The Impact of Financial Liberalization on Liquidity and Efficiency of the Nigerian Stock Market

BY

HALIRU YUSUF

M.Sc. /ADMIN/51431/05-06

A THESIS SUBMITTED TO THE POSTGRADUATE SCHOOL, AHMADU BELLO UNIVERSITY, ZARIA

NIGERIA

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE DEGREE IN ACCOUNTING AND FINANCE

DEPARTMENT OF ACCOUNTING

AHMADU BELLO UNIVERSITY, ZARIA

NIGERIA

APRIL 2009

DECLARATION

I declare that the work in the thesis entitled '**The Impact of Financial Liberalization on Liquidity and Efficiency of the Nigerian Stock Market**' has been performed by me in the Department of Accounting under the supervision of Mal. Habibu M. S. and Mal. Haruna, A.

The information derived from the literature has been duly acknowledged in the text and a list of references provided. This thesis was not previously presented for another degree or diploma at any university or institution.

HALIRU Yusuf

---------- ---------- ----------

Name of student Signature Date

CERTIFICATION

This thesis entitled “The Impact of Financial Liberalization on Liquidity and Efficiency of the Nigerian Stock Market” by Haliru Yusuf meets the regulations governing the award of the degree of Master of Science in Accounting and Finance of Ahmadu Bello University, Zaria, and is approved for its contribution to knowledge and literary presentation.

---------- ----------

Mal. Muhammed H. Sabari Date

Chairman, Supervisory Committee

---------- ----------

Mal. Awalu Haruna Date

Member, Supervisory committee

---------- ----------

Dr. Salisu Mamman Date

Head, Department of Accounting

---------- ----------

Prof. S.A. Nkom Date

Dean, postgraduate School

ACKNOWLEDGEMENT

All Praises be to almighty Allah the lord of the worlds. With due respect and allegiance to his prophet Muhammad (SAW). I humbly wish to recognize Allah's blessing on me to this stage of my academic pursuit.

I am grateful to my supervisors Mal. Muhammad Habibu Sabari and Mal. Awalu Haruna who have been my source of inspiration throughout the duration of this thesis. "Jazakummullahu Khair". I will like to use medium to thank my father Mallam Haliru Sani who has proved his strength on my academic pursuits. I will never forget you my mother, Hajiya Rabiatu Ahmad for parental care and prayers on my success in life. You are indeed an excellent mother.

Not to forget the supporters of my financial strengths, my able brothers, Jamilu Haliru and Umaru Haliru. May Allah reward you with Jannah. Let me quickly remember my Teachers and Friends both in the academics and outside such as Dr. Sabo Bello, Ahmad Bello (MSc. Coordinator), Mai anguwa (M.S. TIjjani) Bagudo, Kargi, Shehu Abdulkadir (Jazuli), , Sadiyya, Idris Saminu, Hafsat (Jos), all Department of Accounting and Business Administration Friends, I thank you all. To precisely thank Jamilu Mandiya the provider of data utilized for the study in NSE Kaduna. Jazaka Rahman. *My sisters*; Asabe, Jamila, Wasila, Hassana, Bilkisu, Farida, Nafisa, safiyya, and *brothers*; Ibrahim, Zubairu and Salisu and other sons and Dauhgters like Fatima, Sani, Hafsat, Rabi and abdulmalik.

Not to forget MAZZAJE in person of Ibrahim Muhammad Nasir (NNPC) and others for your '*support*' towards this work. Finally, I will like to thank all my family members for their support towards my educational career.

TABLE OF CONTENTS Page

Title Page----------

Declaration---------- i

Certification----------ii

Dedication----------iii

Acknowledgements----------iv

Abstract----------v

Contents----------vi-vii

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study----------1-4

1.2 Statement of the Problem----------4-5

1.3 Objectives of the Study----------6-6

1.4 Research Hypotheses----------6-7

1.5 Significance of the Study----------7-8

1.6 Scope of the Study----------8-8

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction----------9-9

2.2 Nature of Financial Liberalization----------9-15

2.3 An Overview of the Nigerian Experience With Capital Market Reforms-------16-34

2.4 Measures of Capital Market Development: Liquidity and Efficiency----------34-37

2.5 Empirical Literature on Stock Market Liberalization: Liquidity and Efficiency-38--45

2.6 The Theoretical Underpinnings of Financial Liberalization Programmes---------46-49

2.7 Summary----------50-50

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction----------51-51

3.2 Research Designs----------51-51

3.3 Population Design ---------- ----------51-52

3.4 Sample Size and Sampling Technique----------52-52

3.4 Methods of Data Collection----------52-52

3.5 Techniques of Data Analysis----------52-53

3.6 Justification of the Methods and Techniques----------53-53

3.7 Summary ----------54-54

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction----------55-55

4.2 Trend Analysis of Liquidity and Efficiency of the NigerianStock Market for the Period Under Study----------55-63

4.3 Hypotheses Testing----------63-65

4.4 Discussions of Results----------65-67

4.6 Chapter Summary ----------67-67

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of Major Findings----------68-69

5.2 Limitations of the Study----------69-70

5.3 Conclusions----------70-71

5.4 Recommendations----------71-73

Bibliography----------73-91

Appendices----------92-97

ABSTRACT

The Nigerian stock market has been liberalized in 1995 in order to enhance the liquidity and efficiency of the market. The view of liberalizing the market is in conformity with the liberalists who argue that financial liberalization eradicates condition of financial repression in the financial sector and in turn makes the sector stand a better chance to grow and develop to appreciable levels than otherwise. The objective of this study, therefore, is to find out whether or not financial liberalization has any significant impact on the liquidity and efficiency of the market in sustaining economic growth. Data were collected through secondary sources from the Securities and Exchange Commision's data bank and annual financial statements and the Nigerian Stock Exchange annual financial statements among others. Using paired t-test to analyse the data for twenty years; from 1986-2005, the study found that financial liberalization has significant positive impact on the liquidity and efficiency of the Nigerian stock market. The study, among other things, recommended that the liquidity, and by extension efficiency of the Nigerian stock market should be enhanced through encouragement of the effective participation of financial institutions in the market. Furthermore, the study recommended that the participating institutions, like Banks and individual investors, in the market should comply with basic macroeconomic policies, like fiscal policy and monetary policy, in order to make the market robust and performance driven.

DEDICATION

This study is dedicated to my beloved Mother, Hajiya Rabiatu Ahmad.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

In promoting economic growth, a key factor is seen to be a healthy development of a nation's financial sector, which in turn improves the private sector's access to bank credit, equity capital, payments and risk management services. Before 1986, there was extensive government control of the Nigerian financial system. For instance, ceilings were imposed on bank interest rates; credit was allocated by administrative decisions rather than market criteria; and inflows of foreign capital were strictly controlled. By 1986, the government decided to liberalize the financial system in a gradual process in order to improve its efficiency and liquidity. Money market liberalization commenced in 1987, with freeing interest rate, and the liberalization of the capital market commenced as late as 1995 (Bakaert and Harvey, 2000; and Kim and Singal, 2000).

