ASSESSING THE IMPACT OF CAPITAL MARKET DEVELOPMENT ON ECONOMIC GROWTH IN NIGERIA

BY

ZINA EMMACULATE

Department Of Accounting

Prime University, Abuja

Abstract

The study investigated the effect of capital market operations on economic growth in Nigerian business firms. Market capitalization, value of stock traded and All-Share-Index were used as proxy of the developments of the Nigerian capital market, while real Gross Domestic Product (GDP) was used as the proxy for economic growth. Auto-Regressive Distributed Lags (ARDL) bounds approach to cointegration was employed on a quarterly time-series data from Q1 2009 to Q4 2018. Augmented dickey fuller was used to test for unit root/stationarity of the data, while Pearson correlation method was adopted to ascertain the co-movement/association in the variables. The study measures the relationship and contribution of capital market on economic growth in Nigeria based on the data obtained from the 2019 fact book issued by security and exchange commission in Nigeria and the Federal Office of Statistics. Findings showed that development in the Nigerian capital market impact positively on the economic growth over the period of this study. As the results suggested, in the long run with every trillion increase in market capitalization it will result to an increase of 145.92 million Naira.

Keywords: Capital Market, Gross Domestic Product (GDP), Economic Growth, Market Capitalization, AllShare-Index.
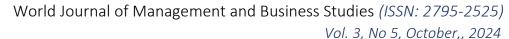
1.   INTRODUCTION

1.1   Background to the Study

Globally, the important of capital market as an efficient channel of financial intermediation has been recognized by the researchers and policy makers as a primary determinant of economic growth of any nation (Oluwatosin, Adekanye and Yusuf, 2013). The capital market is the segment of the financial system which facilitates the channeling of long-term funds from surplus to deficit economic units thereby stimulating capital formation and socio-economic development. The introduction of Structural Adjustment Program (SAP) in Nigeria resulted in significant growth of the financial sector and the privatization exercise which exposed investors and companies to the significance of the stock market. The liberalization of capital market led tremendous changes with respect to volume, number of deals and value of securities traded as well as the number of securities listed in the market, yet there are concerns on its impact at the macro-economic level.

Again, the capital market was instrumental to the initial twenty-five Banks that were able to meet the minimum capital requirement of N25 billion during the banking sector consolidation in 2005. The stock market has helped government and corporate entities to raise long term capital for financing new projects, and expanding and modernizing industrial/commercial concerns (Oladipo and Tunde, 2013).

Oluwatosin, Adekanye and Yusuf (2013) infer that the capital market has undergone tremendous reforms in recent years. Among these is the introduction of Central Securities Clearing System (CSCS), an automated clearing, settlement and delivery system aimed at easing transactions and fostering investors' confidence in the market. Equally important is the linking of performance information on the Nigerian Stock Exchange to Reuters International System in order to disseminate relevant market information to subscribers. However, poorly functioning capital markets typically are illiquid and expensive which deters foreign investors. Illiquid and high transactions costs also hinder the capital raising efforts of lager domestic enterprises which pushed them to foreign markets.

The capital market effectively started operations in Nigeria on 5th June, 1961 under the provision of the Lagos Stock Exchange Act 1961, which transformed into the Nigerian Stock Exchange in December 1977 as a result of the review of the Nigerian financial system (CBN, 2007). The Securities and Exchange Commission (SEC) was established in 1979 through the SEC Act 1979, to regulate the capital market, but it commenced actual operation in 1980. It took over regulatory functions from Capital Issues Commission, which was established in 1973. Since then, various forms of financial instruments have been issued in the capital market by new and existing business to finance product development, new projects or general business expansion. The Nigerian Stock Exchange provides the essential facilities for companies and government to raise

money for business expansion and development projects through investors who own shares in corporations for the ultimate benefit of the economy. The Nigerian Stock Exchange was also established to increase the rate of capital formation in the economy, to bring currency in circulation in banking sector and to enhance the effectiveness of the country's monetary policy and to expand the market (NSE, 2006).

