there are chances of making shares not registered on the NSE. The need for an OTC market is well understood and more convincing than ever because Nigeria had a portfolio of new public issue of securities for many companies like what occurred in the course of the bank consolidation and stock market boom of 2008, and like what happened during the post Nigerian Enterprise Promotion Acts period of the late 1970s.

The market also received a boost during the year 2013 with the launch of the FMDQ OTC market platform. This was another bold step to deepen and give depth and quality to the fastest growing market in the continent. It was also another opportunity to witness the new level partnership and synergy between the players in the money and capital markets, who are determined to reposition Nigeria, as a viable market in the globe, after 2008 financial crisis.



## Market Capitalization

Market capitalization is one indicator that has been commonly used in evaluating the magnitude of a capital market in an economy. The market capitalization drops in a bearish market and rises in a bullish market. From 1988 to 1994, the total market capitalization was below N10 billion. It later increased to N1.359 trillion in 2003 and N5.12 trillion in 2006. In 2007, market capitalization recorded the maximum worth of N13.229 trillion. But it fell to N7.030 trillion in 2009 as a result of the universal financial breakdown. It later rose to N19.08 trillion in 2013 but decreased by N2.20 trillion in 2014 (CBN, 2014). The proportion of market capitalization to the economy's Gross Domestic Product (GDP) aids to measure the size of the stock market. In 1981, this was 10.5%, but dropped at 7.4% in 1994. It later increased to 9.3% in 1995, 18.9% in 2003, and 25.9% in 2010. In 2011, it fell to 24.0%, but later increased to 35.6% in 2013 (CBN, 2013).

## Listed Securities

In 1961, the total equities listed on the NSE increased from 3 to 13 in 1971, 196 in 2007 and 201 in 2010. For the SSM, as at 1985, it was 1 and later increased to 20 in 1995 and 1996. In 1993, it dropped from 23 and again fell to 19 in 1997 and from then it remained at 16 from 1998 to 2010. The overall securities increased from 8 in 1961 to 261 in 2001, 288 in 2005-2006, 301 in 2008 and then dropped to 265 in 2009, 250 in 2011, and later rose to 279 in 2013, 280 in 2014. With all these changes, total listed securities were still low even with almost 50 years of the existence of the Nigerian Stock Exchange (SEC, 2013; NSE, 2014).

## Value of Transactions

From 1961 to 1975, the NSE annual value was lower than N100 million. Still, it was between N100 million and N600 million from 1976 to 1994. In 1995, the trading value increase and was above N1 billion. It later increased to N120.70 billion in 2003 to N2.379 trillion in 2008. There was a decrease in these transactions from 2009 to 2011. In 2012, it increased to N808.99 billion, N2.38 trillion in 2013 after which it finally fell to N1.34 trillion in 2014 (CBN, 2014). Government Stock was in control of the market between 58.91% and 99.5% from 1961 to 1990, while from 1995 to 2014, industrial securities took over and was in control of the market, most especially equities (CBN, 2014).

## Challenges of the Nigerian Capital Market

The recent events in the Nigerian Capital Market as to why investors are still terrified to raise money in the capital market can be seen as follows; illiquidity challenge of the market, embezzlement of resources & extravagant expenditures, corruption, insufficient information about the market, lack of active control & regulation on the part of the SEC, tardy growth of securities market, deferment in the provision of share certificates,

problem of manual call-over, double taxation, small size of the market, and problem of macroeconomic volatility

## **Empirical studies on the relationship between Capital Market and Economic growth**

Various studies have been carried out on the relationship between capital market and economic growth. For example, Odetayo and Sajuyigbe, (2012) examine “the impact of Nigerian capital market on economic growth and development during the period 1990 – 2011 using ordinary least square regression. The authors discover that the variables have significant impact on the economic growth” (p. 4-7). In the same opinion, Kolapo and Adaramola, (2012) carried out their research and discovered that Nigerian capital market development has a significant relationship with economic growth. Chinwuba and Amos (2011), examine “the impact of the Nigerian capital market performance on the economic development of Nigeria by using the Ordinary least Square regression model. The result indicates that the performance of the capital market impact positively on the economic growth of Nigeria” (p. 409). Mishra, et al (2010) examined the impact of capital market efficiency on economic growth of India using the time series data on market capitalization, total market turnover and stock price index over the period covering from the first quarter of 1991 to the first quarter of 2010. Their study disclosed that there is a connection between capital market efficiency and economic growth in India.