Financial liberalization of stock market is viewed from two different classes: internal and external liberalization. Chandrasekhar (2004:2) defined internal stock market liberalization as "the easing of conditions for the participation of both firms and individual investors in the stock market by diluting or doing away with listing conditions, by providing freedom in pricing of new issues, by permitting greater freedoms to intermediaries, such as brokers, and by relaxing conditions with regards to borrowing against shares and investing borrowed funds in the market". Henry (2000:4) on the other hand, viewed external stock market liberalization "as a decision

by a country's government to allow foreigners to purchase shares in that country's stock market".

There exist two schools of thought on stock market liberalization: the liberalists and the conservatives. Liberalists are the supporters of financial liberalization who believe that stock market liberalization in developing countries is equivalent to an Initial Public Offering (IPO) (Martell and Stulz, 2003) which boosts acess to capital and allows for convergence of cost of capital between developed and developing countries. While conservatives believe that there are several conditions (such as strong institutions for monetary policy and exchange rate management pre-liberalization) not met by most of developing countries which are necessary to ensure the success of full liberalization, in such economies it may lead to destabilization characterized by chronic phases of growth and capital flight .

Many studies, for instance in Spain, Portugal, Italy, Belgium, Nertherlands, France, Austria and United Kingdom amongst others, (see Jones, 2003; Levine and Zervos, 1998; Stepleton and Subrahmanyan, 1997, Errunza and Losq, 1985; Eun and Janakiramanan, 1986; Alexander, Eun, and Janakiramanan, 1987; Bekaert and Harvey, 2000; Stulz, 1999a and 1999b; Wunnava et al., 2007) have shown that there are many benefits for governments that liberalized their stock markets. Such benefits include; reduction in cost of equity capital (through integration of segmented markets, and integration is said to be achieved when global assets of identical risk command the same expected return regardless of where they are traded), capital gains appreciation, increase in investment, higher economic growth, and increase stock

market liquidity and efficiency (Jain-Chandra, 2002). By increase in investment, it means that investors were able to effectively partronize the capital market by investing much of their funds in the traded securities.

However, in Sub- Saharan Africa, it appears that the capital market did not enjoy the patronage of many interested participants in response to those expected gains because of the extensive government control in the financial system. Thus, the performance of many developing countries' stock markets, until the mid-1980s, generally suffered from the classical defects of bank dominated economies aggravated by shortage of equity capital, lack of liquidity of the stock markets, absence of foreign institutional investors, and lack of investor confidence in the stock market (Agarwal, 1997).

The issue of market size and its efficiency are also important as regard to financial liberalization. It is expected that liberalization would lead to an improvement in the quality and quantity of information available to market participants which invariably should enhance pricing by the market as per the Emerging Market Hypothesis (EMH). The EMH is based on the assumption that at any given time, prices of stocks fully reflect all the available information related to them. According to this, a stock market is seen as a more efficient if market relevant information is incorporated into assets prices.

Furthermore, the level of market liquidity and efficiency as a result of liberalization of financial system appear different from one country to the other. For instance in Nigeria, Emenuga (1998) in assessing the liquidity performance of Nigerian stock market found a turnover ratio, a measure of the value of shares traded relative to total

market capitalization, to be 2% in 1996. The ratio is as high as 10% in Bostwana, 7.6% in Zimbabwe and 4.6% in Mauritius. The reason for the variation in the latter countries has been attributed to the open door investment policy.

This study aims at evaluating the Nigerian Stock Markets financial reform policies in an attempt to enhencing its liquidity and efficiency.

1.2 Statement of the Problem

Nigerian stock market has been liberalized in 1995 in order to enhance the liquidity and efficiency of the market. This is on the ground that liquid equity market allows savers to sell their shares easily if they so desire, thereby making shares relatively more attractive investments. The view of liberalizing the market is in conformity with the liberalists who argue that financial liberalization eradicates condition of financial repression in the financial sector and in turn makes the sector stands a better chance to grow and develop to appreciable levels than otherwise. However in the literature, there exists another conflicting view by the conservatives that financial liberalization as a strategy can only bring about veritable dividend to developed and stable economies. They assert that for liberalization to yield desired outcomes, certain conditions must be fulfilled; such as macroeconomic stability, fiscal discipline and matured tax system, amongst others. According to them, even if the conditions are fulfilled, instead of liberalization to stimulate economic growth by means of liquid market, it ends up hurting economic development by reducing investor commitment and incentives of stock owners to exert corporate control through monitoring the

performance of managers and firms, and the overall outcome being eventual inefficiency.

As there is no unanimous agreement in the literature concerning the outcome of liberalization and also considering the maturity status of the Nigerian stock market, and the conditions argued by conservatives, empirical evaluation of Nigerian stock market to determine its liquidity and efficiency becomes imperative. In this regard; the post liberalization situation and the Nigerian capital market raised the following questions:

1. Has the financial sector reform led to an alteration in the way in which the capital market functions or operates?
2. Has the Nigerian capital market acquired more liquidity and efficiency in post-liberalization era as different from the pre-liberalization era?
3. What factors are significant in enhancing both the liquidity and efficiency of the capital market?

1.3 Objective of the Study

1. To evaluate whether or not financial liberalization has any significant impact on the liquidity and efficiency of the Nigerian stock market in sustaining economic growth.

2. To examine the factors significant for enhancing both the liquidy and efficiency of the capital market.

3. Do a trend analysis to observe the liquidity and efficiency behaviour of the Nigerian capital market, pre and post liberalization.

1.4 Research Hypotheses

The following research hypotheses have been formulated in order to establish an empirical ground:

Hypothesis One

H_{o1}: Financial liberalization has no significant impact on the liquidity of the Nigerian stock market.

H_1: Financial liberalization has significant impact on the liquidity of the Nigerian stock market.

Hypothesis Two

H_{o2}: Financial liberalization has no significant impact on the efficiency of the Nigerian stock market.

H_2: Financial liberalization has significant impact on the efficiency of the Nigerian stock market.

1.5 Significance of the Study

The study will add valuable knowledge to the existing literature in Nigeria. Our analysis contributes to the literature in two ways. First, using robust econometric procedure, it examines the case for financial liberalization in Nigeria. Second, it provides evidence on the implication of unfettered capital flows on the development needs of Nigeria which has been successful in attracting foreign capital as a result of liberalization efforts. The study is relevant because the twin policy target of capital flow attraction and liberalization have been the integral preoccupation of various governments of Nigeria since the International Monetary Fund (IMF) influenced structural adjustment programme of 1986. Issues of capital flows as well as stock market liberalization are of course not only of economic interest, but also clearly of serious policy concern.

In addition, transitions of financial markets as a result of liberalization have induced many changes that affect the intermediation role of the financial system. The most fundamental change is that of financial structures in response to competitive pressures and financial deregulation. Increasing globalization of the world's financial markets will continue to exert pressure on the need for financial sector efficiency. At the same time, the large scale transactions will increase the importance of markets' reactions and expectations. As such, the seeming conflict between financial efficiency and macroeconomic stability should continue to generate research interest.