Empirically, this study acknowledged the contribution of previous studies on the capital market development and economic growth relationship for developing countries. But in both cases, they showed a lack of clarity, as literature reports mixed results on whether there is a relationship between capital market development and economic growth (Nwani and Orie 2016, Afolabi 2015, Jibril et. al 2015). Secondly, it is not very clear about the exact nature of the causal relationship between capital market development and economic growth for developing countries and even less clear on the causal relationship (Karim and Chaudary, 2017), Okoro (2016), Ujunwa and Salami (2010). This suggests that the current realities existing in most of the capital markets in Africa today leave some significant gap in the debate of the impact of capital market development on economic growth. In the case of Nigeria, for instance, the capital market indicators have declined very rapidly as a result of the recent economic recession. For example, the percentage value of stock traded/GDP and percentage of total market capitalization /GDP were 2.90 and 23.51 in 2013 but dropped to 0,60 and 16.00, respectively in 2016 and that affected the financial system of Nigeria. The activities of the investors engaging in capital flight and profit-taking on the capital market could impact on the economy over time with the volatility in the market. Therefore, the study of the Nigerian capital market is apt in view of the fluctuating market capitalization and movement in the key market indicators such as volume and value of traded securities as well as All-share-Index and their relationship with economic growth using real GDP. This reason triggers the need to investigate the situation bearing in mind that the most accurate measurement of growth is real GDP as it removes the effect of inflation. Secondly, even though an attempt had been made by Osakwe and Ananwude (2017), but their studies were limited to 2015 thus, excluding the critical period of the Nigerian economic recession of 2016 and the period after the recession to date. Hence, this research was designed to examine the influence of the capital market on economic growth using real GDP in Nigeria covering the period 2009 to 2018 based on capital market aggregate data.

1.2   Statement of the Problem

The linkage between capital market performance and economic growth has often generated strong controversy among analysts based on their study of developed and emerging markets (Kolapo and Adaramola, 2012). The determination of the growth of an economy depends on how efficiently the capital market performs its allocative function of capital. As the stock market mobilizes savings, concurrently it allocates a larger proportion of it to the firms with relatively high prospects as indicated by its rate of returns and level of risks (Alile, 1997).

Nevertheless, there is abundant evidence that most Nigerian businesses lack medium and long – term capital. The business sector has depended mainly on short-term financing such as overdrafts to finance even long-term investment. Based on the maturity matching concept, such financing is risky. All such firms need to raise an appropriate mix of short- and long-term capital which in other will have an impact to the economy (Edame and Okoro, 2013). In the light of the above mentioned facts, the study aimed at appraising the responsiveness of economic growth to capital market development of Nigerian (1995-2016).

1.3   Objectives of the study

The main objective is to assess the influence of the capital market on economic growth in Nigeria. However, the

specific objectives are to:

  i.   Examine the effect of capital market capitalization on Gross Domestic Product (GDP) in Nigeria
 ii.   Determine the impact of value of stock traded on Gross Domestic Product in Nigeria.
iii.   Assess the impact of All-Share-Index on Gross Domestic Product in Nigeria.

1.4   Research questions

To achieve these objectives, the research work was designed to address the following questions.

  i.   To what extent does market capitalization affect the Gross Domestic Product in Nigeria?
 ii.   Is there any effect of the value of stock traded on the Gross Domestic Product in Nigeria?
iii.   How does All-Share-Index in the capital market contribute to the Gross Domestic Product in Nigeria?

1.5   Research Hypothesis

Based on the questions raised the following null hypotheses have been formulated:

H_{01}: Market capitalization has no significant effect on the Gross Domestic Product in Nigeria.

H_{02}: The value of stocks traded has no significant influence on the Gross Domestic Product in Nigeria.

H_{03}: All-Share-Index has no significant impact on the Gross Domestic Product in Nigeria

2.   LITERATURE REVIEW

2.1   Concept of Capital Market

Capital market is defined as the market where medium and long term finance are bought and sold (Akingbohugo, 2006). Capital market offers varieties of financial instrument that enable
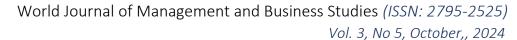
economic agents to pool, price and exchange risk. Through assets with attractive yields, liquidity and risk characteristics, it encourages savings in financial form. This is very essential for government and other institutions in need of long term funds (Nwankwo, 2011). According to Al-Faki (2009), the capital market is a network of specialized financial institutions, series of mechanisms, processes and infrastructure that, in various ways, facilitate the bringing together of suppliers and users of medium to long term capital for investment in socio-economic developmental projects". Emekekwue (2016) stated that capital market provides facilities for transfer of medium and long term funds to various economic units.

The capital market is a very specialized market which is a subunit of the financial market and plays the role of financial intermediation which helps in bridging the gap between the surplus unit and the deficit unit of the economy through the mobilization of savings and investments. Jargons (2021) posits that the capital market is a market for long-term investments that have explicit or implicit claims to capital long-term investments whose lock-in period is greater than one year. Equity and debt instruments, like shares, preference shares, debentures, zero-coupon bonds, secured premium notes and the like are purchased and sold and it also covers all forms of lending and borrowing in the capital market. The capital market comprises of institutions and mechanisms which helps in providing medium and long term funds which are made available to individuals, businesses, and even the government. Both private placement sources and organized marketlike securities exchange are included in it (Jargons, 2021).