In France, Vazakidis and Adamopoulos, (2009), employed “Cointegration, Granger Causality test and Vector Error Correction model, to examine the relationship between stock market development and economic growth for period of 1965 to 2007. They found that there exists a positive relationship between economic growth and stock markets development” (p. 7-8). Yet, Flavia and Petru, (2010) ascertained that capital markets has not grasped a level of enlargement that would empower it to accomplish its core purpose in the economy, the gap with the countries of Europe still being fairly high. This study will update the work of previous researchers by extending the time frame of the study so as to either validate or disapprove previous work.

## **3. METHODOLOGY**

The statistical method that will be used in this study is Ordinary Least Squares (OLS) econometric method using a time series secondary data from 1983-2013 and unit root test will also be used in this study to test for stationarity. The data were acquired from the Central Bank of Nigeria (CBN) statistical bulletin and World Development Indicator (WDI). The impact of capital market on the growth of the Nigerian economy has observed series of studies and experimental evidences, yet the challenge is not yet resolved, hence, there is need for more research work.

## Statement of Hypotheses

The basic opinions of the study are combined into the following propositions and the investigation will be carried out based on them:

### Hypothesis 1

$H_0$ : Capital market has no significant impact on the growth of the Nigerian economy.

### Hypothesis 2

$H_0$ : There is no positive relationship between value of transactions and economic growth in Nigeria.

## Model Specification

The model attempts to observe the relationship between capital market as it affects the economic growth of Nigeria from 1983 to 2013. GDP which is the dependent variable was measured as a function of independent variables which are ASI, MCAP, VTRAN, ND.

This statement is inscribed in functional form as;

$$GDP = f(ASI, MCAP, VTRAN, ND) \quad (1)$$

This model can further be inscribed in explicit form as;

$$GDP = \alpha_0 + \alpha_1 ASI + \alpha_2 MCAP + \alpha_3 VTRAN + \alpha_4 ND + \varepsilon \quad (2)$$

Where;

$\alpha_0$  - constant term

GDP - Gross Domestic Product

ASI – All Share Index

MCAP – Market Capitalization

VTRAN – Value of Transaction

ND – Number of deals

E - Error term

Where  $\alpha_0, \alpha_1, \alpha_2, \alpha_3, \alpha_4$  are the parameters.

The model was logged so as to disrupt them into a lesser figures and to escape problem of large numbers. The t-1 is the past time period, hence the dependent variable, independent variables and the error term carry the t-1. Hence,

$$\text{LogGDP}_{t-1} = \alpha_0 + \alpha_1 \text{logASI}_{t-1} + \alpha_2 \text{logMCAP}_{t-1} + \alpha_3 \text{logVTRAN}_{t-1} + \alpha_4 \text{logND}_{t-1} + \mu_{t-1}$$

The apriori expectations are  $\alpha_1 > 0$   $\alpha_2 > 0$   $\alpha_3 > 0$  and  $\alpha_4$ , which means we presume a positive connection between the dependent variable and the independent variables.

## 4. DATA ANALYSIS & INTERPRETATION OF THE RESULT

### Data Analysis

The variables presented below include gross domestic product, all share index, market capitalization, value of transaction, and number of deals in Nigeria for a period of 30 years (1983 to 2013). The model identified in chapter three was assessed using the Ordinary Least Square (OLS) estimation.

### Unit root test

Generally, the unit root test encompasses the test of stationarity or non-stationarity for variables used in the regression analysis. The Augmented Dickey Fuller (ADF) test is used in order to examine unit roots. The result is reported in levels and first differences in each case. The decision rule that is applied using ADF is that; if the computed absolute value of the tau statistic ( $|\tau|$ ) exceeds the Dickey Fuller or critical tau values, we reject the hypothesis, in which case the time series is stationary. On the other hand, if the computed  $|\tau|$  does not exceed the critical tau value, we do not reject the null hypothesis, in which case the time series is non-stationary (Gujarati, 2004). Tables 1&2 shows the unit root test for the variables.

