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# Financial Reforms And The Nigerian Capital Market: 1986– 2010

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**ABSTRACT**
This paper examines the impact of financial reforms on the Nigerian Capital Market for the period 1986 – 2010. This is against the backdrop of the important role the capital market plays in the economic growth and development of a nation. The paper reviewed empirical secondary data from CBN and Stock Market publications. The impact of the financial reforms introduced since 1986 on capital market development was assessed using multiple regression, the Johansen co-integration technique and Error Correction Model (OCM) as well as the pair-wise Granger causality tests to ascertain the long-term relationship between financial reforms and capital market development. The result revealed that the financial reforms from 1986 upwards had an overall significant impact on the capital market development in Nigeria.
**Keywords:** Capital Market, Economic Growth, Financial Institutions, Financial Reforms, Stock Exchange.

## 1.0 INTRODUCTION

There is a fair agreement in the literature that economic reforms, especially what came to be tagged Structural Adjustment Programme (SAP), have almost always been mounted in response to national financial distress whose foundation could be traced to macroeconomic distortions (World Bank 1986). While such distress manifest mainly as deep economic deterioration (stagflation and huge external debts), distortions are often evident in the pursuit of unsustainable fiscal, monetary and exchange rates policies in addition to widespread government intervention in enterprises that can best be handled by the private sector. In general, several analysts believe that economic mal-adjustment is associated with policy pursuits which depart from free market pricing policies (Chiber, et al 1986; Ray 1986). Economic reforms are therefore seen as pursuits of fiscal reforms and market liberalisations, which focus on extensive privatization of state owned enterprises as well as liberalizations of financial and foreign exchange markets, with the government limited to provision of the right enabling environment for a private sector led growth.

There is a consensus in the literature that at the heart of economic reforms is the need to address a two-fold task: restructure or get policy incentives right as well as restructure key implementation institutions. Financial sector reforms is that aspect of economic reforms which focus mainly on restructuring financial sector institutions (regulators and operators) via institutional and policy reforms. There have been other economic reforms since the commencement of SAP. The first is the financial systems reforms of 1986 to 1993 which led to deregulation of the banking industry that was hitherto dominated by indigenized banks that led to over 60 per cent Federal and State governments' stakes. During this period, government at both federal and state levels invested heavily in industry especially in agro- and allied sectors, electricity and petroleum refining. This period saw in addition to credit, interest rate and foreign exchange policy reforms. The second phase began in the late 1993 to 1998, with the re-introduction of regulations. During this period, there was a lot of distress in the financial sector which necessitated another round of reforms, designed to manage the distress. The third phase began with the advent of civilian democracy in 1999 which saw the return to liberalization of the financial sectors, accompanied with the adoption of distress resolution programmes. The fourth phase began in 2004 to date and it is informed by the Nigerian monetary authorities who asserted that the financial system was characterized by structural and operational weaknesses and that their catalytic role in promoting private sector led growth could further be enhanced through a more pragmatic reform.

The Nigerian capital market is an important component of the Nigerian financial system. According to Anyanwu (1993), the financial market is a complex mechanism made up of procedures, instruments and

institutions through which efficient economic units (the users of funds, e.g. government, corporate bodies) and the surplus economic units (i.e. suppliers of funds/savings) are brought together to transact business with each other. Nzotta (2004) stated that the capital market is a mechanism for lenders to provide long term funds in exchange for financial assets issued by borrowers or traded by holders of outstanding negotiable debt instruments. Despite the existence of studies on capital market (Arestis, Demetriades and Luintel, 2001; Fase and Abma, 2003; Iimi, 2003; Khan, Qayyum and Sheikh, 2003), little exist on financial reforms and capital market development in Nigeria. The objective of this paper is to examine the impact of financial reforms on the development of the Nigerian Capital Market from 1986 to 2010. The paper is subdivided into five sections. Section 1 is the introduction, section 2 is reviews related literature, section 3 explains the methodology, section 4 is analyses and interprets the data, and finally, section five is on summary and concluding remarks.

## 2.0 REVIEW OF RELATED LITERATURE

Omoruyi (1991), CBN (2004) and several financial sector analysis summarized objectives of financial sector reforms to include: market liberalization for the promotion of a more efficient resource allocation; expansion of savings mobilization base, promotion of investment and growth through market-based interest rates. It also means the improvement of the regulatory and surveillance framework; fostering healthy competition in the provision of services and above all laying a basis for inflation control and economic growth.

Capital market is defined as the market where medium to long-term finance can be raised (Akingbohungbe, 1996). In another exposition, Ekezie (2002) noted that capital market is the market for dealings (i.e. lending and borrowing) in longer-term loanable funds. Mbat (2001) described it as a forum through which long-term funds are made available by the surplus to the deficit economic units. It must, however, be noted that although all the surplus economic units have access to the capital market, not all the deficit economic units have the same easy access to it. Companies can finance their operations by raising funds through issuing equity (ownership) or debenture/bond borrowed as securities. Equities have perpetual life while bond/debenture issues are structured to mature in periods of years varying from the medium to the long-term of usually between five and twenty-five years.

Capital market offers access to a variety of financial instruments that enable economic agents to pool, price, and exchange risk. Through assets with attractive yields, liquidity and risk characteristics, it encourages savings in financial form. This is very essential for government and other institutions in need of long-term funds and for suppliers of long-term funds (Nwankwo, 1991).

The vital role of the capital market to the growth and development of the economy of a nation has been widely recognized the world over. It is through the capital market that long-term funds are mobilized and channeled for productive investments (Alabede, 2005). The development of the financial sector also closely tracks economic transformation. A well developed financial system mobilizes and pools savings, facilitates the exchange of goods and services, and allows the diversification and management of risk. These functions influence savings and investment decisions as well as technological innovations, and hence economic growth.

Based on its importance in accelerating economic growth and development, government of most nations tends to have keen interest in the performance of its capital market. The concern is for sustained confidence in the market and for a strong investors' protection arrangement. Nigeria Securities and Exchange Commission (NSEC) is the government agency responsible for developing and regulating the Nigeria capital market. It was created by Act No. 71 of 1979 and re-acted as Securities and Exchange Commission Decree No. 29 of 1988. The NSEC purses its objectives by registering all market operators based on capital adequacy, competence and solvency as criteria.