According to Viney (2003) capital market serves as the primary market over which shares are issued in the first instance to source funding for the development and growth of an investment. The transaction in the market raised new finances for an organization and provides improved investment in productive capital and economic growth. The capital market is seen as a platform that enables the encouragement of domestic savings through the provision of individuals and businesses with some additional financial instruments, which are suitable in achieving their objective of risk preference, and liquidity needs (Levine and Zervos, 1998). Recent studies in business progress and growth have increasingly concentrated on the influence of the capital markets in stimulating economic growth. The issue has become noticeable in the program of many academic scholars and decision-makers. There has been an increase in theoretical literature which suggests that well-functioning capital markets can play an important role in economic growth and development by undertaking the following functions within an economy.

The Nigerian Capital Market

The Nigerian capital market changed from the early Lagos Stock Exchange. The exchange began operations in 1961, trading with 19 listed securities. Presently, it has 261 and 167 listed securities and companies, respectively. The securities on the capital market are made up of 172, 80 and 9 for equities, bonds, and Exchange Traded Funds, respectively (SEC 2017). The exchange serves as the focal point of the Nigerian capital market. It encloses instruments for managing savings for both private and the public to ensure that such capital is channeled into productive purposes.

The market also facilitates the trading of issued securities. In addition, it makes provision for businesses to have access to a public listing in the market. The capital market's main window is operated largely, by the big enterprises, while the second-tier securities that involve less rigorous listing requirements are operated in the market for small and medium enterprises (Noruwa & Aguda, 2015).

The activities of the Nigerian capital market have been developing at a healthy rate relative to its functions of stimulating economic growth. Even though the volume and value of securities traded in the market from 2008 to 2011 declined due largely to the collective magnitude of numerous macroeconomic impacts and stable divestment by foreigners from the market as a result of an increase in currency risk. The All Share Index (ASI)in 2012 and 2013 increased by 35.5 and 47.2 percent, respectively. This increase was driven largely to the blue-chip company's solid corporate earnings and increased capital inflow, as well as portfolio investment.

Conversely, the All-Share Index declined in 2014, 2015 and 2016 by 16.1, 17.4, and 6.2 percent, respectively. The change was a result of several factors including, prices decline of crude oil, depreciation, and unpredictability of the naira exchange rate and absence of clear direction of the economy. But in 2017 impressive increases and returns were achieved in the various sectors and classes of asset, attributed to continuous strong expectation in the market. The ASI, which serves as the main indicator of the Nigerian capital market, at the end of 2017 closed at 38,243.19 from 26,874.62 at the end of 2016, indicating an increase of 42.3 percent. While, the Premium Board Index at end of 2017 close at 2,564.13, representing an increase of 51.2 percent.

The rise portrayed the attraction of investors to the Premium Board listed companies. Equally, the Main Board Index rose by 42.4 percent to close at 1,713.69 in 2017 from 1,203.79 in 2016.The developments generally, showed the optimism of the investors on the prospects of the Nigerian economy (CBN Economic Report 2008 - 2017).

Capital markets, similar to all financial institutions, its activities have bearing on economic growth due to its capability to enhance liquidity. In this regard, liquidity denotes the amount of ease to convert investment easily by agents into cash. Liquidity of capital market liquidity has a significant influence on economic growth through the provision of a means that facilitate the financing of capital intensive long-term projects, as well as while adequately providing the short-term requirements needs of investors. In effect, as pointed out by Boyd and Smith (1998), the presence of liquidity in the capital market allows the engagement of further long-term developed productive systems of production, which permit better economies of scale and subsequently boost economic growth. The capital market role of improving liquidity is much recognized in the theoretical literature. Accordingly, Yartey and Adjasi (2007), posited that the liquidity of the capital market is germane to economic growth, as its liquidity can trigger an improved motivation to obtain information about companies and contribute to the improvement of corporate governance.

Capital Market Variables

In the quest to establish the relationship of the capital market and economic growth, market capitalization, value of stock traded and All-Share-Index variables were used.

Market Capitalization

Market capitalization describes the total value of the size of the stock (Adewoyin, 2004). Market capitalization is the measurement of the size of businesses and corporations which is equivalent to the price of market share times the total number of shares, that is shares that have been authorized, issued, and purchased by shareholders of a publicly-traded company (Al-Faki, 2006). Market capitalization is also computed by multiplying the price per share and the number of shares of the company. Investors use the figure to ascertain the size and worth of the company, as against to total assets or sales figures (Olowe, 1997). Precisely, market capitalization means the company's total number of shares multiplied by the market share price. It is also, generally considered as representing the company's value used by the public investors to ascertain the credit value of a company in cognizance to investment in such firms.