► TABLE 1: RESULT FOR AUGMENTED DICKEY FULLER TEST (LEVELS)

| ADF TEST STATISTICS            | INTERCEPT AND TREND | PROBABILITY | CRITICAL VALUES           |
|--------------------------------|---------------------|-------------|---------------------------|
| ADF Test Statistics- LOGGDP    | -1.947              | 0.6056      | 1% critical value -4.297  |
|                                |                     |             | 5% critical value -3.568  |
|                                |                     |             | 10% critical value -3.22  |
| ADF Test Statistics –LOGASI    | -0.712              | 0.9629      | 1% critical value- 4.297  |
|                                |                     |             | 5% critical value -3.568  |
|                                |                     |             | 10% critical value -3.218 |
| ADF Test Statistics – LOGMCAP  | -4.767              | 0.0033      | 1% critical value -4.297  |
|                                |                     |             | 5% critical value -3.568  |
|                                |                     |             | 10% critical value -3.218 |
| ADF Test Statistics – LOGVTRAN | -3.018              | 0.1447      | 1% critical value -4.309  |
|                                |                     |             | 5% critical value -3.574  |
|                                |                     |             | 10% critical value -3.222 |
| ADF Test Statistics – LOGND    | -1.864              | 0.6477      | 1% critical value -4.297  |
|                                |                     |             | 5% critical value -3.568  |
|                                |                     |             | 10% critical value -3.218 |

Source: Eviews 7 computation.

▶ **TABLE 2: RESULT FOR AUGMENTED DICKEY FULLER TEST (1<sup>ST</sup> DIFFERENCE)**

| ADF TEST STATISTICS            | INTERCEPT AND TREND | PROBABILITY | CRITICAL VALUES           |
|--------------------------------|---------------------|-------------|---------------------------|
| ADF Test Statistics- LOGGDP    | -4.990              | 0.0022      | 1% critical value -4.339  |
|                                |                     |             | 5% critical value -3.588  |
|                                |                     |             | 10% critical value -3.229 |
| ADF Test Statistics –LOGASI    | -4.194              | 0.0134      | 1% critical value -4.324  |
|                                |                     |             | 5% critical value -3.581  |
|                                |                     |             | 10% critical value -3.225 |
| ADF Test Statistics – LOGMCAP  | -8.113              | 0.0000      | 1% critical value -4.310  |
|                                |                     |             | 5% critical value -3.574  |
|                                |                     |             | 10% critical value -3.222 |
| ADF Test Statistics – LOGVTRAN | -4.285              | 0.0109      | 1% critical value -4.324  |
|                                |                     |             | 5% critical value -3.581  |
|                                |                     |             | 10% critical value -3.225 |
| ADF Test Statistics – LOGND    | -3.978              | 0.0211      | 1% critical value -4.310  |
|                                |                     |             | 5% critical value -3.574  |
|                                |                     |             | 10% critical value -3.222 |

Source: E views 7 computations

**Table 1** shows the unit root test result at levels. As shown on the table, the variable, LOGGDP with ADF absolute value of -1.947 is less than the critical values of -4.297, -3.568 and -3.22 at 1%, 5% and 10% level of significance respectively. It shows that there is a 61% chance that there could be an error by estimating the variable. Therefore, the null hypothesis cannot be rejected. This implies that LOGGDP is not stationary at levels. The ADF test statistics for LOGASI is -0.712 which is also less than the ADF critical values of -4.297, -3.568 and -3.218 at 1%, 5% and 10% level of significance respectively. This explains that there is 96% chance that there could be an error by estimating the variable.

The null hypothesis cannot be rejected at level. The ADF test statistics for LOGMCAP is -4.767 which is greater than the ADF critical values of -4.297, -3.568 and -3.218 at 1%, 5% and 10% level of significance respectively. This explains that LOGMCAP is highly significant, therefore, the existence of the unit root test is rejected and the variable is stationary. The ADF test statistics for LOGVTRAN is -3.018, which is less than the ADF critical values of -4.309, -3.574 and -3.222 at 1%, 5% and 10% level of significance respectively. This explains that there is a 14% chance that there could be an error by estimating the variable. Therefore, it is not significant. The variable is not stationary. The ADF test statistics for LOGND is -1.864, which is less than the ADF critical values of -4.297, -3.568 and -3.218 at 1%, 5% and 10% level of significance. This proves that LOGND is not significant at level. This explains that there is a 64% chance that there could be an error in estimating the variable.

**Table 2** shows the result for unit root at first difference. As shown in the table, the ADF test statistics for LOGGDP with the value of -4.990 exceeds the ADF critical values of -4.339, -3.588 and -3.229 at 1%, 5% and 10% level of significance, thus we conclude that LOGGDP is stationary at 1<sup>st</sup> difference. The ADF test statistics for LOGASI with a value of -4.194 exceeds the ADF critical values of -3.581 and -3.225 at 5% and 10% respectively (but less than 1% critical value of -4.324), thus we conclude that LOGASI is stationary at 1<sup>st</sup> difference.