1.6 Scope of the Study

The study attempts to look at the impact of finacial liberalization on the liquidity and efficiency of the Nigerian stock market for the periods of twenty years, ranging from 1986 to 2005. As there are many ways of looking at liquidity and efficiency in the stock market, liquidity is measured based on the value of shares traded and market capitalization and efficiency is measured based on the number of listed securities and stock broking firms. The study also focuses on the internal stock market liberalization.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter attempts to shade more light on the nature of financial liberalization in Europe, Asia and Sub-saharan Africa. Also, detailed Nigerian experience with capital market reforms, measures of capital market development and empirical literature on financial liberalization with particular reference to liquidity and efficiency are presented. Finally, the conceptual framework on which the study is based is also stated.

2.2 NATURE OF FINANCIAL LIBERALIZATION

Financial liberalization refers to measures directed at diluting or dismantling regulatory control over the institutional structure, instructions and activities of agents in different segments of the financial sector (Ghosh (2005)). These measures can relate to internal or external regulations. According to Chandrasekar, (2004): *Internal financial* liberalization typically includes some or all of the following measures, to varying degrees:

The reduction or removal of control on the interest rates or rates of return charged by financial agents.

The withdrawal of the state from the activity of financial intermediation with the conversion of the “development banks” into conventional banks and the privatization

of the publically owned banks, on the grounds that their presence is not conducive to the dominance of market signals in the allocation of capital.

The easing of conditions for the participaion of both firms and individual investors in the stock market by diluting or doing away with listing conditions, by providing freedom in pricing of new issues, by permitting greater freedoms to intermediaries, such as brokers, and by relaxing conditions with regard to borrowing against shares and investing borrowed funds in the market.

The reduction in controls over the investments that can be undertaken by financial agents and, specifically, the breaking down the “Chinese wall” between banking and non-banking activities. Most regulated financial systems sought to keep separate the different segments of the financial sector such as commercial banking, merchant banking, the mutual fund business and insurance.

The expansion of the sources from and instruments through which firms or financial agents can access funds. This leads to the proliferation of instruments such as commercial paper and certificates of deposits issued in the domestic market and allows for offshore secondary market products such as ADRs (American Depository Receipts-the floating of primary issues in the United states market by firms not based in the United States) or GDRs (Global Depository Receipts).

The liberalization of the rules governing the kinds of financial instruments that can be issued and acquired in the system.

External financial liberalization usually involves changes in the exchange control regime. Full convertibility for current- account transactions accompanying trade liberalization have been either prior or simultaneous reforms, which are then complemented with varying degree of convertibility on the capital account. It covers the following:

Measures that allow foreign residents to domestic financial assets, either in the form of debt or equity. This can be associated with greater freedom for domestic firms to undertake external commercial borrowing, often without government guarantee or even supervision.

Measures which allow domestic residents to hold foreign financial assets. This is typically seen as a more drastic degree of liberalization, since it eases the possibility of capital flight by domestic residents in periods of crises.

Measures that allow foreign currency assets to be held and traded within the domestic economy (the “dollarization” of acounts). This is the most extreme form of external financial liberalization, which has been implemented only in very few countries (Chandrasekar, 2004).

Many countries around the world have implemented financial liberalization for the past two decates. For instance European and Asian countries like Argentina, Brazil,

Chile, Columbia, India, Korea, Malayasia, Mexico, Taiwan and Thailand liberalized their stock markets in November, 1989; March, 1988; May 1987; December, 1991; June, 1986; June, 1987; February,1987; May 1989; May, 1986 and January, 1988 respectively. Different forms of reforms had been taken place in these countries like in Thailand, investment in foreign securities were allowed, import bans lifted and exchange controls eased. Similarly Philippines in 1986 signed debt rescheduling of $2.9 billion, import restrictions lifted and talks open with IMF (Henry, 2000).

Another significant reform in many countries, especially in Latin America and Eastern Europe, was the shift from public public pay-as-you-go pension systems to privately managed funded systems. Chile was the first country to implement this type of reform in 1988 and several countries adopted similar systems during the 1990s. Structural pension reforms were expected to improve macroeconomic stability, by reducing the demographic pressures of pay-as-you-go systems and inducing fiscal reform during the transition, reduce labor market distortions, increase savings and reduce political interference in the system (World Bank (1994), Feldstein (1998), Orszag and Stiglitz (2001), Feldstein and Liebman (2002)). Pension reform was also seen as conducive for capital market development. As reviewed by Walker and Lefort (2002), pension reform may foster the development of domestic capital markets through three main channels: 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.

In Africa, financiancial liberalization played a significant role in different areas of economic growth and development, particularly in stock markets. The analysis of Yarty and Adjasi (2007) shows that stock markets have contributed to the financing of the growth of large corporation in certain African countries. In Ghana, the stock market financed about 12% of total asset growth of listed companies between 1995-2002 (Yarty and Adjasi, 2007). In South africa, liabilities accounted for 61% total financing and retained earnings and external equity financed 21% and 18%, respectively of total assets growth between 1996-2000 (Glen and Singh, 2003). In Zimbabwe, external finance contributed 75.4% of total funds and internal finance provided the remaining 24.6% between 1999-1999. Equity financing was the most important source of long term finance at 7.8%. Long term bank loans and bonds were each a very minor component of total external financing (Mutenheri and Green, 2003). Globally, Glen and Singh (2003) find that liabilities accounted for 49% of total equity financing over the period 1996-2000. Of the remaining 51%, internal equity represented 29%, with external equity representing 22%. Glen and Singh (2003) also found substantial differences in the pattern across advanced and developing countries and across individual countries. They find that the use of liability to finance growth was much lower in emerging markets group, with that lower level offset by higher levels of both internal and external equity financing.

New Keynesian economists also challenged the presumptions of the financial liberalization thesis (Burkett and Dutt, 1990-91; Akyuz, 1995). The clearest attempt at a rebuttal of the financial liberalization thesis came from Akyuz's (1995) three-sector model, which differentiated among households, private firms and government.

According to that model, the high interest rates of liberalized finance would benefit deposit-holding households (rentiers), who are lower savers than firms. However, the higher cost of debt would compromise firm's profits. The private saving rate would fall because high-saving firms would face lower profits, while low-saving rentiers would receive a larger proportion of total income. Public savings would also contract as government revenue was compromised by lower taxes on interest income (as part of liberalization measures), while higher interest payments on government debt would increase spending by private firms.

Thus, while the model accepted the McKinnon-Shaw (1973) presumption that an increase in deposits rates (and other liberalization measures) would increase the financialization of savings (financial deepening), such measures were also expected to lower private savings (because of the shift in income from firms to rentiers) and government saving (because of lower tax revenues and higher interest payments on debt). In effect, financial liberalization would increase financial savings but lower overall national savings.

The most thorough repudiation of the financial liberalzation thesis, however, comes from a contribution to the debate on finance and development that preceded the propositions of McKinnon (1973) or shaw (1973). Gerschenkron (1962) argued that in the less-developed (the backward) economies, the banking system would not have the capacity to mobilize the resources necessary for rapid economic transformation. Such a task would require institutional arrangements beyond the banking sector. In Gerschenkron's world, financial liberalization would also be secondary to the

challenge of initiating rapid and sustained growth for the majority of African economies.

