

THE STOCK MARKET AND ECONOMIC DEVELOPMENT: THE NIGERIAN CASE

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Abstract

The stock market is regarded in economic discussions as the hubs of the capital market and the pivot around which the capital market revolves. It is therefore seen as being crucial not only to capital formation/accumulation, but also to economic growth and development. The contributions of developed stock markets to the development of their respective economies has spurred researchers into focusing greater effort towards finding how stock markets contribute to economic development. This study therefore is aimed at determining the economic-growth importance of stock markets, with the Nigerian stock market as a case study. It seeks to highlight the issue of link between the stock market and economic growth.

The study adopted the methodology of error correction mechanism which was conducted after a stationarity test. In specifying the model we adopted three models in which stock market indicators and some selected macroeconomic variables are regressed against the performance of the Nigerian economy. The results of the analysis show that market capitalization and value of shares traded have positive and

significant relationships with economic growth in Nigeria. The data and results were subjected to various statistical tests including – Unit Root Test, Johansen Cointegration tests, F-tests, student-t statistic and Durbin Watson – statistic.

The study observed that given some areas of deficiencies in the structure and operations of stock markets in Nigeria, there is need for policy reform and improvements to enable the stock market play the desired role expected of it towards increasing the equilibrium marginal productivity of capital, and promoting national economic growth and development.

Key Words:- Stock Market, Economic Development

I. Introduction

The major engine of growth and development for any economy is the capital market which accommodates certain institutions for the creation, custodianship, distribution and exchange of financial assets and management of long-term liabilities. An economy without a capital market just cannot grow since the market is responsible for long-term growth, capital formation and

efficient allocation to development uses. The money market, which is the short end of the financial system, only compliments the capital market by providing the necessary working capital to support gross fixed capital formation. The capital market is extremely crucial in the mobilization of savings and the channeling of such savings to profitable self-liquidating investments. Hence, the extent to which African economies have grown and developed can be explained by the degree of development of their capital markets. Obviously, virtually all economic indicators put African economies at the bottom end of the development scale. This can be attributed to, among other factors, the lack of and poor development of their capital markets.

The stock market, which is the very hub of the capital market, the pivot around which the capital market revolves, is not only crucial to the entire capital mobilization but also to economic development. However, African stock markets are just emerging in the global financial system.

The establishment of stock markets in developing countries is expected to boost domestic savings and increase the quantity and quality of investment. More generally, stock markets are seen as enhancing the operations of the domestic financial system in general and the capital market in particular (Kenny and Moss, 1998).

For some developing economies, the stock exchanges are relatively large. For example the market capitalization of exchanges in Malaysia and Jordan represent a higher share of GDP than in France or Germany, while India's stock exchanges list more companies than the stock markets of all other countries except the USA. But on the other hand, for many other developing countries, the equity markets until the mid-1980s generally suffered from the classical defects of bank dominated economies, that is, shortage of equity capital, lack of liquidity, absence of foreign institutional investors, and lack of investor confidence in the stock market (Agarwal 1997). According to the International Finance

Corporation (IFC, 1996), it is ironical that in many countries where there are investment opportunities, there is inadequate access to finance, particularly risk capital and this underlines the need to accelerate the development of local stock markets or/and other elements of the finance market in developing countries. The work of Demirguc-Kunt and Levine (1996), Singh (1997) and Levine and Zervos (1998) found that stock market development plays an important role in predicting future economic growth in situations where the stock markets are active. The arguments of Demirguc-Kunt et al (1996) indicate that economies without well-functioning stock markets may suffer from three types of imperfections: first, opportunities for risk diversification, are limited for investors and entrepreneurs; second, firms are unable to optimally structure their financing packages; and third, countries without well functioning markets lack information about prospects of firms whose shares are traded, thereby restricting promotion of investment and its' efficiency.

The contributions of the developed stock markets to their economies have led researchers to focus on how the stock markets can be developed in the developing economies so that these economies also enjoy the benefits of the stock markets. Consequently, this study focuses on the economic importance as well as the future of the stock markets. It also seeks to shed light on the controversial link between stock market and economic growth. The study will also highlight some of the current impediments to the development of this market and discuss policy options for promoting the development of the market. Research on these issues became important so that it can provide some insights as to how else a more diversified, competitive and vibrant stock market can be developed in Nigeria. This will help to raise investors' confidence, improve resources mobilization and thus lead to economic growth. The study is structured into five sections. Section I is the Introduction followed by Literature Review and Theoretical Framework in Section II, in Section III we present Research

Methodology and Model Specification. The model results are presented and analysed in Section IV, while Section V is Summary and Conclusion.

II. Literature Review And Theoretical Framework

Capital as one of the four factors of production plays an extremely vital role in effective mobilization of all resources and indeed in their full capacity utilization. "Capital is at the centre of the problem of steady growth because it generates income and also increases the production capacity of the economy". Infact, for growth to occur, a country must invest to build up its production capacity. It is this capacity that determines the level of output of goods and services in the economy. "If investment, which represents the net increase in an economy's capital stock leads to growth, then there is a relationship between capital accumulation and economic growth (Soyode 1990). Therefore, the fact that capital is needed for economic development is not disputable. Similarly, (Miller Merton 1991) contended that capital accumulation is a fundamental part of the development process and it is stimulated by real resources and financial resources as well as incentives to invest which together constitute the supply and demand sides of capital accumulation.

It has long been established that "the condition of being developed" consist of having accumulated and having established, efficient social and economic mechanism for maintaining and increasing large stocks of capital per head in various forms. Conversely, the conclusion of being "underdeveloped" is characterised by the possession of relatively small stocks of the various kinds of capital.

To achieve economic growth (that is, rise over a given period in the level of aggregate income, or aggregate consumption after due allowance has been made for the amount of reproducible capital used up in the process), a developing country like Nigeria must pay a greater attention to the level and process of its accumulated and accumulating

capital stock (Aboyade, 1982). The above assertion boils down to the fact that capital is indispensable for economic development and it is usually formed from surplus investible fund which exist within and outside an economy through a mechanism called the capital market.

The idea that financial markets may be related with real activities is not new, but the view of this relationship has changed over time. The main function of money or capital market was to trade in credit for the purpose of financing development before the Great Depression. Gurley and Shaw (1955) were the first to study the relationship between financial markets and real activity. They argued that one of the differences between developed and developing countries is that the financial system is more developed in the former than in the later. The argument was that financial markets could extend a borrower's financial capacity and improve the efficiency of trade. With well-developed financial markets investors can be provided with the necessary funds for their projects. They concluded that financial markets contribute to economic development through enhancing physical capital accumulation. Much of the literature on the relationship between financial markets and real output suffered a lack of evidence until the 1970s when studies by Goldsmith (1969), Shaw (1973) and McKinnon (1973) found that development of financial markets was significantly correlated with the level of per capita income.