Value of Stocks Traded

The value of the transaction has to do with the total value of stocks traded in the capital market in a particular period. It is the total value of all shares that were exchanged between buyers and sellers (Mbat, 2001). The value of the transaction is the total value of shares traded in the capital market of a given country at a particular period (Adebiye, 2005). The value of the transaction is a significant pointer in the practical analysis as it is being used to measure the liquidity of the capital market.

All-Share-Index

This is a market index measures or used to quickly evaluate the general direction of the market and its movements. A market index is a statistical boundary that mirrors the multiple values of market features. There is a price index, which tends to represent statistically the performance of the general level of price of the capital market, the index value. Therefore, the index is computed in such a method that makes it representative of the market. The all shares index of the Nigerian stock market was established in 1985, to estimate the activities of the market. It has grown immensely, from 5,266.4 in 1999 to 20,827.2 in 2009, then to 38,243.2 in 2017 (CBN, 2017).

2.2   Concept of Economic Growth

Economic growth refers to the increase in the production of goods and services over a specific period of time and measured in terms of removing the inflationary effect and creates more profit for businesses. As a result, thus giving more funds to invest and create more employment business, such as stock price rise that lead to more reinvestment opportunities and employment.

Consequently, all countries target positive economic growth, and this what makes economic growth becomes the most examined economic indicator. Most countries measure economic growth each quarter using the real domestic product (GDP) (Vasila, 2003). Analysts monitored economic growth to determine what stage of the business cycle the economy is in, especially to know whether it is at the phase of expansion. This is when the economy is growing sustainably.

When the economy is not endowed with the factors of production, the country must find other ways to improve growth. Most Governments target increase growth as it increases tax revenue. However, if the economy is witnessing growth, the government should decrease spending and raise taxes. This contractive fiscal policy measure ensures the sustainability of economic growth.

2.3   Theoretical Framework

Neo-Keynesian, Neo-classical and Endogenous growth theories were considered to be the major theories of growth that were developed and commonly used. We employed Endogenous growth theory, which is found in the work of Romer (1986), Lucas (1988), Rebelo (1991), who have contributed to its growth and development over the years. The authors examined the proposition that the stable growth rate is dependent in the long term on the levels of accretion of capital.

The recent interest in the relationship between financial development and economic growth springs largely from the insights and techniques of endogenous growth models. These have established that self-sustaining economic growth can exist without exogenous technical progress and that growth may be linked to technology, preferences, the distribution of income, and institutional systems (Pagano, 1993). "This has also rekindled attention among theorists about the relation between stock market development and economic growth and has occasioned in the development of several models suggesting possible links" (Gronski, 2001). There is a substantial literature on endogenous growth models. Their objective is to resolve some of the problems in neoclassical growth models, such as the assumption that the economy will cease growing at some point if it is not stimulated by exogenous technological progress (McCallum, 1996).

Although endogenous, neo-classical and neo-Keynesian growth models provide diverse clarifications for the process of growth, total factor productivity growth is a crucial factor of economic growth. Yet, the neo-Keynesian and neo-classical growth theories placed added importance on the basic factors (physical capital stock, labor, human capital) and completely overlook the part played by institutions, such as capital markets, banks, and government, in contrast to the theory of endogenous growth. The conceivable impact of capital market development on economic growth over the years has engendered much attention. Although there has been a reasonably limited effort at exhibiting the relationship, especially for developing economies. Enisan and Olufisayo (2009) in their studies examined the relationship between capital market performance and economic growth by selecting seven countries from Sub-Saharan Africa. They used an endogenous growth model and discovered that the influence of the capital market on economic growth can be due to the general quality of the economic and social

environment apart from the impact of factors like comparative efficiency, size, and liquidity of the capital market.

2.4 Empirical Review

There have been some Nigerian researchers who have investigated the relationship between the capital market and economic growth in Nigeria. Osinubi and Amaghionyeodiwe (2003) carried out a research to find out the relationship that existed between the Nigerian Stock Exchange Market and economic growth between the time span of 1980-2000. But the result of their findings showed that stock market development does not foster or promote economic growth in Nigeria.

Obamiro (2005) examined the role the Nigerian stock market played in fostering economic growth. Heassumed that the Nigerian government should create a more conducive environment so as to increase the efficiency and effectiveness of the stock market, and to boost economic growth in the country. In this case, he believes the environment such as the business or political environment can affect the efficacy of the Nigerian Stock Market.