Gerschenkron (1962), arrived at this conclusion by juxtaposing the needs of less-developed economies against the potentialities of the banking system. In his view, 'the most backward economies face not a large deficit in accumulated capital but also large technological and institutional gaps, as well as a shortage of enterpreneural talent' (Gerschenkron, 1962: 16). In this environment, 'the banking system would not only be unable to mobilize a sufficient magnitude of resource (because of both limited savings potential and insufficient trust in the banking system) but would also be unable to provide the co-requisites of technology transfer and enterprenuership' (Gerschenkron, 1962: 19-20).

These circumstances typically mandated the use of 'special institutional factor' to mobilize the additional resources and technology as well as reliance on enterpreneurial guidance (Gerschenkron, 1962). Active government involvement in the industrialization process, including savings mobilization (as in the case of Russia and Hungary), were identified as examples of such necessary special institutional arrangements.

2.3 AN OVERVIEW OF THE NIGERIAN EXPERIENCE WITH CAPITAL MARKET REFORMS

Before 1986, the number of securities (equity and bond) issues on the market were 23 because there was inadeqate number of listed firms in the market (Nnanna, 2005). The

number of issues on the market have continued to fluactuate over the 1986-2005 periods. In 1994, 28 issues were made and there was a sharp rise to 40 issues in 1996 as the inflow of foreign portfolio investment increased and two new Unit Trust schemes were launched. Since 1996, the numbers of issues have fallen sharply to stand at only 17 in 1998. It is notable that most recent new issues represent capital increase by firms already quoted on the exchange and there is relatively high activity in terms of Initial Public Offerings (IPOs) ((Nnanna, 2005)**.** However, with the recent consolidation exercise in the banking sector there is high improvement in the number of the new issues in the capital market especially by the banks that issued IPOs to meet the recapitalization requirement.

Although the number of new issues has been small, the values of new issues have grown over the years, increasing from a mere N0.63 billion in 1986 to N7.1 billion in 1995, and from N22 billion in 1996 to N227.4 billion in 2004. (NSE Annual Report & Account, 2004). In terms of the mode of issue, the value of new offers for subscription has grown from only N22.3 million in 1996 to N13.9 billion in 1998 with direct sales representing 90% of new issues in 1998 and stood at N120.8 billion in 2004 Rights issues are next in popularity due perhaps to the low cost associated with this mode of issue.

According to Aderibigbe (2004), the market for debt instruments has been dull and inactive compared to the market for equities. New debenture issues have been small in both number and value and are little used as sources of corporate finance. Recently new issues have improved on through foreign listing and merger & acquisition.

An in-depth analysis of the Nigerian Stock Exchange will clearly show the prominent role the Exchange ought to play in the structure and development of the Nigerian economy. Having been in operation for more than four decades the Exchange can be said to have existed long enough to permit an assessment of its performance. This task has been undertaken by various scholars in the past.

According to McArthur and Loveridge (1972), a stock exchange market is a highly organized market where *existing securities* are bought and sold. Securities include; shares debenture bonds, which have been issued by companies, government, and public corporation, local authorities as a means of raising necessary finance for their operation. Despite the fact that a stock exchange is often termed as a market place, it is not possible for persons other than members of the Exchnage to work on the floor of the Exchange. Consequently if one desires to buy or sell shares, then business must be transacted through a *broker,* belonging to the particular exchange.

According to Alile and Anao (1986), the Stock Exchange in Nigeria is also an organ within the capital market and the capital market is an organ within the financial system. The Nigerian Stock Exchange is the prime operational institution in the nation's capital market. It is the hallmark of the capital market and often referred to as the barometer of an economy. Just like any other institution of the capital market, the Nigerian Stock Exchange performs several vital functions which affect the level of income, prices and employment within the economy. By their special role in creating money and liquidity, the capital markets (especially the NSE) are indispensable to the nation's economic system. In fact, economic growth and capital market development

go hand in hand and the growth phenomenon and the stock exchange market are not mutually exclusive at any stage in the development process.

2.3.1 The Nigerian Stock Exchange: The Reforms

According to Alile and Anao (1986), the earlier that one can reasonably go to find some critical incidents leading to the establishment of a stock exchange market in Nigeria is 1946, when the colonial government then promulgated the ten year plan local loan ordinance. In the late 1950's when it was becoming certain that Nigeria was going to become an independent state, coupled with the growth in commercial activities at that time, the need for a stock market became imperative. During this period, deliberation and discussions were held within the academic and business circle about the desirability of an organized financial market in Nigeria. As a result of this new development, the federal minister of commerce and industry appointed a committee (called Barback's committee) to look into the need and feasibility of establishing a stock exchange market. The report by the committee was published in 1959 and recommended the following amongst others: the creation of securities for dealing in shares, the establishment of rules regulating transfer of listed securities and the measures to encourage savings and issue of securities of government and other organizations (Alile and Anao, 1986)

The favourable report of the Barback's committee led to the registration of the business: the Lagos Stocks Exchange on September 15, 1960. It was incorporated as a non- profit corporation under the Nigerian Company ordinance limited by guarantee.

It was further strengthened by the Lagos Stock Exchange Act 1961. It commenced operations on June 5, 1961 from the central bank building.

The Lagos Stock Exchange is the first stock exchange in West Africa and the sixth in the continent of Africa. At the inception of trading in 1961 the stock exchange had only 19 securities listed for trading. In 2005 there were 283 securities listed on the exchange, made up of 17 government stock, 52 industrial loans (debenture, preference) stocks and 214 equity/ ordinary shares of companies. With a total market capitalization of N 2.1 trillion, many of the listed companies have foreign/multinational affiliations and represent a cross section of the economy, ranging from agriculture through manufacturing to services (NSE Fact Book, 2005).

Trading on the Lagos stock exchange during early year was however extremely poor because of the low rate of capital formation at the time, the predominant lack of awareness of the mechanics of stock exchange transactions, poor communication and all market activities were concentrated in the Lagos area (Odife, 1980).

The need to promote growth in the stock market activity and the overall economic growth and development has engaged the attention of government. Various measures have indeed been taken in that direction. Government made some relevant legislation then, which includes: the Income Tax Management Fund Act 1961, the National Provident Fund Act 1961, the Trustee Investment Act of 1962 and the Insurance Act 1976 (Odife, 1980).

More legislations were enacted in recent times to guide the Nigerian Stock Exchange market transactions. These are: companies and Allied Matter Act of 1990, Trustees

Investment Act of 1990, Nigerian Investment Promotion Commission Acts of 1995, Foreign Exchange Monitoring (Miscellaneous Provisions) Acts of1995, Investment & Securities Act of 1999, and the Pension Act 2004 (Odife, 1980). The effect of all these legislations was to generate an increase in the activities of the Exchange by either creating a market designated or approved type of securities or compelling individual or institutions to patronize the stock market.

Another major development that has significant impact on the growth of the Exchange is government action in enacting the first Nigerian Enterprise Promotion Act in 1972, which obliged specified alien enterprises to indigenize part of their ownership. Within three years of its enactment, 20 new companies where listed on the Exchange. The rejuvenated 1977 Act brought more companies into the market and consequently, more listings were recorded on the Exchange in years subsequent to its introduction, thus deepening the market.