However, the theoretical literature offers conflicting predictions about the role of stock markets and banks in promoting economic growth. The literature on financial liberalization has emphasized abolishing interest rate ceilings and encourages free competition among banks as the way forward to achieve economic growth. However, it has largely overlooked the possibility that endogenous constraints in the credit market, such as imperfect information, could be a significant obstacle to efficient credit allocation even when assuming that banks are free from interest rate ceilings. Arestis et al (2001) show that

while both banks and stock markets play an important role in the growth process, the banking sector development effects on economic growth in the long run is much higher than the stock market development effect. More recently, the emphasis has increasingly shifted to stock market indicators and the effect of stock markets on economic development and hence, stock market development has become the subject of intensive theoretical and empirical studies (see Demirguc-Kunt and Levine (1996), Levine and Zervos (1993, 1998), Demirguc-Kunt, Asik and Mallsmonc 1995). In principle, a well-developed stock market should increase saving and efficiently allocate capital to productive investments, which leads to an increase in the rate of economic growth.

Stock Market and Economic Growth: Theoretical and Analytical Issues.

In principle, stock markets are expected to accelerate economic growth by providing a boost to domestic savings and increasing the quantity and the quality of investments (Singh 1997). Stock markets contribute to the mobilization of domestic savings by enhancing the set of financial instruments available to savers to diversify their portfolios. Better savings mobilization may increase the savings rate (Levine and Zervos, 1998). If efficient stock markets enable savings to be allocated to investment projects with higher returns, the rate of return to savers increases, making savings more attractive. As a result, more savings are channeled to the corporate sector. In doing so they provide an important source of investment capital at relatively low cost (Dailami and Aktin, 1990). In addition, companies in countries with developed stock markets are less dependent on bank financing, which can reduce the risk of a credit crunch. In fact, debt finance is likely to be unavailable in many countries, particularly in developing countries where bank loans may be limited to a selected group of companies and individual investors. McKinnon (1973) suggests that stock market development should have priority even over liberalized bank lending in the first several years of transition to a

capitalist financial market where the preceding order has created a large bad debt problem for banks. Stock markets therefore, are able to positively influence economic growth through encouraging savings amongst individuals and providing avenues for firm financing at a lower cost.

The stock market is supposed to ensure through the takeover mechanism that past investments are also most effectively used. Theoretically, the threat of takeover is expected to provide management with an incentive to maximize firm value. The presumption is that, if management does not maximize firm value, another economic agent may take control of the firm, replace management and reap the gains from the more efficient firm. Thus, a free market in corporate control, by providing financial discipline, is expected to provide the best guarantee of efficiency in the use of assets. Similarly, the ability to effect changes in the management of listed companies is expected to ensure that managerial resources are used efficiently (Kumar, 1984).

Efficient stock markets may also reduce the costs of information. They may do so through the generation and dissemination of firm specific information that efficient stock prices reveal. Stock markets are efficient if prices incorporate all available information. Reducing the cost of acquiring information is expected to facilitate and improve the acquisition of information about investment opportunities and thereby improve resource allocation. Stock prices determined in exchanges and other publicly available information may help investors make better and informed investment decisions and thereby ensure better allocation of funds among corporations and as a result a higher rate of economic growth.

Stock market liquidity is expected to reduce the downside risk and costs of investing in projects that do not pay off for a long time. With a liquid market, the initial investors do not lose access to their savings for the duration of the investment project because they can easily, quickly, and

cheaply, sell their stake in the company (Bencivenga and Smith, 1991). Thus, more liquid stock markets could ease investment in long term, potentially more profitable projects, thereby improving the allocation of capital and enhancing prospects for long-term growth. The critical role of financial market liquidity in affecting the efficiency of physical production enjoys historical support. According to Hicks (1969), new technological inventions did not ignite the industrial revolution in England in the eighteenth century. Rather, more liquid financial markets made it possible to develop projects that required large capital injections for long periods before the projects ultimately yielded profits. Without liquid markets, savers would have been less willing to invest in the large, long term projects that characterized the industrial revolution. In other words, an active secondary market is essential for the existence and operations of the primary market for new capital. Bencivenga, et al (1996) went as far as stating that "the industrial revolution therefore had to wait for the financial revolution". Stock markets help investors to cope with liquidity risk by allowing those who are hit by a liquidity shock to sell their shares to other investors who do not suffer from a liquidity shock. The result is that capital is not prematurely removed from firms to meet short-term liquidity needs, thus allowing firms to utilize capital for long-enough periods to yield the desired results.

From a monetary growth perspective, a well-developed stock market provides a means for the exercise of monetary policy through the issue and repurchase of government securities in a liquid market. This is an important step in financial liberalization. In addition, well-developed and active stock markets alter the pattern of demand for money, and booming stock markets create liquidity and hence spur economic growth.

The arguments for stock market development were supported by various empirical studies, such as Levine and Zervos (1993), Atji and Jovanovic (1993), Levine and Zervos (1998). Show that stock market development is strongly correlated

with growth rates of real GDP per capita. More importantly, they found that stock market liquidity and banking development both predict the future growth rate of an economy when they both enter the growth regression. Nevertheless, there are still some critics to the above enumerated position impact of the stock markets on economic growth.

Critics of the stock market argue that, stock market prices do not accurately reflect the underlying fundamentals when speculative bubbles emerge in the market. In such situations, prices on the stock market are not simply determined by discounting the expected future cash flows, which according to the efficient market hypothesis should reflect all currently available information about fundamentals. Under this condition, the stock market develops its own speculative growth dynamics which may be guided by irrational behaviour. This irrationality is expected to adversely affect the real sector of the economy as it is in danger of becoming the by-product of a casino.

Critics further argue that stock market liquidity may negatively influence corporate governance because very liquid stock markets may encourage investor myopia. Since investors can easily sell their shares, more liquid stock markets may weaken investors' commitment and incentive to exert corporate control by overseeing managers and monitoring firm performance and says that stock market liquidity will not enhance incentives for acquiring information about time or exerting corporate governance. In other words, instant stock market liquidity may discourage investors from having long-term commitment with firms whose shares they own and therefore create potential corporate governance problem with serious ramifications for economic growth.

Critics also point out that the actual operation of the pricing and takeover mechanism in well functioning stock markets lead to short-termism and lower rates of long-term investment, particularly in firm specific human capital. It also generates perverse incentives, rewarding

managers for their success in financial engineering rather than creating new wealth through organic growth (Singh, 1997). This is because prices react very quickly to a variety of information influencing expectations on financial markets. Therefore, prices on the stock market tend to be highly volatile and enable profits within short periods. Moreover, because the stock market undervalues long-term investment, managers are not encouraged to undertake long-term investments since their activities are judged by the performance of a company's financial assets, which may harm long run prospects of companies. In addition, empirical evidence shows that the takeover mechanism does not perform a disciplinary function and that competitive selection in the market for corporate control takes place much more on the basis of size rather than performance. Therefore, a large, inefficient firm, has a higher chance of survival than a small relatively efficient firm.