The ADF test statistics for LOGMCAP with a value of -8.113 exceeds the ADF critical values of -4.310, 3.574 and -3.222 at 1%, 5% and 10% significance levels respectively and thus conclude that LOGMCAP is also stationary at 1<sup>st</sup> difference. The ADF test statistics for LOGVTRAN with a value of -4.285 exceeds the ADF critical values of -3.581 and -3.225 at 5% and 10% respectively (but less than 1% critical value of -4.324) and thus conclude that LOGVTRAN is also stationary at 1<sup>st</sup> difference. The ADF test statistics for LOGND with a value of -3.978 exceeds the ADF critical values of -3.574 and -3.222 at 5% and 10% significance levels respectively (but less than 1% critical value of -4.310) and thus conclude that LOGND is also stationary at 1<sup>st</sup> difference.

► **TABLE 3. OLS WHEN LOGGED**

| VARIABLES | COEFFICIENT | STD. ERROR | T-STATISTICS | PROB   | R-SQUARE                 | ADJ R-SQUARE         | D.W STATS |
|-----------|-------------|------------|--------------|--------|--------------------------|----------------------|-----------|
| LASI      | -0.325319   | 0.108302   | -3.003811    | 0.0058 | 0.861242<br>F-statistics | 0.839895<br>35.71095 | 0.613726  |
| LMCAP     | 0.009754    | 0.062587   | 0.155854     | 0.8774 |                          |                      |           |
| LVTRAN    | 0.305711    | 0.124203   | 2.461369     | 0.0208 |                          |                      |           |
| LND       | 0.292584    | 0.195899   | 1.493545     | 0.1473 |                          |                      |           |
| C         | 16.49108    | 0.938177   | 17.57779     | 0.0000 |                          |                      |           |

Source: Researchers' computation

## Interpretation of result

**Table 3** shows a relationship between the dependent variable (GDP) and the explanatory variables (ASI, MCAP, VTRAN, ND). Both the dependent and the independent variables were logged as a result of massive figures recorded. From the above table, the results derived from the estimation are interpreted below. This interpretation is classified into two categories (diagnostic test and individual test). The diagnostic test which includes DW stats, R-squared, Adjusted R-squared and F-statistics shows whether the regression line is a good one or not, that is good-fit of the regression line. Therefore, the joint explanatory variables fit the dependent variable. DW statistics is used to show the presence of autocorrelation. From the Durbin Watson Table, we see that  $d_L = 1.160$  and  $d_U = 1.735$ . Since  $d = 0.613726 < 1.160$ , we reject the null hypothesis, and conclude that there is a significant positive autocorrelation.

R-squared shows the total variation in Y explained by over a proportion of variation in the independent variable X. According, to the estimated result, the total variation in GDP is explained by over 86% of the variation in ASI, MCAP, VTRAN, and ND. Therefore it is a good-fit, which means that the joint significance of the explanatory variables ASI, MCAP, VTRAN and ND fits the dependent variable well. Adjusted R-squared in the result also shows that the total variation in GDP is explained by over 84% of the variation in ASI, MCAP, VTRAN and ND. Therefore it is a good-fit, which means that the joint significance of the explanatory variables ASI, MCAP, VTRAN and ND fits the dependent variable well. F- Statistics is used to determine the joint significance of the explanatory variables in the model. In this result, it shows that the explanatory variables ASI, MCAP, VTRAN and ND are jointly significant. Therefore the F-statistic is significant with the figure 35.71095 since it is above 4.

The individual test which includes; probability value, t-statistics, and standard error shows that the estimated parameter  $\alpha_1$  and  $\alpha_3$  (that is, LASI and LVTRAN) are statistically significant at the level of 5% since their probability values are less than 0.05 (or 5%) and their absolute values of their t-statistics are greater than 2 which is the rule of thumb for t-statistics. Also, if all the variables are held constant, estimated GDP will be equals to 16.49108. The interpretation of the estimated model is shown below.

$\alpha_1$  means that a proportional change in all share index will lead to a less proportional change in gross domestic product. This therefore means that there is an inelastic relationship between all share index and gross domestic product.

$\alpha_3$  means that a proportional change in the value of transactions will lead to a more proportional change in gross domestic product. This means that an elastic relationship between the number of deals and gross domestic product.