On the April 5, 1976, the federal government inaugurates a financial system review committee to study the structure and operations of the nation's financial system and make recommendation. The committee recommended among other things, the decentralization of the exchange so as to bring the benefit of the capital market operations nearer to a greater section of the country's citizenry and thus enhance the performance of the exchange. The commission proposed as a means of achieving such decentralisation that exchange embarks on a program of establishing provincial stock exchange, which would eventually cover the whole country. These exchanges would be autonomous but would have similar listing requirements. In event government

accepted the principle of decentralization but opted for a national stock exchange, which has branches in different parts of the country (Areago, 1990).

In order to make it national the Lagos stock exchange (LSE) was changed to the Nigerian Stock Exchange (NSE) in December 1977 with two branches, which in 2005 it has increased to eight branches. Along this evolution of the stock exchange in Nigeria is the development of the respective regulatory organ known as the Security and Exchange Commission (SEC). the Apex regulatory body of Nigeria capital market but was not always so termed. The functions of the commission among others include regulatory, registration, rule making, timing of issue review of accounts and so on.

2.3.2 The Nigerian Stock Exchange: Second-Tier Securities Market and Structural Adjustment Programme

On April 30, 1985, another major development took place on the exchange: the Second-Tier Securities Market (SSM) was launched. The establishment of the SSM was to attract smaller companies to the market, which hitherto could not meet the more stringent listing conditions of the First-Tier market. The need also arise in other to turn small and medium sized companies into big ones. This market is patterned after the unlisted securities market (USM) in the United Kingdom.

The implementation of the Structural Adjustment Program of the privatization and commercialization decree of 1988, which aired at rationalization of the public sector through divestment of government holdings coupled with deregulation of interest rates and foreign exchange made many private investors to patronize the market to source

funds as bank leading became relatively more expensive. Thus in the post – SAP, the market became a truly capitalist instrument for mobilizing and allocating capital funds in the process of wealth creation rather than as a vehicle for wealth distribution, as the pre – SAP activities tended to portray (Alile and Anao, 1986).

2.3.3 The Nigerian Stock Exchange: Current Development

In recent times phenomenal changes have taken place on the Exchange. These were in attempt to match the excellent performance of some stock exchange like the New York Stock Exchange, London Stock Exchange and the Johannesburg stock exchange. Notably in line with the SAP policies, the Nigerian capital market was deregulated on January 27, 1993, the following year (1994) the Exchange introduced a dress code for Authorized clerks and unauthorized clerks. Also in the same year the stock exchange gift shop and visitors gallery was open. (NSE Facts Book, 2004).

The stock exchange maintains an All-Share Index formulated in January 1984. Only common stocks (ordinary shares) are included in the computation of the index. It is a barometer designed to measure the movement in share prices of quoted/listed companies. The index reached the 1,000 mark in 1992 (Shala,1998), and crotches the 9,000 mark in year 2000. In the year 2005 it was 24085.8.

Another important development on the exchange is the computerization of the exchange. With the aid Reuters, internet and computers, the Central Securities Clearing System (CSCS) established in 1992 as a subsidiary of the Nigerian stock exchange, has reduced the clearing period to *T + 3 days* (Trading days plus three other

days for clearing to be effected). This was formerly T + 14 days. Though incorporated in 1992 the CSCS commenced operation on April 14, 1997.

2.3.4 The Internationalization Process of The Nigerian Stock Exchange

Internationalisation of the Exchange is another recent development. On January 15, 1995, the federal government abrogates the Exchange Control Act 1989, effectively internationalizing the Nigerian capital market. July 21 the same year (1995) the federal government promulgates the Nigerian Investment Promotion Commission Decree No.16 and the Foreign Exchange (Monitoring and Miscellaneous Provisions) Decree No.17, in furtherance of the opening of the Nigerian capital market to the international community. Hence, foreigners can now participate in the Nigerian market both as operators and investors. Also there are no limits anymore to the percentage of foreign holdings in any company registered in Nigeria. Ahead of this development, the NSE had since June 2, 1987, linked up with the Reuters electronic contributor system for online global dissemination of stock market information like trading statistics, All-Share Index, company investment ratios and company news (financial statements and corporate actions). In November 1996, the exchange launched its Internet system (CAPNET) as one of the infrastructural support for meeting the challenges of internationalization and achieving an enhanced service delivery (NSE Facts Book, 2004).

In April 27, 1999, another remarkable transition occurred on the Exchange. The call over system was replaced with the Automated Trading System (ATS), with dealers trading through network of computers connected to a server. The ATS has facility for

remote trading and surveillance. Other recent change on the exchange is the introduction of the E-Bonus, this help in dematerialization of bonus shares. Also the exchange in 2004 sustained its investor education initiative with the organization of International Investment Roads Shows and National Essay Competition for Secondary Schools and Tertiary institutions.

There was also the introduction of the Trade Alert in 2004 in collaboration with the CSCS. This helps to notify subscribing investors of transaction in their accounts in the depository. The Nigerian stock exchange admit M/ net super sports to it daily official list in November 19, 1999 as its first cross-border Listing. M/ net Super Sport has primary listing on the Johannesburg stock exchange. Another addition to the official list is the 150 billion naira 1st Federal Government Bond. Following the listing of Tourist Company of Nigeria plc, the exchange created a new sub-sector in the equity section of the Daily Official List - Hotel and Tourism. This brought to 27 the number of sub-sectors on the exchange (NSE Fact Book, 2005).

According to Okereke (2004), coupled with the renewed effort by government at pursuing the privatisation program in 2004, the level of activities on the exchange increased tremendously. In addition, the federal government renewed initiative through the National Economic Empowerment and Development Strategy (NEEDS) to transform the Nigeria economy boost the turnover on the exchange. There is also improvement in listing with the central bank directive to banks on minimum shareholders' funds. The recent consolidation in the financial sector has placed enormous responsibility on the exchange. This has also compelled many banks to

approach the stock market for additional funding and hence increased performance of the exchange.

A lot of studies have been undertaken in an attempt to assess evaluate or appraise the performance of the NSE over the years of it existence by various scholars. A general assessment of the performance of the NSE market from 1986 to 2005 indicates that the market has experience remarkable progress. That the market has grown in size and diversity of instruments offered is beyond dispute. Its continuing growth is essential to development. It is also a reflection of the Nigerian stage of economic development (Onosode, 1998).

2.3.5 The Benefits of The Nigerian Stock Exchange

According to Onosode (1998), the existence of the NSE entails a number of benefits for the Nigerian Economy. These benefits are in line with general role of stock market in the development process. In spite of the criticisms of the exchange, it has in its relatively short history lent itself to the pursuit of national objectives. The market has demonstrated its ability to provide financing (both equity and debt) to private sector enterprises and debt financing for public sector projects of various types (infrastructure, housing etc). He was also of the view that, the indigenization exercise under the 1972 and 1977 decree would have been less successful without the stock exchange market he held that the same was true of the privatization exercise of 1991-1993. The larger contribution of capital mobilization was made during the period of

compliance with the indigenization decree between 1973 and 1974 through the exchange (Alile, 1997).