In Romania, Brasoveanu, et al (2015) studied the correlation between capital market development and economic growth for the period 2000 to 2016. The result indicates that capital market development is positively correlated with economic growth by way of feed-beck effect.

Bolbol, Fatheldine and Omaran (2015) indicated that capital market development has contributed to the economic growth of Egypt. Adamu and Sanni (2015), examine the roles of the stock market on Nigeria's economic growth, using Granger-causality test and regression analysis. They discovered a one-way causality between GDP growth and market turnover. They also observed a positive and significant relationship between GPD growth and market turnover ratios. The authors advised that government should encourage the development of capital market since it has a positive effect on economic growth.

Alajekwu and Achugbu (2012) conducted a fifteen-year time series analysis. The study research examined the relationship between the stock market and economic growth. Stock market capitalization was used as a proxy for market size, the value of traded ratio and turnover ratio was used as a proxy for market liquidity. The result indicates that market capitalization and value of traded stock have an insignificant and negative relationship with economic growth. But, stock market capitalization has a strong positive correlation with stock turnover. They concluded that liquidity has a propensity to incentivized economic growth. Therefore, the government should encourage domestic investors to invest by providing an enabling environment and policies to promote the capital market.

Although, Bashorun and Bakare-Aremu (2013) investigated the link between the performance of the capital market and economic growth in Nigeria. The authors use annual data for 30 years

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(1981-2011). The variables used are all-share index, market capitalization and numbers of deals. The authors employ the vector autoregressive model and Granger causality technique. The result of the study indicates that market capitalization, All-shares index, and numbers of deals have an individual positive and significant effect. The pairwise Granger causality test shows that there is a unidirectional causality running from the capital market for economic development and response causality between market capitalization and economic growth, therefore, the results support the endogenous growth theory (Umar et. al. 2015).

However, Yadirichukwu and Chigbu (2014) in their study empirically examined the impact of the capital market on economic growth in Nigeria. The study employed annual data from 1985 to 2012. They used regression analysis where multivariate and error correction is put in place to observe four formulated hypotheses. The result of the study shows that there is an inverse relationship between the stock market capitalization ratio and long-run economic growth. But it also shows a long-run relationship between the value of the total transaction and economic growth.

Even though, many studies have been undertaken to investigate the relationship between capital market development and economic growth in different countries. The long-run relationship between stock market development (measured by market capitalization, volume and value of stock traded and a number of listed shares) and has generated different conclusions. More so the studies are not up to date as the one with the most recent data was Osakwe & Ananwude (2017). This study will take it further by using data covering up to 2018 and taking the stock market indicators of market capitalization, All-Share-Index, and value of stock traded. Gross Domestic Product (GDP) will serve as the proxy of economic growth, while banking system credit to the economy will serve as the control variable as it a stimulant to both the capital market and economic growth.

3.   METHODOLOGY

The study was conducted based on Ex post factor research design, which helps to reveal the possible relationship through the observation of existing conditions and search back in time for plausible contributing factors (Kerlinger and Rent, 1986). As (Kerlinger, 1964) stated, it facilitates the independent variable or variables to be studied in consideration for their possible relation to, and effects on dependent variables. The population of the study comprises all the activities of the quoted companies on the Nigerian Stock Exchange, The activities of the Central Bank of Nigeria and the real GDP indices from the National Bureau of Statistics. However, the study sample consists of data of three capital market indicators of market capitalization, AllShare-Index, and value of stock traded of all quoted companies on the Nigerian Stock Exchange from 2009 – 2018. Also, included in the data on Gross Domestic Product (GDP) from 2009 – 2018. Convenient sampling technique was adopted, in which case the contribution of all quoted companies from 2009 – 2018 was taken into consideration.

4.   DATA ANALYSIS

The data collected for the study were analyzed carrying out descriptive statistics of the variables under study to detect the normality of the data. Augmented dickey fuller was used to test for unit root/ stationarity of the data. Pearson correlation method was adopted to ascertain the co-movement/association in the variables.