Augusto and Sergio (2007) observed that besides efforts to attract foreign capital, developing countries also tried to emulate the performance of capital markets in developed economies by undertaking a series of reforms thought to foster development of domestic securities markets. They added that these reforms had their own logic and are easy to understand in the context of logic.

McKinnon (1973) and Shaw (1973) pioneered the view that financial liberalization and financial sector development are essential for growth. They argued that the deregulation of the capital markets increases economic growth through higher savings rates and improved resource allocation. King and Levine (1993a) later redefined the financial sector growth nexus by arguing that capital markets play a crucial role in the processing of information. The ability of financial institutions to select profitable innovations and projects that increase productivity and, hence, growth was seen as the key contribution to capital markets to economic development.

In line with the above arguments on the relevance of the stock markets to economic growth and development, Augusto and Sergio (2007), noted that a barrage of reforms have been implemented in emerging economies to foster the development of local capital markets. They, Augusto and Sergio (2007), grouped these reforms in four categories, namely:- (a) reforms aimed at creating the enabling environment for capital markets – such as the strengthening of macroeconomic stability and the enforcement of property rights; (b) reforms aimed at

enhancing the efficiency and market discipline in the entire financial system through greater competition – such as capital account liberalization; (c) reforms indirectly supportive of capital market development – such as pension reforms and privatization programmes; and (d) capital market-specific reforms – such as the development of regulatory framework and improvements in securities clearance and settlement systems.
Furthermore, Augusto and Sergio (2007) identified six types of reforms including stock market liberalization, enforcement of insider trading laws, introduction of fully automated trading systems, privatization programmes, structural pension reforms (that is, shifting from a public, defined-benefit, pay-as-you-go system to a privately managed funded, defined-contribution system), and institutional reform. They, however, noted that although these reforms were a significant part of the capital market reform programmes implemented by most countries, this list is not exhaustive and does not attempt to cover all the policy initiatives oriented towards fostering stock market development that were implemented in the past decade.

## 2.1 THE NIGERIAN STOCK MARKET IN PERSPECTIVE

The development of the Nigeria Capital Market dates back to the late 1950s when the Federal Government through its ministry of industries set up the Barback committee to advise it on ways and mean of setting up a stock market. Prior to independence, financial operators in Nigeria comprised mainly of foreign owned commercial banks that provided short-term commercial trade credits for the overseas companies with offices in Nigeria (Nwankwo, 1991). Their capital balances were invested abroad in the London stock Exchange. Thus, the Nigeria Government in an attempt to accelerate economic growth embarked on the development of the capital market. This is to provide local opportunities for borrowing and lending of long-term capital by the public and private sectors as well as an opportunity for foreign-based companies to offer their shares to the local investors and provide avenues for the expatriate companies to invest surplus funds.
Based on the report of the Barback Committee the Lagos Stock Exchange was set up in 1959. With the enactment of the Lagos Stock Exchange Act 1961, it commenced business in June, 1961 and assumed the major activities of the stock market by providing facilities for the public to trade in shares and stocks, maintaining fair prices through stock-jobbing and restricting the business to its members. The Lagos stock exchange was renamed the Nigeria Stock Exchange in 1977, with the following objectives;
1) To provide facilities to the public in Nigeria for the purchase and sale of funds, stocks and shares of any kind and for the investment of money.
2) To regulate the dealings of members interest and those of their clients.
3) To control the granting of a quotation on the stock exchange in respect of funds, stocks and shares or any company, government, municipality local authority or other corporate body.
4) To promote, support, or propose legislative or other measures affecting the aforementioned objectives.
Initially trading activities commenced with two Federal Government Development Stocks, one preference share and three domestic equities. The market grew slowly during the period with only six equities at the end of 1966 compared with three in 1961. Government stocks comprised the bulk of the listing with 19 of such securities quoted on the Exchange in 1966 compared with six at the end of 1961. (Nnanna, Englama and Odoko, 2004). Prior to 1972 when the indigenization exercise took off, activities on the Nigeria stock exchange were low. That was true both in terms of the value and volume of transactions.
The NSE comprises 3 tiers. The first tier is the official list comprising of 198 securities. Most of the activity on the NSE is on the first tier. The second tier list comprises 15 securities and the third-tier securities market is designed for Small and Medium Scale Enterprises (SMEs). The rules and regulations differ between the tiers.
The major instruments/products available in the Nigerian capital market to date include; the industrial equities otherwise referred to as ordinary shares; industrial loans such as debentures, unsecured zero coupons, preference bonds/stocks, specialized project loans/infrastructural loans, government stocks/ bonds, unit trust schemes, unlisted corporate/industrial loans stock, among others. The market is currently divided in to two broad categories, namely equities and debt markets. The former are instruments or products that confer ownership rights on the investor, while the later are interest-bearing obligations with fixed or floating interest-rates.
According to Ekoko (2007), the institutions that make up the capital market include:

- Insurance companies
- Other financial institutions dealing in long-term funds; and
- The stock market

The NSE is the primary operator in the Nigerian capital market. Mayo (1997) describes the stock exchange as a "primary capital market in which companies and other institutions can raise funds by issuing shares or loan stock but it is more important as a secondary market for buying and selling existing securities.

Alile (1997) said that the stock exchange is made up of the following elements:

- Place – this represents the forum, physical or otherwise, for conducting transactions in stocks;
- Mechanism – this includes the operative issue and transfer procedure;
- Institutions – these include regulatory agencies, issuing houses, the stock broking firms, etc.
- This stock market is made up of two segments which are the primary and the secondary market. Ekiran (1999) describes the primary market as the market for the issuance of new funds or securities. The secondary market is the market in which the holders of financial instruments can sell them to other investors. Alile (1997) says that "the secondary market is the vehicle for providing liquidity to investors."

### 2.1.1 Instruments traded on the Nigerian Stock Exchange

The instruments traded on the Nigerian Stock Exchange were described by Dada (2003) and Alabede (2005) as follows:

- **Ordinary Shares** - the holders of ordinary shares are real owners of the company, because they bear the greatest risk in the company and also benefit from its success. Ordinary shares represent the permanent capital of a company.
- **Preference shares** – the holders of preference shares are entitled to a fixed percentage of dividends before ordinary shareholders are paid any dividend. A preference share's dividend can only be paid if there are sufficient distributable profits available.
- **Federal Government Development Stocks** – the federal government issues these instruments, usually annually, and it is a long-term loan, with maturity varying between 6 and 25 years.
- **Bonds** – state and local governments go to raise funds on the floor of the NSE using bonds.
- **Debenture/Loans Stocks** – these are instruments used to raise corporate funds for financing long-term capital needs. The holders of such instruments are entitled to a fixed rate of interest, which must be paid whether profit is earned or not by the company.