Apart from the indigenization program and the previous privatization exercise, the privatization of the majors parastatals like, the NITEL, NEPA, the Petroleum Refineries and the banking sector recapitalization of N25 billion were made and will still be made highly successful with the presence and development of the Nigerian stock exchange. For instance, about 406 billion naira was raised from the stock market in 2004 by banks to meet up with the consolidation exercise (SEC, 2005).

The stock market has been a source of capital mobilization for the government and corporate sector. With a market capitalization of 2.1 trillion in December, 2004, about US $16 billions, (SEC, 2004), the market standout as a viable mechanism for resource mobilization. For the past six years, up to the end of 2004 accumulative total of 506 billions naira was raised by companies from the stock market as total new issue. (i.e.: 12.0; 17.2; 37.2; 61.3; 180.1, and 186.5 billion naira in the year 1999, 2000, 2001, 2002, 2003, and 2004 respectively (SEC, 2004).

Furthermore, on privatization, Emenuga (1998), also support the view that the market has played an unrivalled role in the implementation of past privatization schemes as it did during the indigenization programme. According to him, between 1988 and 1992, 35 enterprises were privatized through pubic, offer of shares. The offers totaled N1.2 billion shares valued at N1.5 billion. To the public, the exercise created awareness of the investment opportunity in the capital market attracting 0.8 million new shareholders and hence raised the number of shareholders by 200% (Emenuga, 1996).

Emenuga (1998) analyses the contribution of NSE to Nigeria economy. According to him, the mere presence of a stock market in the country boosts the international investment climate of the country and it raises the chances of additional local financing for both foreign and direct investment. He opined further that in an economy like Nigeria were the banking sector is battling with credibility problems following the systemic distress of the financial sector; the stock market plays a moral boosting role to investor. It can only be imagined what the private investment in the real sector would have been if the stock market had not been in place. Moreover, he is of the view that, NSE provides opportunity for investment diversification. In the absence of the stock market a large part of the wealth currently invested in the NSE would have been diverted to foreign countries. Thus, the market has remained a viable institution for holding back capital flight.

2.3.6 The General Performance of The Nigerian Stock Exchange

Adegbite and Babalola (2001) attribute the general level of performance in the NSE to the computerization of trading and increase transparency in delivery of corporate information. According to Odoko (1998), the initiative of the Exchange in introducing the SSM in 1985 gave encouragement to small and medium scale industries to seek quotation on the exchange by stipulation less stringent listing requirement for them. This development had the effect of widening the investors' base as well as the supply of securities on the market.

Onosode (1998) also support the view that recent reforms act as catalyst for improved performance of the exchange. He opined that, the NSE has already taken with the full

co-operation of the government and other regulatory authorities a giant steps to internationalize its operation and de-materialize transaction on the exchange as part of this process. He asserted that, its recent creation, the CSCS, was a step in the right direction. In the year 1987, the exchange became the fourth stock exchange in the world to be hooked on line to Reuters Electronic contributor system which daily beamed information in our stock to the global community.

Considering the recent changes on the exchange it is tempting to pass a satisfactory verdict on achievement on the Exchange. However, the story is not all that palatable. There are impediments that characterized the Exchange over the years. These problems have hindered the effective performance and growth of the Exchange.

According to Odife (1986), there is a school of thought that believes that performance is a function of structure and conduct. After reviewing past criticisms of the Exchange, he noted that even if all the problems which they represent could be solved, not much change will occur in the system.

He argued further that the performance of the Exchange was a product of its structure and the conduct of its business would not be easy for many to accept. Yet most people would accept the thesis that the performance of the Nigerian Economy is a product of its structure and organization. What this really means for the Exchange is that the system needed to be re-examined, re-organized and re-structure to make it more effective. To continue to believe that mere cosmetic changes will revitalize the Exchange is to engage in self-delusion (Odife, 1998).

Odife (1986) as one of the advocates of the proposal to establishment of new stock Exchanges adduced further that the establishment of new Exchanges would lower the listing requirement so that more companies which might not necessary be the highest quality but which have nevertheless sound prospects could still get a public listing.

Transaction cost is one of the barometers for measuring the efficient performance of a stock market. The transaction cost borne by investors, tend to be too high. Adeyemi, (1998) highlighted these costs. These include: graduated brokers commission, 1 percent SEC fee, NSE fees of about 1 percent, 10 percent withholding tax on dividend, 10 percent withholding tax on duties, application fee of 0.7 percent of the amount being raised, issuing house fee which is about 2.5 percent of proceeds, brokerage to receiving banks and stockbrokers to the tune of 1 per cent proceeds and underwriting commission could be as high as 5 per cent though subject to negotiation.

When all these cost are calculated and deducted against the money raised the cost of issue can be very expensive. According to Emenuga (1998), when the cost for administration, advertising and payments to professionals are added, the cost of raising US $1 million equity capital in Nigeria bills is up to about 4 percent of the value. For loan stock, the cost of the mandatory underwriting commission further increases the cost.

Liquidity for new and previously issued securities is provided by the secondary (trading) market. Holders of financial assets place considerable value on being able to convert those assets into cash in a short period of time without substantial reduction in price solely because of the need to sell. The secondary market makes it possible for

the holders of securities to have liquidity based on marketability rather than on some early maturity date for redemption, while it enables issuer to sell financial liabilities of a long maturity (effectively infinite for shares). In other word, the market intermediates between the desire of asset holders for liquidity and of issuer for illiquidity (long redemption date) for their securities (Tun and Hugh, 1973). According to Emenuga (1998) liquidity is important for a few reasons. The more liquid a stock market is, the more it commands investors interest since resale of shares is easily guaranteed. Furthermore, firms have more access to debt (debenture) and equity (new issues) in a liquid market. Also in an economy with a liquid stock market, shares become easily acceptable as collateral for bank lending, and this boost credit and investment. Since liquidity allows investors to alter their portfolio quickly and cheaply, it makes investment less risky and facilitates longer term profitable investment.

2.3.7 Weaknesses of The Nigerian Stock Exchange

In assessing the liquidity performance and rating of the Nigerian stock market, the cherished quality of liquidity is at present not enjoyed by the Nigerian stock market. At an average ratio of 2 per cent per annum (2.4 per cent for 1996), turnover, a measure of the value of shares traded relative to total market capitalization, is very low in Nigeria (Emenuga, 1998). Many other African markets perform better in this regard. The turnover is as high as 10 per cent in Bostwana, 7.6 per cent in Zimbabwe and 4.6 per cent in Mauritius. The reason adduced for this is the ownership structure in the Nigerian stock market in that the holding of the original direct investors and the

public sector are normally not traded except for terminal divestment. This leaves only the proportion of shares held by individual and institutional investors for trading. The buy-and-hold attitude of this class of investors, further restricts the proportion of their traded shares. Added to these factors is the associated delay and risk involved in trading shares in the Nigerian stock market. New foreign capital had little or no access to the market. This is attribututed to the change in government between 1997 to 1998. Last but not the least; Nigerian stock market is blessed with several trading options which are realistically not risky but very profitable. Examples are merchandising in essential commodities, estate development in prime locations, Local Purchase Order (LPO) and the likes. These competing investment outlets reduce the desires of patronizing the Stock Market resulting to low liquidity in the market. (Olayemi, 1992).