The Auto-Regressive Distributed Lags (ARDL) bounds approach to co-integration was employed on a quarterly time-series data from Q1 2009 to Q4 2018 to test the causal relationship between Capital market and economic growth in Nigeria. It has been confirmed that using time series data is more productive in testing finance-growth causal relationships than the cross-sectional method which has been more common in some studies (Arestis & Demetriades, 1997). This informed the choice for the use of the time series data for the study. Therefore, careful steps had been taken to specify an appropriate econometric model as follows:

Model Specification

The model specified to test the hypotheses of the study is presented below:

$Y = a + bx$

$GDP_t = a_{0t} + a_1 MCAP_t + a_2 VALT_t + a_3 ASI_t + a_4 BSC_t \, e_t$

Where:

GDP = Gross Domestic Product

a_0 = Regression Constant

$a_1 - a_4$ = Coefficient of independent variables.

MCAP = Market Capitalization

VALT = Total Value of Transactions

ASI = All-Share-Index

BSC= Banking system credit

e = Stochastic Error term (Disturbance term)

t = Time series

Table 4.1: Variable Measurement

S/No.	Variables	Symbol	Measurement Of Variables
1	Gross Domestic Product	GDP	$C + G + I + X - M$
2	Market Capitalization	MCAP	(Cost per share) x (Number of shares)
3	Value of Transactions	VALT	Total value of all stock traded
4	All-Share-Index	ASI	Number of stock # 1 + Number of stock # 2 + ... = All share index

The definitions of the variables that are used in the model are based on the regression model developed in the study. The four Variables MCAP, VALT and ASI represent Capital Market performance, while the variable GDP represents economic growth.

Descriptive Statistics

The analysis from Table 3.2 below shows that the mean of GDP is 17632.05, with 0.253 coefficient skewness and a standard deviation of 9346.44. The mean of market capitalization is 15.073 and a standard deviation of 4.9 with -0.03 coefficient skewness. The mean of All-share index is 30637.51 and a standard deviation of 6742.767 with a 0.44 coefficient of skewness. Value of stock traded and banking system credit have of 226.469 and 50021196 respectively, all variables except the value of stock traded follow a normal distribution with non-significant Jarque-Bera value.Also, the Kurtosis of all the variables revolves around a benchmark of 3 for standard normal distribution.

Table 4.2: Descriptive statistics

	GDP	Market Capitalization N	All Share Index	Value Of Stock Traded	Banking System
Mean	17632.05	15.073	30637.51	226.4698	50021196
Median	15850.95	16.25	29598.7	207.35	45811732
Maximum	35230.61	24.87	44504.5	441.3	81840137
Minimum	5460.764	7	19851.9	108.2	13947025
Std. Dev	9346.437	4.911782	6742.767	82.9657	22500279
Skewness	0.252413	-0.032568	0.437723	0.94547	0.084338
Kurtosis	2.931759	2.82148	2.911971	3.312332	2.886016
Jarque-Bera	4.017635	1.2934	2.312325	6.122013	3.379672
Probability	0.134147	0.523771	0.314691	0.046841	0.18455

Table 4.3: Correlation analysis table

	GDP	Market Capitalization	All Share Index	Value of Stock Traded	Banking System
GDP	1	0.846901812	0.51513809	0.415363652	0.960029406
Market Capitalization	0.846902	1	0.793193395	0.857597459	0.604333794
All Share Index	0.515138	0.793193395	1	0.790139369	0.498884857
Value Of Stock Traded	0.415364	0.604333794	0.790139369	1	0.371461945
Banking System	0.960029	0.857597459	0.498884857	0.371461945	1

From table 4.3 above, the degree of correlation between GDP and market Capitalization is 0.85 highly positively correlated. The degree of correlation between GDP and all share index is 0.51 positively moderate correlation. The coefficient between GDP and value of stock traded is 0.41 positively correlated. The coefficient of correlation between GDP and banking system credit is 0.96. banking system credit also shows a positive correlation with all capital market development variables. It implies that banking system credit is positively related to both capital market development and economic growth.

Stationarity test

The seasonal pattern in the above graphs revealed the evidence of non-stationarity in the data. Consequently, based on graphical analysis and the Dickey-Fuller test, the conclusion is that for the quarterly periods of 2009 to 2018, GDP, market capitalization, All-share-index, the value of stock traded and banking system credit time series were nonstationary; i.e., they contained a unit root. Therefore, the data were different. After the first difference, the data were found to be stationary at 10%, 5% and 1% using Augmented Dickey Fuller critical value.

Table 4.4: ADF tests

	t-stat I(0)	t-stat I(1)		CV 10%		CV5%		CV1%		
				I(1)	I(0)	I(0)	I(1)	I(0)	I(1)	
				-2.61	-2.63	-2.94	-2.94	-3.61	-3.62	
GDP	-0.626	-6.31		FTR	Reject	FTR	Reject	FTR	Reject	
Market cap	-1.21	-6.58		FTR	Reject	FTR	Reject	FTR	Reject	
All share index	-2.34	-7.002		FTR	Reject	FTR	Reject	FTR	Reject	
Value of traded stock	-2.97	-7.002		Reject	Reject	Reject	Reject	FTR	Reject	
Banking system credit	-0.798	-4.32		FTR	Reject	FTR	Reject	FTR	Reject	

Note: CV = Critical Value; FTR – Fail to reject = unit root; Reject = no unit root.