## 2.2 Nigerian Stock Exchange Specific Reforms

The Nigerian Capital Market has evolved having undergone several reforms over the years. Before 1959, almost all formal savings and deposits in Nigeria were in the banking system. The country's major capital balances were invested on the London Stock Exchange usually via London-based stockbrokers. The Nigerian capital market effectively came into being with the establishment of the Lagos Stock Exchange in 1960, which began actual trading in 1961.

The NSE was incorporated under the Companies' Ordinance as an association, limited by shares initially, but became a company limited by guarantee in 1990. It received initial financial support from the CBN through an annual subvention. The Lagos Stock Exchange's name was changed to The NSE in 1977 following recommendations by the Government Financial System Review Committee of 1976. In addition to the Lagos bourse (by far the preponderant stage for trading activity) the NSE opened trading floors in Port Harcourt and Kaduna in 1980 and has since added Kano, Yola, Calabar, Ilorin, Uyo, the latest being the Abeokuta branch commissioned in November 2008

Some specific reforms have been carried out on the NSE over the years to make the exchange more efficient. Some of the developments in the NSE are identified in Store (2004), Alabede (2005) and SEC (2005) as follows:

- **Automated Trading System (ATS)** – this is one of the most outstanding innovations in the securities market in Nigeria. The ATS is a system of security trading arrangement whereby transactions are conducted through a network of computers. Before ATS was introduced, the call over system was used and this system made the settlement cycle on the NSE to be 21 days. ATS was launched on the 27th of April, 1999.
- **Central Securities Clearing System (CSCS)** – The NSE commissioned the CSCS in 1997 as a subsidiary but it came into operation on the 14th of April, 1999. According to the Securities and

Exchange Commission (SEC, 2005), the CSCS was conceived as primarily a settlement arena for the achievement of the T-3 settlement cycle. The CSCS serves as an interface with the ATS and automatically receives data relating to trade as they take place for settlement.

- **On-line Trading** - The NSE has been able to link some of its branches that have large daily transactions to the central server at the Customs House, Lagos, Abuja, Kano, Yola, and Port Harcourt. Branches are now fully integrated to the main trading platform. Stockbrokers residing in these areas do not have to be in the Lagos trading floor to trade anymore.
- **Remote Trading** – As part of the reform in the NSE, in order to make it efficient, in 2004, the exchange introduced remote trading. Remote trading is a system where brokers trade from the comfort of their offices. The computers of the stockbrokers are connected to the main trading machines through one of the safest connection devices. This system guarantees safe delivery of data from the mainframe of the trading machine to the computers in the office of stockbrokers. The objective of this system is to eliminate the formal trading floor.
- **The Trade Alert** – This was introduced in 2005 and generated a lot of controversy. This system was introduced as a means of protecting the securities market against ever increasing threats from fraudsters. The trade alert is a device which, when subscribed to by a security holder, will send a notice to the security holder's mobile phone indicating elaborately all transactions taking place in his accounts in the CSCS. The aim of this device is o stop any unauthorized trade, before it takes place thereby protecting the investment.
- **E-bonus** – The e-Bonus was put in place to ensure bonuses issued to an investor by companies are instantly credited to the investors' accounts at the CSCS.
- **E-IPO** – This system ensures that the Initial Public Offer of listed companies are electronically captured on the accounts of the CSCS. After the closure of the offer and allotment by the company, lists of the successful investors would be forwarded to the CSCS for retention in the depository. This system will eliminate the long waiting period which the registrar hitherto took to print and distributes certificates. A summary of the reforms are show in figure 1 below:

### 2.3 Other Financial Sector Reforms

The Securities and Exchange Commission (2005) identified three aspects of reforms in the Nigerian economy which impacted positively on the performance of the NSE. These include:

- **Privatisation of Government Corporations –** The privatization of government-owned companies started at the time of the Structural Adjustment Programme (SAP), in 1986. However, the process was given the desired attention under NEEDS. A number of government-owned companies have been privatized by the Bureau of Public Enterprises (BPE). Some in the list for privatization include NITEL, Refineries, NAFCON, Nigerian Ports, NEPA, etc. The privatization of the government-owned parastatals helped to boost trading on the NSE as long-term funds are mobilized to pay for the privatized corporations. The privatization process was motivated by the desire to increase government revenues, promote economic efficiency, and reduce government interference in the economy. Domestic capital market development was also an implicit objective of privatization. Although governments usually adopt privatization programmes primarily to raise revenue, and in order to improve the economic efficiency of former state-owned enterprises (SOEs), most governments, including Nigerian government, also believed that privatizations implemented through public share offerings will develop their national capital markets. Recent economic research (Levine (1997), Levine and Zervos (1998) and Henry (2000)) has given added impetus to this objective by conclusively documenting a direct link between capital market development and economic growth.