These problems are further magnified in emerging markets with their weaker regulatory institutions and greater macroeconomic volatility. The higher degree of price volatility on stock markets in developing countries reduces the efficiency of the price signals in allocating investment resources. These serious limitations of the stock markets have led many analysts to question the importance of the system in promoting economic growth in emerging markets.

Stock Market and Economic Growth: Empirical Evidence

Numerous empirical tests have shown that financial variables have important impacts on economic growth. However, most of the evidence uses bank-based measures of financial development such as the ratio of liquid liability of financial intermediaries to GDP and domestic credit to the private sector divided by GDP. Not until recently has the emphasis increasingly shifted to stock market indicators, due to the increasing role of stock markets in the economies. For example, Atje and Jovanovic (1993) tested the hypothesis that the stock markets have a positive

impact on growth performance. They found significant correlations between economic growth and the value of stock market trading divided by GDP for 40 countries over the periods 1980-88.

Similarly, Levine and Zervos (1998) used pooled cross-country, time-series regression to evaluate the relationship between stock market development and long-run economic growth. Using data on 41 countries over the period (1976-1993) and after controlling initial conditions and other factors that may affect economic growth, they concluded that stock market development remains positively and significantly correlated with long run economic growth.

In addition, using cross-country data for 40 countries from 1976-93, Levine and Zervos (1998) reported the influence of stock markets as measured by their size (ratio of market capitalization to GDP) and value traded (as a proportion of GDP) as well as bank credit on economic growth. They found that the value traded is positively and significantly related to growth even when market capitalization was included in the equation. They arrived at the conclusion that "stock market liquidity and banking development are both positively and robustly correlated with current and future rates of economic growth, even after controlling for economic and political factors. Since measures of stock market liquidity and banking development both enter the growth regressions significantly, the findings suggest that banks provide different financial services from those provided by stock markets" (Levine and Zervos, 1998, p. 554).

Furthermore, using data from 44 industrial and developing countries from 1976-1993, Demirguc-Kunt and Levine (1996a) investigated the relationships between stock market development and financial intermediary development. They found that countries with better-developed stock markets also have better-developed financial intermediaries. Thus, they concluded that stock market development goes hand-in-hand with financial intermediary development.

Empirical evidence linking stock market development to economic growth has been inconclusive even though the balance of evidence is in favour of a positive relationship between stock markets and economic growth. Levine and Zervos (1998) found that various measures of stock market activity are positively correlated with measures of real economic growth across countries, and that the association is particularly strong for developing countries. Their results also show that after controlling for initial conditions and economic and political factors, the measures of banking and stock market development are robustly correlated with current and future rates of economic growth and productivity improvement.

Determinants of Stock Market Development

The previous section has provided enough evidence to make a convincing case that stock market development at least created the enabling environment for a successful economic growth. It is likely that the impact of stock market development on growth will vary across levels of development. The policy question, therefore, is what determines stock market development? The literature suggests that sound macroeconomic environment, well developed banking sector, transparent and accountable institutions, and shareholder protection, are necessary preconditions for the efficient functioning of stock markets in developing countries.

A. Macroeconomic Stability

The macroeconomic policy environment is critical for influencing stock market and hence the extent to which the market may be able to play its role. A stable macroeconomic environment is crucial for the development of the market. The higher the macroeconomic stability the more incentives firms and investors have to participate in the stock market. Furthermore, corporate profitability can be affected by changes in monetary, fiscal and exchange rate policies. Macroeconomic volatility worsens the problem of informational asymmetries and becomes a source of vulnerability to the financial system. Low and predictable rates of inflation are more likely to

contribute to stock market development and economic growth. Both domestic and foreign investors will be unwilling to invest in the stock market where there are expectations of high inflation. Gracia and Liu (1999) find that sound macroeconomic environments and sufficiently high income levels – GDP per capita, domestic savings, and domestic investments- are important determinants of stock market development in emerging markets.

B. Banking Sector Development

The development of the banking sector is important for stock market development in developing countries. At the early stages of its establishment the stock market is a complement rather than a substitute for the banking sector. Developing the financial intermediary sector can promote stock market development. Infact, the levels of financial intermediary development and openness to trade appear to be the most significant macro-factors that have a positive impact on the size of the equity market in the world at large. This finding is intuitive given that financial intermediaries monitor and control managers and help firms to list and thus countries with well-developed financial intermediaries tend to have larger equity markets. Many East Asian countries are successful examples. Support services from the banking system contribute significantly to the development of the stock market. Consequently, liquid inter-bank markets, largely supported by an efficient banking system, are important for the development of the stock market. Conversely, a weak banking system can constrain the development of the stock market. On the empirical front, Demiraguc-Kunt and Levine (1996) found that most stock market indicators are highly correlated with banking development.

C. Institutional Quality

Institutional quality is important for stock market development because efficient and accountable institutions tend to broaden appeal and confidence in equity investment. Equity investment thus becomes gradually more attractive as political risk is resolved over time. Therefore, the development

of good quality institutions can affect the attractiveness of equity investment and lead to stock market development. Good quality institutions such as law and order, democratic accountability, corporate governance, bureaucratic quality, has been found as important determinants of stock market development in Africa because they tend to reduce political risk, enhance regulatory capacity, and support the viability of external finance. Erb et al (1996a) show that expected returns are related to the magnitude of political risk. They found that in both developing and developed countries, the lower the level of political risk, the lower is required returns. The recent increase in foreign capital inflows in emerging markets raises the issue of political risk. When foreign investors decide to invest in emerging markets, they face three different types of risk: economic risk, financial risk and political risk. The evidence in the literature suggests that political risk is a priced factor for which investors are rewarded and that it strongly affects the local cost of equity, which may have important implications for stock market development.

D. Shareholder Protection

Another key determinant of stock market development is the level of shareholder protection in publicly traded companies, as stipulated in securities or company laws. Stock market development is more likely in countries with strong shareholder protection because investors do not fear expropriation as much. In addition, ownership in such markets can be relatively dispersed, which provides liquidity to the market. La Porta et al (2003) provide evidence for the importance of minority rights protection by using indicators of the quality of shareholder protection as written in laws. They demonstrate that the quality of shareholder protection is correlated with the capitalization and liquidity of stock markets in 49 countries around the world. They also found that countries with lower quality of legal rules and law enforcement have smaller and narrower capital markets and that the listed firms on their stock markets are characterized by more

concentrated ownership. Demirguc-Kunt and Maksimovic (1995) show that firms in countries with high ratings for the effectiveness of their legal systems are able to grow faster by relying more on external finance.

E. Stock Market Liquidity

Liquidity is the ease and speed at which economic agents can buy and sell securities. With a liquid market, the initial investors do not lose access to their savings for the duration of the investment project because they can easily, and cheaply, sell their stake in the company. Thus, more liquid markets could ease investment in long term, potentially more profitable projects, thereby improving the allocation of capital and enhancing prospects for long term growth. The more liquid the stock market, the larger the amount of savings that are channeled through the stock market and the more developed the market is.