Another institutional problem characterizing the Exchange is regulatory problem. When the SEC was formed everybody assumed it to be the Apex institution. Odife (1998) found that the way things stood in Nigeria, the stock Exchange was more like the Apex than the SEC and yet the power belonged to the SEC. Also, there is the problem of merger and take over procedures. In the advanced capital market, mergers and take-over are instruments for resource allocation. The mechanism exists to decide which trust or combination is to be encouraged and which is to be discouraged.

One other weakness of the Nigerian stock market is reflected in the near total absence of underwriting capacity in the market as a result of the small size of the capital- base

of the listing Houses. For instance in 1993, 1994, 1999 and 2002, the number of stock broking firms in the country have remained stagnant. This is due to the fact that most stock broking firms were striving to meet up with the marging requirements of CBN, and that there were srick surveillance of the conduct of stock brokers by the Chartered Institute of Stock brokers in the interest of the orderly development of the capital market (Al- Faki and Osaze, 2005). There is also lack of Jobbers to facilitate smooth trading. A Jobber is an individual or firm dealing in stock as a principal rather than as a broker. Stock jobbers are not permitted to deal with the public since this function is reserved to stockbrokers. Thus, affecting the efficiency position of the market.

According to Okereke (2004), among the institutional problems affecting the performance of the Exchange is the issue of listing and listing requirements. Apart from the stringent listing requirements there is lack of incentive to listing. Incentives to listing consist basically of the use of fiscal and other measures to induce increase in the number of equities quoted on the exchange. Such measures usually have the aim to accelerate capital formation and promote active trading in the stock market. The major form of incentive grants are the “Carrot or stick” policy. That is, a tax advantage to companies whose ownership is ‘open’ or shared is quoted, or alternatively imposes a tax penalty on ‘close’ companies. According to Emenuga (1998), in a capital market, the operating tax policies do have implication for the supply of and demand for financial assets.

2.4 MEASURES OF CAPITAL MARKET DEVELOPMENT

Capital market development can be looked at in many ways such as size of the investors (Agarwal, 1997), frequency of direct foreign investments in country, technological improvement (Akyuz, 2002) among others. Tharavanij (2007) argue that measures of capital market development can be broadly classified into two categories: absolute and relative measures. An absolute measure identifies the level of capital market development itself without reference to other developments in the financial system. A relative measure attempts to measure the importance of direct financing via capital markets relative to indirect financing via financial intermediaries, particularly banks. These measures were first developed to classify financial systems as bank-based or market based syste (Levine 2002). Given that these relative measures compare different components of the financial system, they can be used as measures of financial structure. We use absolute measure of capital market development in this work.

Absolute measures of capital market development usually involve the liquidity and efficiency of stock markets and/or bond markets (Beck and Levine, 2002). Liquidity as found in different studies has different meanings pending on the nature of the circumstances for measuring it. O'Hara (2004) viewed liquidity as the ability to buy and sell assets easily. Maureen (1997) posits that liquidity is the accommodation of trading with the least effect on price. Liquidity in this work refers to the volume of activities in the stock market.

Dey and Flaherty (2004) in a study proposed two approaches as regards liquidity: time and cost. According to the first approach, an asset is liquid if it can be traded quickly.

Conversely, an asset is illiquid if investors cannot find, for a long period, matching market orders enabling the respective transaction. According to the second approach, an asset is liquid if the price to be paid (received) when buying (selling) the asset is close to its current market price. This leads to consider spreads between bid and ask quotes. The spread between the highest bid quote and the lowest ask quote corresponds to a liquidity measure usually known as the bid-ask spread.

Michayluk and Kofman (2001) argued that there are two dimentions of liquidity in the stock market: a measure of friction or activity. Friction measures classification follow Demsetz (1968), Grossman and Miller (1988) and Stoll (2000), where friction is identified as the price concession for immediacy. In contrast, activity measures reflect the extent of trading. These two dimensions have opposing directional impacts on liquidity. Specifically, an increase in a friction measure indicates reduced liquidity, while an increase in an activity measure indicates increased liquidity. Activity measure is adopted in this study.

Activity measure is the measure of depth in the market. Measure of depth reflect the ability to trade at the giving bid and ask quotation. Explanations of quotations of changes in quoted liquidity may hinge on the amount of quoted depth used to fill the trade. Kavajecz (1999) suggests that for most securities quotations convey public trading desires and as market orders deplete the quoted depth, specialists move quotations to the nearest price containing additional standing volume. If floor brokers

provide standing volume then any prior quotations will not be depleted by trading and there will be less of a change in liquidity.

Barclay, Kandel and Marx (1998) emphasize activity measures, such as volume, as better indicators of liquidity than price discounts. Volume of trading has been measured in a variety of ways, including the number of shares traded, naira volume of shares traded and number of transactions. Additionally, Marsh and Rock (1986) calculated a liquidity statistics based on the number of shares traded per unit of return.

Size measures are another subcategory of activity measures and reflect the magnitute of the firms, the number of shares or the transaction in naira value. Haugen (1999) suggests that liquidity differences affect stock prices by making some stocks more costly to trade than others. He suggests that there is a family of liquidity factors including market capitalization and trading volume divided by market capitalization Datar, Naik and Radricliffe (1998) suggest that the number of shares traded by itself is not a sufficient statistic for the liquidity of a stock since it does not take into account the difference in the number of shares outstanding or the shareholder base. They use the turnover rate, measured as the number of shares traded divided by the number of shares outstanding in that stock.

The other absolute measure of capital market development is efficiency. Efficiency is using the fewest resources to produce a given output (www.aswer.com). The issue of efficiency in capital market has been dicussed in detail in the field of financial economics. The literature of this field presents three kinds of efficiency (Balaban, 1995): allocational efficiency, informational efficiency and operational efficiency.

Allocational efficiency occurs when organizations in the public and private sectors can obtain funding for the projects that will be the most profitable, thereby promoting economic growth. Informational efficiency is the speed and accuracy with which prices in a market reflect new information. While operational efficiency (also known as internally efficient market) occurs when the right combination of people, process and technology come together to enhance the productivity and value of any business operation, while driving down the cost of routine operations to a desired level. The latter is the scope of this study.

There are many ways in which an operational efficency is measured in the stock market as found in Dey (2004), notably among them are: the level of infrastructural facilities in the market such as technology, number of stock broking firms, listed securities in the market, trading costs, quality of staff and certain regulatory or structural changes.

In the context of this study, only the liquidity and efficiency behaviours of the Nigerian capital market were looked at.

2.5 EMPIRICAL STUDIES ON STOCK MARKET LIBERALIZATION: LIQUIDITY AND EFFICIENCY

This section attempts to discuss different studies conducted on stock market liberalization with particular reference to liquidity, efficiency, and both liquidity and efficiency.