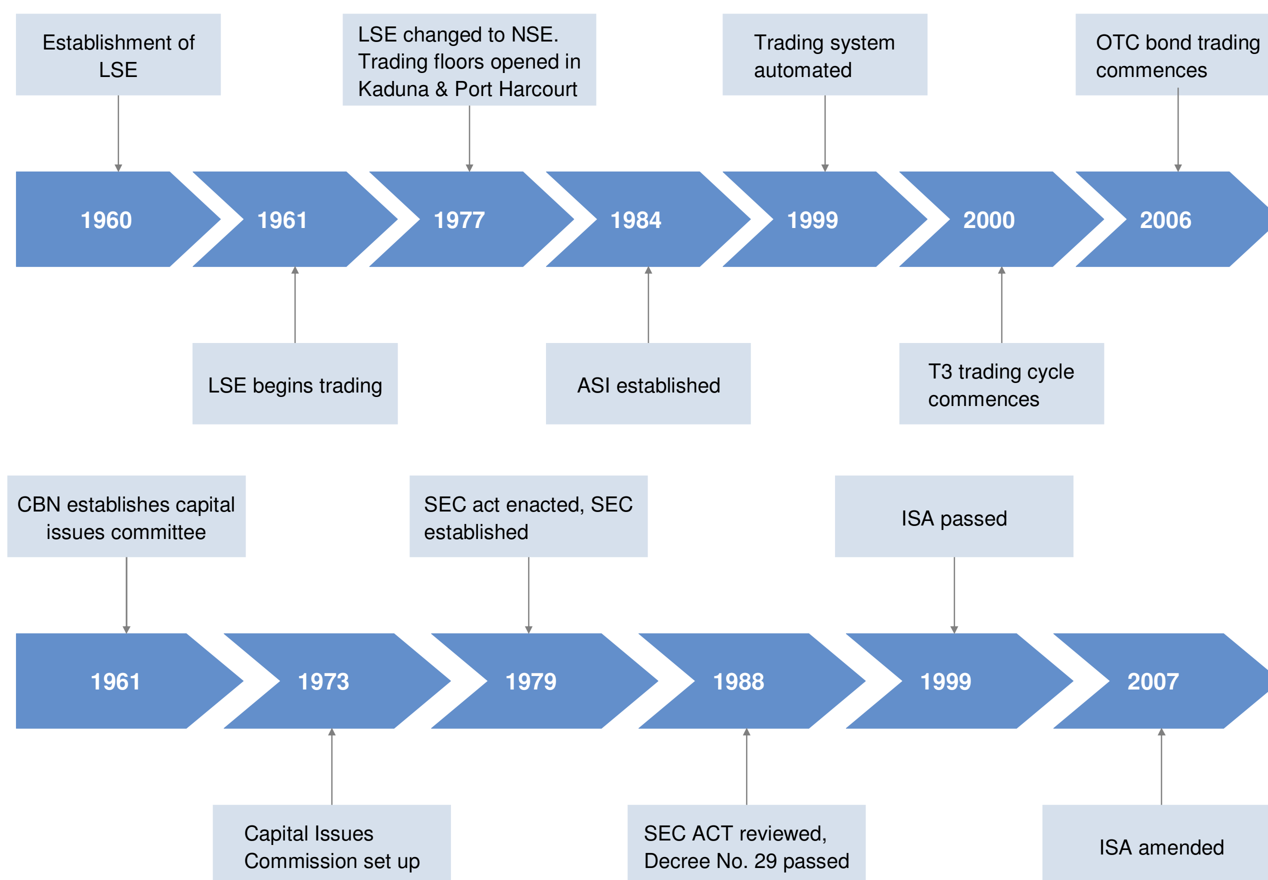


**Figure 1: Development/Evolution of the Nigerian Stock Exchange**

Privatisations had a direct impact on domestic stock market capitalization, as many governments carried out privatization sales through share offerings in local exchanges. In Nigeria, the privatization programme has yielded substantial revenue to government. Recent figures reveal that in 2000 and 2001, privatization proceeds to the Federation Account yielded N18, 103.6 million and N77, 958.1 million respectively (CBN, 2001). Much of the proceeds were raised through public offer of the privatized companies on the capital market. In addition, the privatization programme has enjoyed credibility and transparency from the capital market.

Boutchkova and Megginson (2000) show that privatized firms are generally among the largest firms in local stock markets, even in many developed countries, and that they account for a large share of total market capitalization. Because of the positive externalities generated by listing decision, these share issues were expected to foster stock market development by increasing diversification opportunities available to investors and therefore encouraging trading activity and new listings in private firms. Share issue privatizations could also increase the participation of uninformed retail investors in local stock exchanges, reducing adverse selection in the market and increasing liquidity. (Chiesa and Nicodano, 2003; Bortolotti et al, 2003). Privatization programmes, even without share offerings on local stock exchanges (as in the case of Nigeria), may also foster stock market development by reducing political risk and signaling commitment to market-oriented policies. (Augusto and Sergio, 2007).

- **Reforms in the Banking Sector –** In 2004, the Central Bank of Nigeria (CBN) embarked on reforms in the banking sector with a 13-point agenda which include the recapitalization of banks from N2 billion to N25 billion. This is a singular reform which has significantly impacted on the activities of the NSE. The CBN (2005) shows that in the process of complying with the minimum capital requirement, N406.4 billion was raised by banks from

the capital market and that N350.2 billion (about $3 billion) was attracted as new investment from outside Nigeria.

- **Pension Reforms –** In 2004, the Pension Reforms Act was passed into law, replacing the old system of non-contributory pension with contributory pension whereby both employer and employee are expected to contribute equal percentage to the funds. With the establishment of the National Pension Commission, the pension reforms have fully commenced. This reform has generated large funds which have been channeled for productive investment through Pension Fund Custodians (PFC). This helped to boost investments in the Nigerian economy, impacting positively on the NSE. As cited supra, (Augusto and Sergio, 2007), this is a significant reform which aimed to shift from publicly administered pay-as-you-go pension system to privately managed funds systems of individual pension accounts. Among other benefits, structural pension reforms were expected to improve macroeconomic stability, by reducing the demographic pressures of pay-as-you-go systems by inducing fiscal reform to absorb the costs of transition, reduce labour market distortions, increase aggregate savings, and reduce political interference in the system. (Feldstein, 1998; Feldstein and Liebman, 2002; Orszag and Stiglitz, 2001; and World Bank, 1994). Capital market reform is seen as conducive to domestic capital market development through three main channels (Walker and Lefort, 2002); by inducing authorities to improve the regulatory framework (accumulating "institutional capital"), increasing specialization in the investment decision-making process, and improving incentives for financial innovation. Walker and Lefort (2002) find evidence of a reduction in the cost of capital and higher trading volumes as a result of pension reforms. Catalan, Impavido, and Musalem (2001) analyse the Granger causality between contractual savings (assets in pension funds and life insurance companies) and stock market development and find evidence that the growth in contractual savings causes increases in market capitalization and trading.

- **Corporate Governance and Financial Reporting**

Over the decades, various governments have passed laws and approved regulations aimed at creating proper legal and regulatory framework for the Nigerian Capital Market to flourish. These have especially tended towards the direction of improved corporate governance practices by introducing new standards in a number of different areas, including voting rights, audit committees, procurement and tender procedures, and structure of the board of directors. There are also enactments of new insider trading regulations and improved accounting (financial reporting) and disclosure requirements. This is particularly with the adoption by Nigeria of the International Financial Reporting Standards, and the passing into law of the Financial Reporting Act, 2010. Another significant reform in this area is the review of listing requirements from time to time.