F. Private Capital Flows

In the last few decades, foreign investors have emerged as major participants in emerging stock markets. Foreign investment is associated with institutional and regulatory reform, adequate disclosure and listing requirements and fair trading practices. The increase in informational and operational efficiency is expected to inspire greater confidence in domestic markets. This increases the investor's base and participation and leads to more capital flows.

Another likely determinant of stock market development in emerging markets is the degree of privatization. Also pension reforms and the creation of pension funds are likely to have impact on development of emerging stock markets.

Indicators of the Nigerian Stock Market Performance

How well a stock market performs in relation to other stock markets and primarily in relation to the role it is expected to play in facilitating economic growth and development depends on a number of factors. Certain key indicators of stock market performance which are generally accepted in the

literature can be included in such analysis of the performance of a market.

A. Market Capitalization Ratio (MCR)

Market capitalization is the total value of all equity securities listed on a stock exchange. It is a function of the prevailing market price of quoted equities and the size of their issued and paid up capital. Market capitalization is the most important measure for assessing the size of a capital market.

The market capitalization ratio (MCR) equals the value of listed shares divided by GDP. The assumption behind the measure is that overall market size is positively correlated with the ability to mobilize capital and diversify risk on an economy wide basis (Agarwal 1997).

The market capitalization, GDP information and market capitalization to GDP ratio is presented in table 2.8. It shows the trend in the market size between 1986 and 2005. It can be seen from the table that the stock market size increased from 1986 to 1996, fell slightly from 1997 to 1998 and increased from 1999 to 2007. The major reason for the fall in the market size from 1986 to 1999 was the instability in the economy during those

periods as a result of instability in government. There were various military government regimes coupled with the introduction of the Structural Adjustment Programme (SAP) in 1986. These made the Nigerian market very unsafe and unattractive for investments both for domestic and foreign investors. There were a lot of capital flight during those periods. However, from May 1999, when the civilian democratically elected government took over governance, the investment climate of the country became attractive again most especially because of the many positive economic policies. Democratization, deregulation and internationalization have made the market much more vibrant and competitive. There are already an increasingly active foreign presence in the market as a result of the aforementioned developments in the political and policy environments of the market and indications are that the trend will continue. Specifically, the astronomical increase in the market size in 2004 was mainly as a result of the banking sector consolidation exercise which saw many of the banks in the country coming to the stock market to source for funds in order to meet the N25 billion mandatory capital base stipulated by the Central Bank of Nigeria. The data really shows that increases in the listings have a positive impact on the stock market size.

Table 1 Market Capitalization and GDP (1986-2007) (MC/GDP)

Year	Market capitalization (N' billion)	GDP at Current Basic Prices (N' billion)	Market Capitalization, GDP %
1986	6.79	71.9	9.4
1987	8.30	108.2	7.7
1988	10.02	142.6	7.0
1989	12.58	220.2	5.7
1990	16.36	271.9	6.0
1991	23.13	316.7	7.3
1992	31.27	536.3	5.8
1993	47.44	688.1	6.9
1994	66.37	904.0	7.0
1995	180.31	1934.8	9.3
1996	285.82	2703	10.6
1997	281.96	2802.0	10.1
1998	262.52	2721.2	9.6
1999	300.04	3313.6	9.1
2000	472.90	4727.5	10.0
2001	662.6	5374.3	12.3
2002	764.9	3232.2	12.3
2003	1,359.3	6061.7	22.4
2004	1,925.9	11411.1	16.9
2005	2,900.1	15610.9	18.6
2006	5,120.9	18564.6	27.6
2007	13,294.6	23280.7	57.1

Source: SEC Annual Reports and Statement of Accounts, various years, 2007. National Bureau of Statistic, 2007

B Total Value of Shares Traded Ratio (VT)

This measure equals total value of shares traded on the stock market exchange divided by GDP. The Total Value Traded Ratio measures the organized trading of firm equity as a share of national output and therefore should positively reflect liquidity on an economy-wide basis. The total value traded

ratio complements the market capitalization ratio.

Using value of trade as a measure of the market's trend intensity, or momentum, is common. Table 2 shows the trend in the Value of Trade on the NSE from 1986 to 2007

Table 2: Value of Shares Traded Ratio (1986-2007)

Year	Values of shares traded (₦ billion)	Gross Domestic Product (₦ billion)	Total value traded/ GDP (Percentage)
1986	0.5	71.9	0.695
1987	0.3	108.2	0.277
1988	0.3	142.6	0.210
1989	0.7	220.2	0.318
1990	0.3	271.9	0.110
1991	0.2	316.7	0.063
1992	0.5	536.3	0.093
1993	0.7	688.1	0.102
1994	1.0	904.0	0.111
1995	1.8	1934.8	0.093
1996	7.1	2703.8	0.263
1997	11.1	2802.0	0.396
1998	13.6	2721.2	0.500
1999	14.1	3313.6	0.426
2000	28.2	4727.5	0.597
2001	57.6	5374.3	1.072
2002	60.3	6232.2	0.968
2003	120.7	6061.7	1.991
2004	225.8	11411.1	1.979
2005	262.9	15610.9	1.684
2006	470.3	18564.6	2.533
2007	2,086.3	23280.7	8.962

Source: SEC, NSE Annual Reports and Statement of Accounts, 2007, National Bureau of Statistic, 2007

C. Turnover Ratio (TR)

This ratio equals the value of total shares traded divided by market capitalization. Though it is not a direct measure of theoretical definitions of liquidity, high turnover is often used as an indicator of low transaction costs. It is a measure of how active a market is. The turnover ratio complements the market capitalization ratio. A large inactive market will have a large market

capitalization ratio but a small turnover ratio. Turnover ratio also complements the total value traded ratio. While the total traded ratio captures trading relative to the size of the economy, turnover ratio measures trading relative to the size of the stock market. A small liquid market will have a high turnover ratio but a small total value traded ratio. Table 3 shows that the turnover ratio has been very low in Nigeria.

Table 3: Turnover Ratio (1986-2007)

Year	Value of Shares Traded (N' billion)	Market Capitalization (N' billion)	Turnover Ratio %
1986	0.5	6.79	7.4
1987	0.3	8.30	3.6
1988	0.3	10.02	3.0
1989	0.7	12.58	5.6
1990	0.3	16.36	1.8
1991	0.2	23.13	0.9
1992	0.5	31.27	1.6
1993	0.7	47.44	1.5
1994	1.0	66.37	1.5
1995	1.8	180.31	1.0
1996	7.1	285.82	2.5
1997	11.1	281.96	3.9
1998	13.6	262.52	5.2
1999	14.1	300.04	4.7
2000	28.2	472.90	6.0
2001	57.6	662.6	8.7
2002	60.3	764.9	7.9
2003	120.7	1359.3	8.9
2004	223.9	1925.9	11.6
2005	254.7	2900.1	8.8
2006	470.3	5,120.9	9.2
2007	2,086.3	13,294.6	15.7

Source: SEC Annual Reports and Statement of Accounts

D. Market Index

The Exchange has since January 1984 published a stock exchange index called the All-Share Index. The index is an aggregate of the market capitalization of all the industry equities listed in the market with 1984 as its base. Aggregate price changes tend to reflect general changes in the state of the economy or shifts in investors' expectations. The market index is an important tool for explaining economic performance. The index computed by the stock exchange is based on the

average changes in the individual stock prices. It is essentially a compilation depicting the average current market value of common stock at a particular date, relative to their average market value at an earlier base period. Table 4 below shows the Nigerian Stock Exchange All-Share Index from inception of the index in 1984 to 2007. The performance of the Index reflects positive improvement in prices of most quoted equities during the years, especially the highly capitalized stocks.