Auto-Regressive Distributed Lags (ARDL) Bounds Test

The ARDL bounds estimation tests the null hypothesis that no long-run relationship exists. From Table 4.5, it is observed that the estimated F-statistic is greater than the upper bounds critical values at conventional levels of significance at 1%, 5%, and 10%. This indicates the existence of a long-run relationship between economic growth and capital market development.

Table 4.5: Bounds test result

				CV 10%		CV5%		CV1%		
				I(0)	I(1)	I(0)	I(1)	I(0)	I(1)	
	f-statistic			2.02	3.09	2.56	3.4	3.29	4.51	
model	5.256			Reject	Reject	Reject	Reject	Reject	Reject	
DV = GDP	*Note: CV = Critical Value at 6 lags; FTR – Fail to reject = no cointegration; Reject = cointegration.*									

4.1 Test of Hypothesis

Long-run estimates

The long-run estimates are shown in table 4.6 below. The market capitalization coefficient shows a positive relationship with GDP in the long run, i.e. with every trillion increase in market capitalization increasing 145.92 million Naira in GDP. All share index will increase in GDP by 0.58 in the long run. The value of the stock traded will also increase GDP by 74.26 million in the long run. The control variable, banking system credit also has a positive impact on GDP, for every additional increase in banking system credit will boost GDP by 0.00035 million naira in the long run. Therefore, capital market development variables have a significant long-run impact on economic growth.

Table 4.6: Long run coefficients

variable	coefficient	Std. Error	t-statistic	p-value
Market cap	145.92	53.74	22.53	0.000***
All share inde	0.58	0.04	14.307	0.000***
Value of st	74.26	45.80	12.79	0.000***
Banking sys	0.00035	0.00008	44.779	0.000***
constant	-2848	1032.33	-2.243	0.03**

Notes: **&*** denotes significance at5%& 1% respectively

Short-run estimates and diagnostics

The result of the short-run error correction terms was shown in Table 3.7 below, which shows in the short run, a trillion increase in market capitalization reduces GDP by 104.61 million Naira, it

seems not too significant at short run. All share index will increase GDP by 0.146 in the short run. However, it seemed not to have any significant impact in the short run except at 10% level of significance. The co-integration term, CointEq(-1), is observed to be -0.2482 and significant at 5%. This implies that about 24.82% of any movements into disequilibrium are corrected for within one period and suggests a slower speed of adjustment of disequilibrium correction in reaching long-run equilibrium steady-state position.

Table 4.7: Short-run estimates and diagnostics

	MODEL	T	p-value
D(market cap)	-104.61	-0.51	0.611
D(All share index)	0.1458	1.829	0.076*
D(Value of stock trade)	-4.001	-0.662	0.512
Banking system c	0.00011	2.012	0.047**
cointEq(-1)	-0.2482	-2.272	0.029**
R^2	0.48		
DW	1.98		

Notes: *, **&*** denotes significance at 10%, 5%& 1% respectively

Diagnostics

The results from table 3.8 below show that residual serial correlation using Lagrange Multiplier (LM) test was not significant which implies that, there was no serial correlation in the residuals of the model.

Table 4.8: Residual autocorrelation test

Breusch-Godfrey Serial Correlation LM Test: Null hypothesis: No serial correlation at up to 2 lags

F-statistic	0.296349	Prob. F(2,30)	0.7457
Obs*R-squared	0.755579	Prob. Chi-Square(2)	0.6854

Granger causality test

The granger causality test in table 4.9 showed that market capitalization and banking system credit do cause GDP, conversely, GDP did not cause any capital market variables and banking system credit. The tests show a unilateral relationship.