- **Automation**

Advances in information technology have enhanced the efficiency and transparency of capital markets. Technology has eased and quickened assessment of default possibilities and various risks that are associated with financial products. Technology has made it easier now, than ever before, for investors and market professionals to spot opportunities. Although technology is quite expensive to acquire and maintain, it is never the less essential if capital markets are to be developed and remain competitive.

## 2.4 Prior Empirical Studies

The financial sector provides basic services necessary for sustainable economic growth; hence many financial economists argue that financial reform has a particularly important role in economies in the developed and developing economies (World Bank 1996; Hermes and Lensink 2000). This branch of literature grew rapidly during the past two decades (Trew 2006). Recent increase in frequency of financial crises also prompted strong research interest in this area. Several empirical studies have been conducted on financial reforms and financial system development in developed and developing economies. This section reviews prior research to establish the gaps in the literature and also to serve as a basis for validation of the findings.

Arestis, Demetriades and Luintel (2001) using time series data from five developed countries and using VAR framework, examine the association between stock market development and economic growth, controlling the effects of banking system and stock volatility. They measure output by the logarithm of real GDP and stock market development by the stock capitalization to GDP, banking system development by the logarithm of the

ratio of domestic credit to nominal GDP, stock market volatility by the eight quarter moving standard deviation of the end of quarter change of stock market prices. Their results suggest that although both banking and stock market promote economic growth, the effects of the former are more powerful. They support the view that bank based financial system may be more to promote growth than capital market based system. Limi ((2003) study of reforms in the banking sector over the period 1997-2001 of five major state banks to examine the efficiency changes during and after the banking sector reform. The authors used production function model using labour and capital, banks were supposed to produce output. The author finds that two of the banks improved the technical efficiency over the reform period, while the technical efficiency of the other tends to be fluctuating. Fase and Abma (2003) investigate the association between financial development and economic growth for more developing countries in Asia, using data of varying length, and error correction framework. Their result shows that financial development matters for economic growth and that causality runs from the level of financial intermediation and sophistication to economic growth. They conclude that improvement of financial structure in developing countries may benefit economic development and that the policy of financial reform in the selected countries is likely to improve economic growth. Khan, Qayyum and Sheikh (2005) examine the relationship between financial development and economic growth for Pakistan over the period 1971-2004 using autoregressive distributed lag (ARDL) technique. The results of the study suggest that in the long run, financial depth and real deposit rate are important factor contributing to economic growth in Pakistan. Using time series data for Malaysia, Ang and McKibbin (2007) also discovered that financial liberalization, through removal of repressive policies, had a favorable effect on stimulating financial development.

## 3.0 MATERIALS AND METHODS

### Hypothesis:

The hypothesis formulated for this study is: "The reforms in the Nigerian financial sector have not impacted significantly on the performance of the Nigerian Stock Exchange."

### Data for the Study

The data used for analysis in this study were secondary data. They were extracted from the CBN's statistical bulletin imported into Excel spreadsheet for the period 1986 to 2010. The data extracted from the CBN's publications related to the NSE market capitalization, volume of trade, value of stock traded, number of deals and index of all common stock. These data were supplemented with data from journals, conference papers and textbooks.

## 3.1 MODEL SPECIFICATION

As we know, both institutional and macroeconomic factors are important in stock market development. Garcia and Liu (1999) showed that macroeconomic factors such as real income, savings rate, financial intermediary development, and stock market liquidity are important determinants of stock market development. Pagano (1993) shows that regulatory and institutional factors may influence the efficient functioning of stock markets. In this study, we examine the roles of savings rate, credit to the private sector, and broad money supply (M2) on capital market development (using market capitalization to depict capital market development). We estimated the following regression:

$$MRMC = \beta 0 + \beta 1SVR + \beta 2RCRP + \beta 3RMS + e$$

Where: MRMC is the dependent variable measured as stock market capitalization relative to GDP. The explanatory variables are:

Saving rate (SVR), the saving rate is calculated as the ratio of gross saving to gross disposable income. Like the banks, stock markets convey saving to investment projects. Usually, the larger the saving rate, the higher the flow of capital to stock markets. We expect a positive effect of the saving rate on the stock market size.

Credit to private sector (RCRP) - we use the domestic credit to the private sector divided by GDP to account for financial intermediary development. Since both banks and stock markets intermediate savings towards investment projects, they can be either complements or substitutes. Boyd and Smith (1996) suggest that banks and stock markets may behave as complements rather than as substitutes. Empirically, Demirguc-Kunt and Levine (1996a) show that the degree of stock market development is positively related to bank development. Conversely, Garcia (1986) finds that Central Banks activities may generate a negative correlation between bank growth and stock market development.

 

Broad Money Supply (M2 represented by RMS) is another indicator for bank development; it is the ratio of broad money supply to GDP. This ratio is a measure of the size of the banking sector in relation to the economy as a whole whereas credit to private sector measures the role of financial intermediaries in the provision of long-run financing of investment projects by private corporations.

The reforms that started in 1986 with Structural Adjustment Programme introduced brought about a deregulation of the entire economy arising from a market driven system. This brought about a major paradigm shift in the operational variables in almost all sectors of the economy, especially the financial sector. In effect, these reforms in one way or the other have had effect on the rate of savings, the rate of money supply and credit to the private sector. This is because economic activities were now wholly dictated by market forces.

### 3.2 TECHNIQUE FOR DATA ANALYSIS

We employed co-integration, multiple regression and Granger causality test to determine whether there is a causal relationship between capital market development and economic reforms. We obtained descriptive statistics and correlation coefficient as a measure of the degree of relationship between dependent variable (market capitalization) and the independent variables. In order to test for stationarity (whether the 'mean' and 'variance' are constant over time), we ran a unit root test and the Johansen co-integration test and obtained over-paramatised results.