Table 4: The NSE All-Share Index 1984-2007

Year	Index	% Change	Cum. Change %
1984	100.0	-	-
1985	127.3	27.3	27.3
1986	163.8	28.7	56.0
1987	190.9	16.5	72.5
1988	233.3	22.4	94.9
1989	325.3	39.3	134.1
1990	513.8	57.9	192.1
1991	783.0	52.4	244.5
1992	1,107.6	41.5	285.9
1993	1,543.8	39.4	325.3
1994	2,205.0	42.8	368.1
1995	5,092.0	130.9	499.1
1996	6,992.0	37.3	536.4
1997	6,440.5	(7.9)	528.5
1998	5,672.7	(11.9)	515.6
1999	5,266.4	(7.2)	509.4
2000	8,111.0	54.0	563.4
2001	10,963.1	35.2	598.6
2002	12,137.7	10.7	609.3
2003	20,128.9	65.8	675.1
2004	23,844.45	18.5	693.6
2005	24,085.8	1.0	694.6
2006	33,189.3	37.8	732.4
2007	27,990.22	74.73	807.13

Source: SEC Annual Report & Accounts 2007

E. Market Liquidity

Liquidity generally refers to the ability to buy and sell security easily. Liquid equity markets allow companies on the one hand to have a permanent access to capital through equity issues and on the other hand, allow investors to switch out of equity if they need to access funds or if they want to change the composition of their portfolios.

Two measures of liquidity commonly used in the literature are computed: total value traded to GDP and the turnover ratio. The turnover ratio gives the

total value of shares traded in relation to the size of the market. The results are as reported in tables 2 and 3

F. Market Concentration

Market concentration can be measured by looking at the share of market capitalization accounted for by the large stocks. These large stocks are seen as the leading few firms in the market. In many economies only a few companies dominate the stock market (Bundoo 1999). High concentration is not desirable as it can adversely affect liquidity,

as it is common to find a negative correlation between concentration and liquidity. Table 5 shows the top twenty stocks on the Nigerian Stock Exchange by Market Capitalization. From the table, it can be deduced that the top ten stocks on the average made up 53.3 percent of total market capitalization between 2000 and 2006. The top 20 stocks controlled 72.0 percent of the market on the average over the same period.

G. Market Listing

The total amount of new issues of securities raised in a capital market is a major indicator of how popular the market is as a source of growth funds. This actually depends on the degree of investors' confidence and the comparative cost of raising similar funds from alternative source in the financial system. The number of equity listings on a stock exchange also determines the popularity and size of a stock market. The number of listings is influenced by the stringency of the requirements for quotations and the degree of corporate aversion to quotation. Nigeria has only 214 equity listing as at 2007 compared to South Africa with 450 and Egypt with 700. Table 6 shows the Growth in the Number of Listed Securities between 1987 and 2007 while Table 2.14 shows New Issues and Gross Fixed Capital Formation in the Nigerian Capital Market from 1981 to 2005. New issues of securities in Nigeria averaged N39.26 billion between 1990 and 2004 as indicated in table 7 while the total number of listed securities in the Exchange as at 2007 was 310. The astronomical increase in the amount raised through New Issues (Equities) as from 2004 (Table 7) was as a result of the banking and insurance sector consolidation which saw many banks and insurance companies coming to the stock market to source for funds in order to meet up with the Central Bank of Nigeria's stipulated mandatory paid-up share capital for banks and insurance companies operating in the country.

III. Research Methodology

The methodology adopted in this study is error correction mechanism. This was conducted after stationarity test. Cointegration test was also used

to examine the existence of long run relationship between all variables of interest after which error correction mechanism is used. All necessary statistical tests was carried out, including coefficient of determination R^2 , F-statistic, Durbin Watson and t-statistic.

Model Specification

To examine the impact of stock market on economic growth in Nigeria, we adopted three models in which stock market indicators and some selected macroeconomic variables are regressed on the performance of the Nigerian economy. The first and second models examine the separate effect of market capitalization ratio and value of shares turnover ratio on economic growth in Nigeria. The third model incorporates other determining variables of economic growth with market capitalization ratio and turnover ratio as independent variables of the model. The proxy for the performance of Nigerian economic growth is the growth rate of real Gross Domestic Product. Stock market indicators used in this study are market capitalization ratio, turnover ratio and shares traded ratio. Other independent variables selected in this study are: exchange rate, domestic rate of inflation, government expenditure and political stability. These models are specified as follows.

$$GRGDP = \beta_0 + \beta_1 RMARCAP + \mu$$

$$GRGDP = \beta_0 + \beta_1 RTURNOVER + \mu$$

$$GRGDP = \beta_0 + \beta_1 RMARCAP + \beta_2 + RTURNOVER + \beta_3 EXCH + \beta_4 DIR + \beta_5 GOVEXP + \beta_6 POL + \mu$$

Where

GRGDP	=	growth rate of real GDP
RMARCAP	=	market capitalization ratio
RTUNOVER	=	turnover ratio
EXCH	=	exchange rate
DIR	=	domestic rate of inflation
GOVEXP	=	government expenditure
POL	=	political stability

A priori expectation

On the basis of the discussion above, the expected sign for the coefficients of market capitalization ratio is positive. This is because high market capitalization ratio and turnover ratio facilitate economies of scale and make efficient use of other resources possible. The coefficient of exchange rate is expected to be negative. This is because high and unstable exchange rate increase cost of production, thereby, retarding production and economic growth. High inflation hinders smooth production process, scares away Foreign Direct Investment and consequently retards export and economic growth. It is also expected that government expenditure facilities and political stability promote productive activities. Therefore, we expect their coefficients to be positive.

In other words, it is expected that $\beta_1 > 0, \beta_2 < 0, \beta_3 < 0, \beta_4 > 0, \beta_5 > 0$ and $\beta_6 > 0$

Re-statement of Hypothesis

- H₀: Market capitalization ratio has no significant relationship with economic growth in Nigeria.
- H₁: Market capitalization ratio has significant relationship with economic growth in Nigeria.
- H₀: Turnover ratio has no significant relationship with economic growth in Nigeria
- H₁: Turnover ratio has significant relationship with economic growth in Nigeria.
- H₀: Exchange rate, domestic inflation rate, government expenditure and political stability have no significant impact on economic growth in Nigeria.
- H₁: Exchange rate, domestic inflation rate, government expenditure and political stability have significant impact on economic growth in Nigeria.