Table 4.9: Granger causality test

Null Hypothesis:	F-Statistic	P value
MARKET_CAPITALIZATION__N does not Granger Cause GDP	3.34981	0.0474
GDP does not Granger Cause MARKET_CAPITALIZATION__N	0.34193	0.7129
ALL_SHARE_INDEX does not Granger Cause GDP	2.04532	0.1454
GDP does not Granger Cause ALL_SHARE_INDEX	0.05333	0.9481
VALUE_OF_STOCK_TRADED__N does not Granger Cause GDP	1.14281	0.3312
GDP does not Granger Cause VALUE_OF_STOCK_TRADED__N	0.55504	0.5793
BANKING_SYSTEM does not Granger Cause GDP	4.78590	0.0335
GDP does not Granger Cause BANKING_SYSTEM	0.96303	0.3922
ALL_SHARE_INDEX does not Granger Cause MARKET_CAPITALIZATION__N	0.41087	0.6664
MARKET_CAPITALIZATION__N does not Granger Cause ALL_SHARE_INDEX	2.08287	0.1406
VALUE_OF_STOCK_TRADED__N does not Granger Cause MARKET_CAPITALIZATION__N	0.30156	0.7417
BANKING_SYSTEM does not Granger Cause MARKET_CAPITALIZATION__N	1.83824	0.175
MARKET_CAPITALIZATION__N does not Granger Cause VALUE_OF_STOCK_TRADED__N	7.17526	0.0026
MARKET_CAPITALIZATION__N does not Granger Cause BANKING_SYSTEM	1.54881	0.2276
VALUE_OF_STOCK_TRADED__N does not Granger Cause ALL_SHARE_INDEX	1.62294	0.2127
ALL_SHARE_INDEX does not Granger Cause VALUE_OF_STOCK_TRADED__N	4.66942	0.0164
BANKING_SYSTEM does not Granger Cause ALL_SHARE_INDEX	0.36122	0.6995
ALL_SHARE_INDEX does not Granger Cause BANKING_SYSTEM	0.43281	0.6523
BANKING_SYSTEM does not Granger Cause VALUE_OF_STOCK_TRADED__N	0.70483	0.5015
VALUE_OF_STOCK_TRADED__N does not Granger Cause BANKING_SYSTEM	0.85357	0.4351

4.2   Discussion of Findings

The results of the findings indicated that in the long-run market capitalization has a positive relationship with GDP, as in every trillion increase in market capitalization it will increase to 145.92 million Naira in GDP. All share index will increase the GDP by 0.58 in the long run. The value of the stock traded will also increase GDP by 74.26 million on the same line. The control variable, banking system credit also has a positive impact on GDP, for every additional increase in banking system credit, it will boost GDP by 0.00035 million Naira in the long run. While in the short run, a trillion increase in the market capitalization reduces GDP by 104.61 million Naira, it seems there is no significant relationship between the two variables in the short run. Therefore, based on the findings of the results, it showed that capital market development variables have a significant long-run impact on economic growth. The findings corroborated with the empirical findings of Agarwal (2001), Adenuga (2010), Tuncer and Alovast (2010), Ujunwa and Salami (2010) and Jibril et al (2015).

5.   CONCLUSION AND RECOMMENDATIONS

5.1   Conclusion

This research work investigated the impact of capital market on economic growth in Nigeria, using time series data. During this study, the endogenous growth theory was re-examined. The study applied the AutoRegressive Distributed Lag model (ARDL) co-integration technique to evaluate the impact of the capital market and economic growth long-run relationship and causal relationship based on the three (3) set out questions in carrying out the study. For clarity and robustness, the study used three measures of capital market development, market capitalization to GDP, the value of stock traded to GDP and All-Share-Index to GDP. The study established the existence of co-integration for all the capital market development indicators.

Consequently, the result obtained for all three measures of capital market indicators used in this study demonstrates the existence of a significant impact of the capital market on economic growth. The findings from the Granger Causality suggest the existence of a unidirectional relationship between capital market and economic growth in Nigeria. This affirms that the capital market impact economic growth in Nigeria and there is a significant long-run relationship between capital market and economic growth in Nigeria.

5.2   Recommendation

Based on the findings from the study, it is recommended that

1.   The Government of Nigeria should provide enabling environment, which would involve, amongst other things, enacting key legislation that will cover for security trading, investment, robust payments system, taxation, to bring about a favorable atmosphere that would pave way for enhanced domestic and foreign direct investment (FDI);

2. The Government through the Security and Exchange Commission should as a matter of urgency step up and ensure the demutualization of the Nigerian Stock Exchange (NSE), as that would promote equity, justice, transparency in the activities of the exchange and would encourage seamless and free floor of activities and it will ultimately expand the capacity of the exchange in terms of both operations and structure; and

3. The regulatory agencies should ensure adequate oversight supervision on the activities of the Nigerian Stock Exchange which is the umbrella of the Nigerian capital market, as such regulatory oversight will ensure compliance of the exchange with all the stipulated operational rules and guidelines and would engender public confidence, which in turn will lead to increase in the activities of the capital market activities and invariably the economic growth.

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