## 4.0 ANALYSIS OF THE EFFECT OF FINANCIAL REFORM ON MARKET CAPITALIZATION

This section of the study presents the analysis and interpretation of results on the effect of financial reform on market capitalization. The results of the analyses are presented below:

**Table 4.1 Empirical Data for 1985 to 2010**

MARKET PERFORMANCE/GROWTH INDICATORS VERSUS PROXIES FOR ECONOMIC REFORMS FROM VARIOUS SOURCES

| Year | Market Capitalisation (Nbn) | Mkt. Capitalisation as a % of GDP @ Current basic prices. (RMC) | Rate of Credit to Private Sector to GDP (RCRP) | Rate of Money Supply(M2) to GDP (RMS) | National Savings N'bn | Average Savings Rate % (SVR) |
|---|---|---|---|---|---|---|
| 1985 | .00679 | 9.400000 | 9.50000 | 32.84000 | 12.5 | 9.5 |
| 1986 | .00770 | 9.800000 | 9.50000 | 34.43000 | 13.9 | 9.5 |
| 1987 | .00890 | 7.900000 | 12.2000 | 26.20000 | 18.7 | 12.2 |
| 1988 | .00970 | 7.200000 | 12.4000 | 27.58000 | 23.2 | 12.4 |
| 1989 | .0120 | 5.900000 | 16.5000 | 21.17000 | 23.6 | 16.5 |
| 1990 | .0159 | 6.100000 | 17.8000 | 19.76000 | 29.7 | 17.8 |
| 1991 | .0226 | 7.400000 | 14.9000 | 24.16000 | 37.7 | 14.9 |
| 1992 | .0325 | 5.900000 | 16.1000 | 20.86000 | 55.1 | 16.1 |
| 1993 | .0460 | 6.900000 | 16.7000 | 24.18000 | 85.0 | 16.7 |
| 1994 | .0655 | 7.400000 | 12.3000 | 25.59000 | 108.5 | 12.3 |
| 1995 | .1711 | 9.300000 | 12.6000 | 14.95000 | 108.5 | 12.6 |
| 1996 | .2856 | 10.60000 | 11.9000 | 12.80000 | 134.5 | 11.9 |
| 1997 | .292 | 10.10000 | 6.10000 | 14.75000 | 177.6 | 6.1 |
| 1998 | .2633 | 9.700000 | 5.20000 | 18.02000 | 200.1 | 5.2 |
| 1999 | .2999 | 9.400000 | 6.60000 | 19.69000 | 277.7 | 6.6 |
| 2000 | .4786 | 10.40000 | 4.90000 | 19.17000 | 385.2 | 4.9 |
| 2001 | .6626 | 12.80000 | 5.00000 | 26.86000 | 488.0 | 5.0 |
| 2002 | .7639 | 14.00000 | 3.70000 | 21.82000 | 592.1 | 3.7 |
| 2003 | 1.35 | 18.90000 | 3.20000 | 23.01000 | 655.7 | 3.2 |
| 2004 | 2.11 | 23.30000 | 4.40000 | 18.68000 | 797.5 | 4.4 |
| 2005 | 2.90 | 37.00000 | 3.30000 | 18.10000 | 1,317.0 | 3.3 |
| 2006 | 5.12 | 53.00000 | 3.00000 | 20.47000 | 1,739.6 | 3.0 |
| 2007 | 13.30 | 60.00000 | 3.20000 | 24.88000 | 2,693.6 | 3.2 |
| 2008 | 9.56 | 39.00000 | 3.60000 | 33.05000 | 4,118.2 | 3.6 |
| 2009 | 7.03 | 29.00000 | 3.40000 | 38.14000 | 5,763.5 | 3.4 |
| 2010 | 10.33 | 32.00000 | 1.50000 | 37.78000 | 5,825.3 | 1.5 |

**Table 4.2 Results of descriptive statistics**

| | RMC | RCRP | RMS | SVR |
|---|---|---|---|---|
| Mean | 17.40000 | 0.150483 | 23.80538 | 8.442308 |
| Median | 9.950000 | 0.135811 | 22.41500 | 6.350000 |
| Maximum | 60.00000 | 0.359444 | 38.14000 | 17.80000 |
| Minimum | 5.900000 | 0.062691 | 12.80000 | 1.500000 |
| Std. Dev. | 15.10796 | 0.074451 | 6.854473 | 5.245507 |
| Skewness | 1.558167 | 1.399024 | 0.620119 | 0.406779 |
| Kurtosis | 4.359197 | 4.283843 | 2.621280 | 1.684131 |
| Jarque-Bera | 12.52220 | 10.26711 | 1.821755 | 2.592835 |
| Probability | 0.001909 | 0.005896 | 0.402171 | 0.273510 |
| Observations | 26 | 26 | 26 | 26 |

**Table 4.3 UNIT ROOT TEST SUMMARY RESULTS**

| VARIABLE | ADF Test: First Diff. Statistic | Order of Integration |
|---|---|---|
| D(GDPR) | -2.515835 | 1(1) |
| D(RCCP) | -3.368047 | 1(1) |
| D(RPSD) | -4.616114 | 1(1) |
| D(RMSP) | -4.379315 | 1(1) |
| ECM | -4.695846 | 1(1) |

A unit root test indicates order 1 integration of all the variables.

**Table 4.4 JOHANSEN COINTEGRATION TEST**

Date: 03/09/13 Time: 18:41
Sample: 1986:1 2011:4
Included observations: 98
Test assumption: Linear deterministic trend in the data
Series: GDPR RCCP RMSP RPSD
Lags 1 to 4

| Eigen value | Likelihood Ratio | 5 Percent Critical Value | 1 Percent Critical Value | Hypothesized No. of CE(s) |
|---|---|---|---|---|
| 0.344734 | 76.88063 | 47.21 | 54.46 | None** |
| 0.217628 | 35.45458 | 29.68 | 35.65 | At most 1 |
| 0.087901 | 11.40289 | 15.41 | 20.04 | At most 2 |
| 0.024056 | 2.386188 | 3.76 | 6.65 | At most 3 |

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

L R test indicates 2 cointegrating equation(s) at 5% significance level.