Estimation Techniques

This paper employs the techniques of error correction model, cointegration and unit root test to estimate the relationship between capital market development and economic growth.

In any economic study of functional relationship between two or more variables that involve time series data, it is imperative to take into consideration the properties of time series data used in making any judgement or inferences. A time series is said to be stationary if its means, variance and covariance are all invariant with respect to time. Regression of a non-stationary time series on another non-stationary time series may produce a spurious regression. In other words, the model may yield misleading values of coefficient of determination R², Durbin Watson test of autocorrelation, t-statistic and F statistic. The estimation technique used in this analysis will be based on test of stationarity using Augmented Dickey Fuller test of unit root, cointegration test for testing the existence of long run relationship between the dependent and independent variables, and error correction techniques (ECM) for establishing a long run adjustment between the variable of interest. All these techniques are briefly explained below.

1. Concept of Unit Root Test

The unit root test is a test of stationarity of time series data. Unit root test can be performed by using Augmented Dickey Fuller (ADF) test. The ADF test is a test against the null hypothesis that there is a unit root of 1 (1) series;

The test equation is of the form:

$$\Delta Y_t = \alpha + \alpha_1 Y_{t-1} + \delta_1 \Delta Y_{t-1} + \delta_2 \Delta Y_{t-2} + \delta_3 \Delta Y_{t-3} + \dots + \delta_p \Delta Y_{t-p} + \xi_t$$

The t-statistic test of the coefficients of the lagged level of Y_{t-1} with the critical t – values are given in the Fuller (1976) distribution table. The critical value for the rejection (or acceptance) of the null hypothesis is a function of the sample size and the functional form of the model used for the test.

2. Co-Integration Test

According to Komolafe (1996), two or more different series may not themselves be stationary, but some linear combination of them may indeed be stationary with the generalization to more than two series. Economically speaking, two variables

will be cointegrated if they have long term relationship between them. The technique of cointegration thus arises out of the need to integrate short run dynamics with long run equilibrium. The presence of co-integration means that long-run relationship exists among the non-stationary variables. Granger and Newbold (1977) and Granger and Engel (1985) have all shown that the existence of cointegration is a sufficient condition for the formulation of a model that allows for the incorporation of an error correction model (ECM). The inclusion of ECM in a model ensures that the long run relationship is preserved.

In this study, the Johansen, S. and K. Juselius (1990) cointegration test will be used.

3. Error Correction Mechanism

The error correction term indicates the speed of the adjustment which restores equilibrium in the dynamic model. The ECM coefficient shows how quickly variable returns to equilibrium and it should have a statistically significant coefficient with a negative sign. Error correction technique corrects for disequilibrium between short run and long run behaviour of the dependent variable. Since disequilibrium may exist in the short run, there is need to tie the value of the dependent variable to its long run value. The error term from the cointegrating /initial regression is thus called "equilibrium error"

The error correction model can be specified as;
$$D(\log(\text{GRGDP})) = \beta_0 + \beta_1 D(\log(\text{RMARCAP})) + \beta_2 D(\log(\text{RTURNOVER})) + \beta_3 D(\log(\text{EXCH})) + \beta_4 D(\log(\text{DIR})) + \beta_5 D(\log(\text{GOVEXP})) + \beta_6 D(\text{POL}) + \text{ECM}(-1) + \mu$$

Where:

- D = difference parameter
- ECM(-1) = one period lagged value of the error from the cointegrating /initial regression
- U_t = error term

IV. DATA ANALYSIS AND PRESENTATION OF RESULT

This section presents the result of regression analysis of the relationship between the stock market development indicators and the performance of the economy using error correction mechanism. It also presents the results of other statistical estimations. The section is structured into five parts. In part 4.2, we carry out descriptive analysis of market capitalization. Part 4.3 examines the correlation analysis between the performance of the stock market and economic activities in Nigeria. In part 4.4, we conduct unit root test, and cointegration test. And lastly, section 4.5 is based on presentation of error correction model result and various diagnostic tests.

The data for the analysis are shown in table below.

Table 4.1: Data for Analysis

YEAR	GRGDP	DIR	EXCR	GOVEXP	RMARCAP	RTURNOVER	POL	RSHARE
1986	0.017354	5.4	2.020600	16223.70	2987.170	1.672721	0	0.695
1987	0.505490	10.2	4.017900	22018.70	3476.812	1.786273	0	0.277
1988	0.318303	38.3	4.536700	27749.50	3522.238	2.577491	0	0.210
1989	0.543985	40.9	7.391600	41028.30	4066.789	5.447030	0	0.318
1990	0.234823	7.5	8.037800	60268.20	4838.910	1.924656	0	0.110
1991	0.164622	13.0	9.900000	66584.40	6877.144	1.128394	0	0.063
1992	0.693577	44.5	17.29840	92797.40	9636.243	1.513947	0	0.093
1993	0.283107	57.2	22.05110	191228.9	13692.63	1.411608	0	0.102
1994	0.313699	57.0	21.88610	160893.2	18974.06	1.505444	0	0.111
1995	1.140289	72.8	21.88610	248768.1	48521.79	1.074882	0	0.093
1996	0.397439	29.3	21.88610	337217.6	77778.61	2.472980	0	0.263
1997	0.036306	8.5	21.88610	728215.2	77287.91	3.801281	0	0.396
1998	-0.028835	10.0	21.88610	487113.4	67783.12	5.165090	1	0.500
1999	0.217694	6.6	92.69340	947690.0	58486.28	6.132958	1	0.426
2000	0.426719	6.9	102.1052	701.1000	116078.5	5.892148	1	1.597
2001	0.136818	18.9	111.9433	1018.000	153465.8	8.692824	1	0.072
2002	0.159631	12.9	120.9702	1018.200	169097.8	7.893375	1	0.968
2003	-0.027365	14.0	129.3565	1226.000	274562.9	8.001161	1	1.991
2004	0.882486	15.0	133.5004	1426.200	400352.8	10.69179	1	1.979
2005	0.280413	17.9	132.1470	1822.100	580567.3	8.267602	1	1.684
2006	1.659122	8.2	128.6516	1938.000	859388.8	6.703391	1	2.533
2007	1.196962	5.4	125.8331	2459.900	1621714.5	3.240813	1	8.962

Source: Central Bank of Nigeria (2007)

Where:

GRGDP	=	growth rate of real GDP
RMARCAP	=	market capitalization ratio
RTURNOVER	=	turnover ratio
RSHARE	=	share traded ratio
EXCH	=	exchange rate
DIR	=	domestic rate of inflation
GOVEXP	=	government expenditure
POL	=	political stability

4.2 Descriptive Analysis

In the figure above, the performance of stock

market, measured by market capitalization ratio, improves over the years. Market capitalization rose steadily from less than 100,000 million in 1986 to more than 600,000 million in 2006. This appreciation shows fast growth and development in the stock market. It also indicates high investment in companies by investors. And this has contributed to the growth of the economy.