## 5. SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

### Summary of Findings

The summary of the study findings are presented as:

- 1) From the study, an inverse relationship is observed to exist between GDP and all share index given its slope coefficient of -0.325319. The relationship is also observed to be statistically significant as the t-value of -3.004 which exceeds the critical t value at 5% significance level.
- 2) There is a positive relationship between GDP and Market capitalization (MCAP) given its slope coefficient of 0.0098. The relationship is also observed not to be statistically significant at a t-value of 0.156 at 5% significance level. The relationship was observed to be statistically insignificant at 5%.
- 3) There is a positive relationship between GDP and the value of transactions given its slope coefficient of 0.306. The relationship is also observed to be statistically signifi-

cant at a t-value of 2.461 at 5% significance level. The relationship was observed to be statistically significant at 5%.

- 4) There is a positive relationship between GDP and number of deals given its slope coefficient of 0.293. The relationship is also observed to be statistically insignificant at a t-value of 1.494 at 5% significance level. The relationship was observed to be statistically insignificant at 5%.

## Conclusion

Two diagnostic tests were carried out on the data such as Augmented Dickey Fuller (ADF) test which was employed in order to analyze unit roots for the variables and multiple regression analysis which was used to estimate the parameters. The result for the ADF showed that at levels, only MCAP was stationary, while the other variables were not stationary. But at first difference, all the variables were stationary. The multiple regression analysis showed that two parameters were statistically significant at 5% which are all share index and value of transactions, while the other parameters which are market capitalization and number of deals were not statistically significant at 5%.

The findings revealed that an inverse relationship exists between Gross domestic product (GDP) and all share index (ASI). The relationship between GDP and market capitalization (MCAP), value of transaction (VTRAN) and number of deals (ND) was observed to be positive. Hence, we reject the null hypotheses and conclude that capital market has a significant impact on economic growth. However, the research evidence have shown diverse findings for some economies, with respects to the Nigerian capital market, a major difficulty is the loss of investors' confidence in the Nigerian capital market bringing about uncontrolled corporate misconduct on both the capital market operators, management and quoted companies. There is however, a necessity for some effective and efficient measures to be taken so as to reinstate this weakening confidence in the market.

## Recommendations

In line with the above findings, we therefore recommend as follows;

- 1) There should be an improvement in the negativity of the All Share Index by encouraging that long term funds should be given to investors in the capital market rather than short term funds as it will help to boost the economic growth as more funds would be invested in the economy.
- 2) Government should encourage more foreign investors to partake in the market so that it will help to improve the falling market capitalization.
- 3) There should be an increase in the availability and sufficiency of investment instruments such as options, derivatives, future and convertibles for investors as this will boost the value of transactions in the market.
- 4) Lastly, appropriate regulatory agencies in the capital market should be concentrated on improving fair trading transactions and dealings through the proficiency and transparency of the stock market.

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## APPENDIX 1:

| YEAR | GROSS DOMESTIC PRODUCT (NAIRA) | ALL SHARE INDEX | MARKET CAPITALISATION (NAIRA) | VALUE OF TRANSACTION (NAIRA) | NUMBER OF DEALS |
|------|--------------------------------|-----------------|-------------------------------|------------------------------|-----------------|
| 1983 | 35,451,565,749                 | 109.55          | 5,700,000,000                 | 397,900,000                  | 11,925          |
| 1984 | 28,500,815,241                 | 118.8916667     | 5,500,000,000                 | 256,500,000                  | 17,444          |
| 1985 | 28,873,977,228                 | 117.2833333     | 6,600,000,000                 | 316,600,000                  | 23,571          |
| 1986 | 20,721,499,308                 | 149.8166667     | 6,800,000,000                 | 497,900,000                  | 27,718          |
| 1987 | 24,093,203,445                 | 176.9166667     | 8,200,000,000                 | 382,400,000                  | 20,525          |
| 1988 | 23,272,161,397                 | 210.8083333     | 10,000,000,000                | 850,300,000                  | 21,560          |
| 1989 | 24,231,168,859                 | 273.8687583     | 12,800,000,000                | 610,300,000                  | 33,444          |
| 1990 | 30,757,075,595                 | 423.6583333     | 16,300,000,000                | 225,400,000                  | 39,270          |
| 1991 | 27,392,886,873                 | 671.6166667     | 23,100,000,000                | 242,100,000                  | 41,770          |
| 1992 | 29,300,921,687                 | 931.0166667     | 31,200,000,000                | 491,700,000                  | 49,029          |
| 1993 | 15,789,003,753                 | 1229.025        | 47,500,000,000                | 804,400,000                  | 40,398          |
| 1994 | 18,086,400,536                 | 1913.225        | 66,300,000,000                | 985,900,000                  | 42,074          |
| 1995 | 28,546,958,641                 | 3815.116667     | 180,400,000,000               | 1,838,800,000                | 49,564          |
| 1996 | 34,987,951,375                 | 5955.141667     | 285,800,000,000               | 6,979,600,000                | 49,515          |
| 1997 | 35,822,342,618                 | 7638.591667     | 281,900,000,000               | 10,330,500,000               | 78,089          |
| 1998 | 32,004,613,750                 | 5961.875        | 262,600,000,000               | 13,571,100,000               | 84,935          |
| 1999 | 35,870,792,988                 | 5264.191667     | 300,000,000,000               | 14,072,000,000               | 123,509         |
| 2000 | 46,385,996,027                 | 6701.175        | 472,300,000,000               | 28,153,100,000               | 256,523         |
| 2001 | 44,138,014,092                 | 10185.075       | 662,500,000,000               | 57,683,800,000               | 426,163         |
| 2002 | 59,116,868,250                 | 11631.86667     | 764,900,000,000               | 59,406,700,000               | 451,850         |
| 2003 | 67,655,840,108                 | 15559.895       | 1,359,300,000,000             | 120,703,000,000              | 621,717         |
| 2004 | 87,845,403,978                 | 24738.65083     | 2,112,500,000,000             | 225,820,500,000              | 973,526         |
| 2005 | 112,248,324,602                | 22876.71667     | 2,900,060,000,000             | 262,929,600,000              | 1,021,966.6     |
| 2006 | 145,429,802,542                | 27647.50909     | 5,120,900,000,000             | 470,253,800,000              | 1,367,954       |
| 2007 | 166,451,202,370                | 48773.30833     | 13,181,690,000,000,000        | 2,086,294,590,000            | 2,615,020       |
| 2008 | 208,064,724,514                | 50424.70167     | 9,562,970,000,000             | 2,379,142,700,000            | 3,535,631       |
| 2009 | 169,481,270,115                | 23091.54583     | 7,030,840,000,000             | 684,451,200,000              | 1,739,365       |
| 2010 | 369,062,403,182                | 24775.59333     | 9,918,210,000,000             | 797,551,600,000              | 1,925,314       |
| 2011 | 411,743,801,712                | 23393.64667     | 10,275,344,760,000            | 638,925,700,000              | 1,235,467       |
| 2012 | 462,979,245,902                | 23432.62083     | 14,800,944,400,000            | 808,991,419,900              | 1,147,174       |
| 2013 | 521,803,314,654                | 36207.0775      | 19,077,418,000,000            | 2,350,875,700,000            | 3,224,639       |

Source: World Development Index (WDI) 2014 and Central Bank of Nigeria (CBN) statistical bulletin 2013.

## APPENDIX 2: REGRESSION RESULT FOR GROSS DOMESTIC PRODUCT, ALL SHARE INDEX, MARKET CAPITALIZATION, VALUE OF TRANSACTION AND NUMBER OF DEALS

| Dependent Variable: LOGGDP |             |                       |             |          |
|----------------------------|-------------|-----------------------|-------------|----------|
| Method: Least Squares      |             |                       |             |          |
| Date: 01/27/16 Time: 14:28 |             |                       |             |          |
| Sample: 1983 2013          |             |                       |             |          |
| Included observations: 31  |             |                       |             |          |
| VARIABLE                   | COEFFICIENT | STD. ERROR            | T-STATISTIC | PROB.    |
| LOGASI                     | -0.325319   | 0.108302              | -3.003811   | 0.0058   |
| LOGMCAP                    | 0.009754    | 0.062587              | 0.155854    | 0.8774   |
| LOGVTRAN                   | 0.305711    | 0.124203              | 2.461369    | 0.0208   |
| LOGND                      | 0.292584    | 0.195899              | 1.493545    | 0.1473   |
| C                          | 16.49108    | 0.938177              | 17.57779    | 0.0000   |
| R-squared                  | 0.861242    | Mean dependent var    |             | 24.79212 |
| Adjusted R-squared         | 0.839895    | S.D. dependent var    |             | 1.042705 |
| S.E. of regression         | 0.417219    | Akaike info criterion |             | 1.236281 |
| Sum squared resid          | 4.525871    | Schwarz criterion     |             | 1.467569 |
| Log likelihood             | -14.16235   | Hannan-Quinn criter.  |             | 1.311675 |
| F-statistic                | 40.34418    | Durbin-Watson stat    |             | 0.613726 |
| Prob(F-statistic)          | 0.000000    |                       |             |          |