Unnormalised Cointegrating Coefficients

| GDPR | RCCP | RMSP | RPSD | |
|---|---|---|---|---|
| -1.14 | 0.007539 | -0.004467 | 0.002811 | |
| 6.26 | -0.011001 | 0.018695 | -0.033275 | |
| 1.81 | 0.006572 | -0.006538 | -0.008088 | |
| -3.00 | -0.004103 | -0.007213 | 0.022688 | |

Normalised Cointegrating coefficients: 1 Cointegrating equation(s)

| RMC | RCRP | RMS | SVR | C |
|---|---|---|---|---|
| 1.000000 | -352.5485 | 1.312672 | -0.973246 | 12.30469 |
| | (47.5365) | (0.41153) | (0.35317) | |
| Log likelibood | -120.8986 | | | |

Normalised Cointegrating coefficients: 2 Cointegrating equation(s)

| RMC | RCRP | RMS | SVR | C |
|---|---|---|---|---|
| 1.000000 | 0.000000 | -3.077647 | 0.509436 | 12.30469 |
| | | (0.95658) | (0.58692) | |
| 0.000000 | 1.000000 | -0.012453 | 0.004206 | 0.103414 |
| | | (0.00233) | (0.00143) | |
| Log likelibood | -112.3992 | | | |

Given that all the variables in the model are integrated of order 1(1), using the ADF (See table 4.3), the Johansen (1991) approach of testing for co-integration among variables was employed. The results are presented in table 4.5. The Johansen test shows the existence of one (1) co-integrating equation between the dependent variable – Rate of Market Capitalisation to GDP (RMC) and the independent variables – Savings Rate (SVR), Rate of Money Supply (RMS), and Rate of Credit to the Private Sector (RCRP) at 5% significance level.

**Table 4.5 OVER PARAMETERISED RESULT**

Dependent Variable: D(RMC)
Method: Least Squares
Date: 11/05/12 Time: 12:25
Sample: 1985 2010
Included observations: 23 after adjusting endpoints

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 0.602918 | 1.573796 | 0.383098 | 0.7097 |
| D(RMC(-1)) | 0.761179 | 0.370560 | 2.054133 | 0.0670 |
| D(RMC(-2)) | -0.007747 | 0.530268 | -0.014609 | 0.9886 |
| D(RCRP) | -29.55492 | 88.38235 | -0.334398 | 0.7450 |
| D(RCRP(-1)) | -62.37776 | 82.36079 | -0.757372 | 0.4663 |
| D(RCRP(-2)) | 48.66678 | 69.09141 | 0.704382 | 0.4973 |
| D(RMS) | -0.130268 | 0.563198 | -0.231302 | 0.8217 |
| D(RMS(-1)) | 0.111894 | 0.568604 | 0.196787 | 0.8479 |
| R(RMS(-2)) | 0.046364 | 0.508733 | 0.091135 | 0.9292 |
| D(SVR) | -0.675817 | 0.978497 | -0.690668 | 0.5055 |
| D(SVR(-1)) | 0.131071 | 0.947968 | 0.138266 | 0.8928 |
| D(SVR(-2)) | 0.737798 | 0.873474 | 0.844671 | 0.4180 |
| ECM(-1) | -0.228621 | 0.242852 | -0.941399 | 0.3687 |
| R-squared | 0.579971 | Mean dependent var | | 1.047826 |
| Adjusted R-squared | 0.075936 | S.D. dependent var | | 7.013679 |
| S.E. of regression | 6.742129 | Akaike info criterion | | 6.952154 |
| Sum squared resid | 454.5630 | Schwarz criterion | | 7.593955 |
| Log likelihood | -66.94977 | F-statistic | | 1.150655 |
| Durbin-Watson Stat | 1.974405 | Prob(F-statistic) | | 0.417850 |

**Table 4.6 PARSIMONIOUS ERROR CORRECTION RESULT**

Dependent Variable: D(RMC)
Method: Least Squares
Date: 11/05/12 Time: 12:25
Sample: 1985 2010
Included observations: 23 after adjusting endpoints

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 0.723346 | 1.184650 | 0.610598 | 0.5495 |
| D(RMC(-1)) | 0.551737 | 0.206423 | 2.672847 | 0.0161 |
| D(RCRP) | -53.76530 | 43.75050 | -1.228907 | 0.2358 |
| D(RCRP(-1)) | -59.25324 | 30.12958 | -1.966614 | 0.0658 |
| D(RMS) | 0.076055 | 0.350173 | 0.217191 | 0.8306 |
| D(SVR) | -0.756756 | 0.596877 | -1.267859 | 0.2219 |
| ECM(-1) | -0.130709 | 0.158907 | -0.822551 | 0.4222 |
| R-squared | 0.524972 | Mean dependent var | | 0.925000 |
| Adjusted R-squared | 0.357315 | S.D. dependent var | | 6.885855 |
| S.E. of regression | 5.520228 | Akaike info criterion | | 6.493208 |
| Sum squared resid | 518.0396 | Schwarz criterion | | 6.836807 |
| Log likelihood | -70.91850 | F-statistic | | 3.131225 |
| Durbin-Watson Stat | 1.852118 | Prob(F-statistic) | | 0.029645 |

The result of the parsimonious error correction model in table 4.6 indicates a dynamic short run relationship between the dependent and the independent variables.

From the same Table 4.6, the overall F-statistic is 3.131225 with a p-value of 0.0296, which is statistically significant and shows a good fit. The coefficient of determination (R2) is 52.49%, while R2-adjusted is 35.73% showing that 35.73% of the variations in the dependent variable can be explained by changes in the explanatory variables. The Durbin-Watson statistic is 1.85 which is very close to the '2' benchmark of autocorrelation test which therefore implies that the analysis is free from autocorrelation problem. The result revealed a negative and insignificant relationship between Rate of Market Capitalisation (RMC) and the Rate of Credit to the Private Sector (RCRP), although, significant at 10% with a one period lag (RCRP-1). The results also show a negative and insignificant relationship between Rate of Market Capitalisation (RMC) and the Rate of Savings (SVR); but the relationship between Rate of Market Capitalisation and the Rate of Broad Money Supply (RMS) is shown to be positive, though, insignificant. The error correction coefficient is -0.1307 which is approximately signed and in consonance with apriori expectations, but not significant. The ECM shows the speed and magnitude of adjustment of the long-run dynamic model to short-run shocks (Ogbulu, 2009). With respect to table 4.7, this shows that approximately 13.07% of the disturbance in the model will be corrected annually.