4.3 Correlation Analysis

The table below presents correlation coefficients of the performance of the Nigerian economy and

other explanatory variables. Correlation coefficient measures degree of association between two variables. It indicates whether two

variables are moving in the same or different directions.

Table 4.2: Correlation Test

	RGDP	MARKET CAPITAL	VALUE OF SHARE
RGDP	1.000000	0.870494	0.856426
MARKET CAPITAL	0.870494	1.000000	0.988115
VALUE OF SHARE	0.856426	0.988115	1.000000

The coefficient of correlation between stock market development indicators (market capitalization and value of share traded) and real Gross Domestic Product. The result shows that market capitalization and value of shares traded have positive relationship with economic growth in Nigeria. It can be seen from the degree of association between market capitalization and economic activities in Nigeria which is 0.87. This shows that market capitalization is closely linked with economic activities and that both variables are moving closely in the same direction. The degree of association of value of shares traded with real GDP is also very high 0.85. With this result, it can be said that when value of shares improve economic performance will improve.

4.4 Model Re-Specification

The study uses three models for the estimation of the relationship between stock market development and economic growth in Nigeria. The first and second models examine the separate effect of market capitalization ratio and value of shares traded on economic activities in Nigeria. The third model incorporates other determining variables of economic growth with market capitalization ratio and value of shares traded as independent variables of the model. These models are re-specified as follows.

Models

- (1) $GRGDP = \beta_0 + \beta_1 RMARCAP + \mu$
- (2) $GRGDP = \beta_0 + \beta_1 RTURNOVER + \mu$

$$(3) \quad GRGDP = \beta_0 + \beta_1 RMARCAP + \beta_2 RTURNOVER + \beta_3 EXCH + \beta_4 DIR + \beta_5 GOVEXP + \beta_6 POL + \mu$$

- Where
- GRGDP = growth rate of real GDP
 - RMARCAP = market capitalization ratio
 - RTUNOVER = turnover ratio
 - EXCH = exchange rate
 - DIR = domestic rate of inflation
 - GOVEXP = government expenditure

4.4.1 Unit Root Test

Granger and Newbold (1974). Granger (1986), have demonstrated that if time series variables are non stationary, all regression results with these time series will differ from the conventional theory of regression with stationary series. That is, regression coefficients with non-stationary variables will be spurious and misleading.

To get over this problem, we test for stationarity of the time series. Augmented Dickey Fuller (ADF) test will be used to investigate whether variables used in this study have a unit root or not. The results of the unit root test are presented below.

Table 4.3: Unit root test

Variable	Level	1 st Difference	2 nd Difference	1% Critical value	Order of Integration
GRGDP	-1.368162	-5.006878	-5.838506	-2.7275	I(1)
RMARCAP	1.198573	-2.247601	-4.809752	-4.6712	I(2)
RTURNOVER	-0.446695	-3.352231	-6.123521	-3.9228	I(2)
RSHARE	2.310366	-1.639362	-7.309911	-3.9228	I(2)
EXCH	-1.842658	-2.654709	-4.864107	-4.6712	I(2)
DIR	-1.302843	-4.177538	-5.350520	-2.7275	I(1)
GOVEXP	-1.845627	-3.473145	-5.102036	-3.9228	I(2)
POL	0.000000	-2.738613	-4.582576	-2.7275	I(1)

In the table above, all variables are at non-stationary level. This is because the ADF value of each variable is less than the McKinnon 1% critical values. Time series of growth rate of real GDP, domestic inflation rate and political stability, proxied by dummy variable are stationary at first difference, while the time series of market capitalization ratio, turnover ratio, value of share traded, exchange rate and federal government expenditure are stationary at second difference.

In-order to incorporate stationarity test results into our modeling, our model has to be changed in such a way that all variables are used in their stationary level.

4.4.1 Cointegration Test

Co-integration test examines the existence of

long-run relationship between dependent and independent variables. Co-integration of dependent and independent variables form a dynamic basis of a functional relationship between two or more variables, thus, help in forecasting purposes. In this study, we carry co-integration test using Johansen's test of cointegration.

Johansen Cointegration Test

The result of Johansen cointegration test is shown in table 4.4. The result shows that there exist five (5) cointegrating equations at 5% level of significance. This is because the likelihood ratio is greater than critical values at 5%. The result indicates that, in the long run, the dependent variables can be efficiently predicted using the specified independent variables. Thus, error correction model can be estimated.

Table 4.4: Johansen Cointegration Test

	Likelihood	5 Percent	1 Percent	Hypothesized
Eigenvalue	Ratio	Critical Value	Critical Value	No. of CE (s)
0.988674	266.0812	124.24	133.57	None**
0.956390	171.9877	94.15	103.18	At most 1 **
0.884544	106.2058	68.52	76.07	At most 2 **
0.764506	60.86960	47.21	54.46	At most 3 **
0.645688	30.50211	29.68	35.65	At most 4 **
0.324832	8.712968	15.41	20.04	At most 5
0.021867	0.464292	3.76	6.65	At most 6

*(**) denotes rejection of the hypothesis at 5% (1%) significance level

L.R. test indicates 5 cointegrating equation(s) 5% significance level

4.4 Model Re-Specification

We are able to establish stationarity status of relevant variables in our study in section 4.4.1. We also showed in section 4.4.2 that long run relationship exists between dependent and independent variables in our model. Taking all these into consideration, we re-specify our model one as follows;

These models are re-specified as follows;

MODELS

- ❖ $D(\log(\text{GRGDP})) = \beta_0 + \beta_1 D(\log(\text{RMARCAP}), 2) + \mu$
- ❖ $D(\log(\text{GRGDP})) = \beta_0 + \beta_1 D(\log(\text{RMARCAP}), 2) + \mu$
- ❖ $D(\log(\text{GRGDP})) = \beta_0 + \beta_1 D(\log(\text{RMARCAP}), 2) + \mu + \beta_2 D(\log(\text{RTURNOVER})) + \beta_3$

$$(\log(\text{RSHARE}) \beta_4 D(\log(\text{EXCH})) + \beta_5 D(\log(\text{DIR})) + \beta_6 D(\log(\text{GOVEXP})) + \beta_7 D(\text{POL}) + \text{ECM}(-1) + \mu$$

Where;

D = difference parameter

U_t = Random error Term

ECM_{t-1} = equilibrium parameter

Other variables remain as defined above.

4.4.1 Presentation of Equation One Result

In this section, we present the regression results of the models on the effect of stock market development indicators, market capitalization ratio, share traded ratio and turnover ratio, on economic growth in Nigeria. The regression results are as follows;

Result of Model One

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.205393	0.233295	-0.880400	0.3935
D(LOG(RMARCAP),2)	1.880346	0.687264	2.735985	0.0161
R-squared	0.468401	Mean dependent var		-0.164936
Adjusted R-squared	0.411858	S.D. dependent var		1.114602
S.E. of regression	0.931304	Akaike info criterion		2.812007
Sum squared reside	12.14258	Schwarz criterion		2.908580
Log likelihood	-20.49605	F-statistic		7.485616
Durbin-Watson stat	2.387065	Prob (F-Statistic)		0.016081

Interpretation of Coefficients

The result of model one shows how market capitalization ratio impact on economic growth in Nigeria. In the result, market capitalization ratio has a positive relationship and significant relationship with economic growth. One percent increase in market capitalization ratio will lead to about 1.88 percent increase in economic growth. The coefficient of market capitalization is

significant. This is because its probability is less than 0.05 critical value. The overall coefficient of determination R^2 indicates that market capitalization ratio captured about 46 percent of total variation in economic growth. The implication of the result is that stock market through capitalization promotes investment activities and invariably improves economic growth.

Result of Model Two

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.150200	0.284635	-0.527694	0.6060
D(LOG(TURNOVER),2)	0.288823	0.125782	2.296218	0.0486
R-squared	0.531821	Mean dependent var		-0.164936
Adjusted R-squared	0.427334	S.D. dependent var		1.114602
S.E. of regression	1.135218	Akaike info criterion		3.207995
Sum squared reside	18.04207	Schwarz criterion		3.304568
Log likelihood	-23.66396	F-statistic		5.460139
Durbin-Watson stat	2.372734	Prob (F-Statistic)		0.028617

The result of model two shows how turnover ratio contributes to economic growth. In the result, there is a positive relationship between turnover ratio and economic growth. One percent increase in turnover ratio will on the average, increase economic growth by about 0.288. The coefficient is significant at 5 percent

critical level. Overall coefficient of determination R^2 indicates that value of turnover ratio captured about 53 percent of total variation in economic growth. The result implies that as turnover ratio in the stock market increases, economic growth improves.

Result of Model Three

$$GRGDP=(RMARCAP, TURNOVER, DIR, EXCH, GOVEXP, POL)$$

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.006191	0.272637	-0.022709	0.9824
D(LOG(RMARCAP),2)	2.301681	0.944607	2.436656	0.0408
D(LOG(RTURNOVER),2)	0.287892	0.463393	0.621270	0.5517
D(LOG(DIR))	-0.412479	0.179486	2.298112	0.0445
D(LOG(EXCR),2)	0.555811	0.785943	0.707189	0.4885
D(LOG(GOVEXP),2)	0.007518	0.136465	0.055091	0.9574
POL	0.639892	0.253923	2.520023	0.0321
ECM(-1)	-0.664666	0.303132	-2.192661	0.0493
R-squared	0.721283	Mean dependent var		-0.164936
Adjusted R-squared	0.577407	S.D. dependent var		1.114602
S.E. of regression	0.805753	Akaike info criterion		2.712773
Sum squared reside	5.193899	Schwarz criterion		3.099067
Log likelihood	-13.70218	F-statistic		5.957571
Durbin-Watson stat	2.383609	Prob (F-Statistic)		0.035840

The relationship between turnover ratio and economic growth from the result is positive but insignificant. The coefficient of turnover ratio is 0.28. This result indicates that when turnover ratio changes by one percent economic growth will change in same direction by 0.28 percent.

The results show that the coefficient of exchange rate is positive but insignificant at 5% level. This suggests that exchange rate has a positive impact on the performance of the economy. One percent increase in exchange rate will, on the average, lead to about 0.55 percent increase in economic growth. This result indicates that exchange has not been

well managed by the monetary authorities. This is because high and unstable exchange rate creates uncertainty and increases cost of production which can invariably reduce the competitiveness of local commodities.

The result also shows that the coefficient of domestic inflation rate has a significant negative relationship with economic growth. One percent increase in inflation rate, other things being constant, leads to about 0.41 percent decrease in the performance of the economy. The implication of this result is that inflation rate has constituted a barrier to the growth and development in Nigeria.

The result also shows that government expenditure has a positive insignificant relationship with the performance of the economy. One percent increase in government expenditure leads to about 0.045 percent increase in the performance of the economy. The result shows that government expenditure has not influenced economic growth significantly. Government expenditure has to facilitate increased employment, correct macroeconomic instability and promote social welfare.

Lastly, political stability promotes economic growth. This is indicated from the positive sign of its coefficient. With this, it can be stated that a politically stable economy grows faster. From the result, ECM is negative -0.66 and significant at 5% percent critical level. It shows that more than 66 percent disequilibria in the performance of the economy in the previous year are corrected in the current year. The strong significance of the ECM is an indication and a confirmation of the existence of a long run equilibrium relationship between contributions of the economy and the relevant independent variables used in this study.

4.4 Measurement of Goodness of Fit

1. Coefficient of Determination R^2

The coefficient of multiple determination R^2 is 0.72. This indicates that about 72 percent of the total variations in economic growth are explained by the variations in market capitalization and other included independent variables. This shows that our model explains large proportion of variations in economic growth in Nigeria.

Adjusted R^2 shows actual variations in real GDP captured by the independent variables introduced in the model after taking into considerations effect of additional explanatory variables on R^2 . It can be seen that the model still explains about 57% of the total variations in the performance of the economy.

F-Statistic

The F-statistic shows overall significance of the model. The F-statistic is significant at 5% level.

Its value (4.95) is greater than the theoretical table value (2.53) with 7 and 15 degree of freedom. We, therefore, reject the null hypothesis that the model is not significant in explaining the variations in economic growth.

The Durbin Watson test of autocorrelation shows an absence of serial autocorrelation. This is because the calculated value of DW (2.38) falls between 2 and $4-D_U$ at 1 % significant level. The $D_U = 1.61$ and $4-D_U = 2.39$. With this result we reject the hypothesis that there is presence of serial autocorrelation in our model. Therefore, parameter estimates from our model are stable and efficient.

V. SUMMARY OF FINDINGS AND CONCLUSION

The case of the Nigerian Stock Exchange is no exception to those other developing countries which are working towards reforming and deepening their financial systems through the expansion of their stock markets in order to improve their ability to mobilize resources and efficiently allocate them to the most productive sectors of the economy. This paper examines the relationship between stock market development and economic growth. Results suggests a positive relationship between several indicators of the stock market performance and economic growth both directly, as well as indirectly by boosting private investment behaviour. The market liquidity (turnover ratio) has a positive impact on growth while the market size (capitalization ratio) affect investments which, in turn, affect growth. The empirical results do support the theoretical literature (e.g., Levine, 1991), in suggesting that the stock market development leads to high economic growth because it reduces both liquidity and productivity shocks.

As indicated by the current trends, the market seems to be saddled with low liquidity and slow growth in listings. The market is seen as facing a lot of challenges in its development and growth. It is therefore crucial that the policies related to the market should be given a serious and more

harmonized consideration. The critical bottlenecks that could undermine the stock market linkages with micro economic variables should be clearly identified so that a better framework can be developed to guide the development of appropriate policies which will ultimately ensure the rapid development of the stock market in Nigeria and consequently impact on national economic growth and development.

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