## 4.1 POLICY IMPLICATIONS

Analysis in this study showed that the financial reforms introduced from 1986 upwards have had significant impact on the development of the Nigerian capital market. As can be deduced from our empirical results, the reform variables (rate of savings, rate of credit to the private sector, and rate of money supply) jointly had significant impact on the capital market development variable (market capitalisation) over the study period. Boyd and Smith (1996) suggested that banks and stock markets may behave as complements rather than as substitutes. Empirically, Demirgue-Kunt and Levine (1996a) show that the degree of stock market development is positively related to bank development. Conversely, Garcia (1986) finds that Central Banks may generate negative correlation between bank growth and stock market development. Besides, broad money supply, which is an indicator for bank development exhibit a positive relationship with capital market development. It measures the size of the banking sector in relation to the economy as a whole, while credit to private sector measures the role of financial intermediaries in the provision of long-run financing of investment projects by private corporations. Good quality institutions are important for stock market development because they tend to reduce political risk, enhance regulatory capacity, and support the viability of external finance.

## 5.0 SUMMARY AND CONCLUSION

The Nigerian economy has witnessed major reforms in the form of privatization, debt management, pension and tax administration, insurance and banking consolidation, amongst others, in the last decade. Our study revealed that the financial reforms collectively, impacted significantly on the development of the Nigerian capital market. However, the variables that represent the financial reforms (apart from rate of money supply) individually show a negative relationship with the variable representing capital market development (rate of market capitalization). One reason for this could be the manner of implementation of such reforms without consistently following same to the end. We therefore recommend that reforms should be comprehensively taken that will restructure the entire financial sector, in order to achieve desired and far-reaching results. The reforms must collectively aim to achieve investor protection, transparency, and market stability and efficiency. Also, they must emphasise full and time information disclosure, good corporate governance, and maximum compliance. It is therefore evident, that the reforms must not only focus on the financial aspects, but also the legal and regulatory aspects. The whole essence is to attain international best practice and international competitiveness (Idowu and Babatunde, 2012).

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Appendix

MARKET PERFORMANCE/GROWTH INDICATORS FROM VARIOUS SOURCES

| Year | Market Capitalisation (Nbn) | Mkt. Capitalisation as a % of GDP @ Current basic prices. | Value Traded (Ntn) | T/over Ratio | All-share index | Number of listed securities | National Savings N'bn | Average Savings Rate % |
|---|---|---|---|---|---|---|---|---|
| 1985 | .00679 | 9.4 | 0.000319 | 4.84 | 127.3 | 181 | 12.5 | 9.5 |
| 1986 | .00770 | 9.8 | 0.000497 | 6.36 | 163.8 | 186 | 13.9 | 9.5 |
| 1987 | .00890 | 7.9 | 0.000382 | 3.26 | 190.9 | 185 | 18.7 | 12.2 |
| 1988 | .00970 | 7.2 | 0.000132 | 2.58 | 233.6 | 188 | 23.2 | 12.4 |
| 1989 | .0120 | 5.9 | 0.000654 | 5.42 | 325.3 | 198 | 23.6 | 16.5 |
| 1990 | .0159 | 6.1 | 0.000306 | 1.95 | 513.8 | 217 | 29.7 | 17.8 |
| 1991 | .0226 | 7.4 | 0.000255 | 1.02 | 784.0 | 239 | 37.7 | 14.9 |
| 1992 | .0325 | 5.9 | 0.000492 | 1.51 | 1,107.6 | 251 | 55.1 | 16.1 |
| 1993 | .0460 | 6.9 | 0.000862 | 1.41 | 1,543.8 | 272 | 85.0 | 16.7 |
| 1994 | .0655 | 7.4 | 0.000986 | 1.51 | 2,205.0 | 276 | 108.5 | 12.3 |
| 1995 | .1711 | 9.3 | 0.001839 | 1.08 | 5,092.15 | 276 | 108.5 | 12.6 |
| 1996 | .2856 | 10.6 | 0.007100 | 2.47 | 6,992.10 | 276 | 134.5 | 11.9 |
| 1997 | .292 | 10.1 | 0.001110 | 3.79 | 6,440.51 | 264 | 177.6 | 6.1 |
| 1998 | .2633 | 9.7 | 0.001360 | 5.22 | 5,672.76 | 264 | 200.1 | 5.2 |
| 1999 | .2999 | 9.4 | 0.001410 | 4.69 | 5,266.43 | 269 | 277.7 | 6.6 |
| 2000 | .4786 | 10.4 | 0.002820 | 5.89 | 8,111.01 | 260 | 385.2 | 4.9 |
| 2001 | .6626 | 12.8 | 0.005760 | 8.69 | 10,963.11 | 261 | 488.0 | 5.0 |
| 2002 | .7639 | 14.0 | 0.005930 | 7.76 | 12.137.72 | 253 | 592.1 | 3.7 |
| 2003 | 1.35 | 18.9 | 0.120000 | 8.89 | 19,943 | 265 | 655.7 | 3.2 |
| 2004 | 2.11 | 23.3 | 0.225800 | 10.70 | 23,845 | 277 | 797.5 | 4.4 |
| 2005 | 2.90 | 37.0 | 0.262000 | 9.03 | 24,086 | 280 | 1,317.0 | 3.3 |
| 2006 | 5.12 | 53 | 0.470000 | 9.17 | 33,189 | 287 | 1,739.6 | 3.0 |
| 2007 | 13.30 | 60 | 2.100000 | 15.78 | 57,990 | 310 | 2,693.6 | 3.2 |
| 2008 | 9.56 | 39 | 1.992730 | 20.84 | 31,450 | 304 | 4,118.2 | 3.6 |
| 2009 | 7.03 | 29 | 0.685720 | 9.75 | 20,827.17 | 266 | 5,763.5 | 3.4 |
| 2010 | 10.33 | 32 | 0.797550 | 7.72 | 24,770.5 | 264 | 5,825.3 | 1.5 |

Normalised Cointegrating coefficients: 3 Cointegrating equation(s)

| RMC | RCRP | RMS | SVR | C |
|---|---|---|---|---|
| 1.000000 | 0.000000 | 0.000000 | -10.47769 | 73.89992 |
| | | | (26.6476) | |
| 0.000000 | 1.000000 | 0.000000 | -0.040252 | 0.205125 |
| | | | (0.10717) | |
| 0.000000 | 0.000000 | 1.000000 | -3.569975 | 8.167493 |
| | | | (8.58177) | |
| Log likelibood | -108.4866 | | | |

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