2.5.1 Liquidity

Liquidity notion is relatively wide and is associated with the ability to trade assets into currency, which, by definition, is the most liquid of all assets. Dey and Flaherty (2004), examine the empirical link between stock market liquidity and liberalization (trasaction cost) using parametric correlation and found a very significant relationship of 0.85. Similalrly, using regression model to estimate the correlation between liberalization and liquidity in New York Stock Exchange, Dey (2002) found that activities of trading post liberalization have improved with a value of adjusted R-square of 0.034.

Baker and Stein (2003), using nonparametric correlalation, t-test and multiple regression model examine liquidity behaviour of Istanbul stock market immediately after the financial reforms of between 1993-2002. He found a weak correalation of 0.022 and adjusted R-square difference of 0.006. In another study, Baker and Stein (2002) empirically found that aggregate measures of equity issuance and share turnover are highly correlated. But in a multiple regression, both have incremental predictive power for future equal-weighted market returns.

Chordia, Roll and Subrahmanyam (2001), study aggregate market spreads, depths and trading activities for U.S. equities over an extended time sample. They found that changes in market averages of liquidity and trading activity are highly volatile and negatively serially dependend and that long-term and short-term interest rates influences liquidity. Depth and trading activities increase just prior to major macroeconomic announcements.

Eleswarapu and Krishnamurti (2007) based on the study of random sample of 250 firms in Bombay Stock Exchange (B.S.E) over the five year period- 1989-1993, found evidience in favor of a liquidity premium for stocks on the B.S.E. They also found that trading frequency (a measure of liquidity) is positively and signiicantly related to number of shareholders and shares outstanding.

Earlier studies have explored the role for liquidity shocks as a potential influence on asset prices. Amihud and Mendelson (1986) and Jacoby, Fowler, and Gottesman (2000) provide theoretical arguments and empirical evidence to show how liquidity impacts stock returns in the crosssection. Jones (2001) and Amihud (2002) show that liquidity predicts expected returns in the time-series. Pastor and Stambaugh (2003) find that expected stock returns are cross-sectionally related to liquidity risk.

Ghosh and Revilla (2007) in East Asia measured liquidity risk of stock returns from firm-level in panel of 60 countries in the period 2000-2004. They found that channel that affect liquidity risk of capital markets are size and depth of the market, the physical infrastructure of trading, the institutional foundations of markets and the heterogeineity of the investor base. These factors indirectly have impact on stock market development. In a cross-country studies of stock market development most authors have used market capitalization as a summary measure of the quality of markets. Some cross country studies, such as La Porta et al (2005) and De la Torre and Schmukler (2005), attempt to use an outcome variable more related to efficiency to complement market capitalization. La Porta et al (2005) in one of their specifications use value traded as one of a set of stock market outcomes.

On a study that focuses on the development of stock markets in Latin America, De la Torre and Schmukler (2004) present cross-country panel regressions on the determinants of stock market development. Among their specifications they report results on regressions that study the determinants of value traded. They found that richer countries, as measured by GDP per capita, tend to have more liquid stock market. De la Torre and Schmukler (2005) indicate that they also ran the regression using turnover without any significant difference in the results. Also, a stable macroeconomic environment-proxied by low government budget deficits, and a more open economy, proxied by large equity inflows, tend also to have more liquid markets. Countries that reformed their trading environment, particularly the infrastructure of the Exchanges, and the enforcement of insider trading laws, also showed increase in their trading activity.

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.

2.5.2 Efficiency

Capital market efficiency is concerned with whether prices follow a random walk or are predictable. The assumptions behind the concept of market efficiency imply a

linear generation process. However, non-linearity may take place due to non-linear feeding back mechanism in price movement, market imperfection, and the microstructure of the market. Empirical researches have in fact spotted non-linear in both mature and emerging markets. Neftcy (1984) rejects the assumption of linearity and independence of price changes of successive price change is incorrect. The same conclusion is reached from studies on other countries. Koutmos (1992) examines non-linear dependence in the daily stock returns of the following countries: Belgium, Canada, France, Germany, Great Britain, Italy, Japan, Netherlands and Switzerland. All the indices exhibit negative skewness and high leptokurtosis. The primary results also indicate that strong nonlinear dependence exists in all of the indices. Savit (1998) suggests that asset returns may be generated by deterministic chaos in which case the forecasting error grows exponentially so that the process appears stochastic.

Scheinkman and Barron (1989) claim that stock returns follow a non-linear process. Since non-linearity is found in mature markets, one can expect to find it in emerging markets. In fact, the current nature of these markets may lead to non-linearity. Regulatory changes (liberalization) to enhance trading conditions, disclosure, and listing requirements may be one factor causing non-linearity. Other factors include thin trading, unreliable information, overreaction, high transaction costs, and inside information.

Wu and Ray (2005) in a study examined the relationship between stock market reaction to regulatory changes-merger announcements-and operational efficiency level of participating firms in U.S. for ten years. Using Data Envelopment Analysis (DEA)

and regression analysis to measure operational efficiency, they found that there is a significant relationship between operational efficiency and market response.

Some other studies have considered the link between specific mechanisms and market efficiency in a cross-country basis. Bris, Goetzman and Zhu (2006) analyse whether short sales restrictions affect the efficiency of the market. They found some empirical evidence that short sales restrictions inhibit downward price discovery. Morck, Yeung and Yu (2000) study the comovement of stock returns in markets across the world, interpret this indicator as a measure of efficiency, and perform a statistical analysis of its determinants. Ngugi, Maurinde and Green (2003) study the impact of reforms on stock market in Nigeria using regression model. They found the modernization of trading sysytem leads to greater price efficiency and lower volatility.

2.5.3 Liquidity and Efficiency

Liquidity is a necessary condition for efficiency (Ghosh and Revilla, 2007). Liquidity is the ability to buy and sell a good with ease. That is, to be able to buy or sell a good at will, at market prices, without incuring substantial costs to trade. It follows that every efficient market has to be liquid, although the converse is not necessarily true- a market can be liquid but inefficient. In order for a countrys' stock market to be both liquid and efficient, stock market liberalization could be a better option.

There are several cannels for stock market liberalization to lead to enhanced liquidity and efficiency. It has been shown that stock market liberalization often results in increased liquidity (Kim and Singal, 2000 and Levine and Zarvos 1998). Emerging markets have historically been characterized by thin trading and foreign entry and

participation will impart liquidity in these markets. This will have an independent impact on efficiency (Jain- Chandra, 2002). Kim and Singhal (2000) restrict their analysis to examining the change in the frequency of trading after liberalization. Additionally, his work investigates the link between market efficiency and liquidity using regression model, which is left unexplored by Kim and Singhal. According to a Word Bank report (1997) shows that stock market capitalization and turnover increases more in countries that receive the higher levels of foreign portfolio equity investments.

The entry of foreign investors into domestic stock markets is likely to be accompanied by an increase in the amount of research done on individual stock and market conditions in these equity markets. This will lead to improved information availability to investors, both foreign and domestic. It is reasonable to assume that foreign investors will typically require transparency and stricker disclosure rules an these in turn improve the efficiency of the allocation of capital (World Bank, 1997).

Demigruc-Kunt and Levine (1996) argue that as liquidity increases and as regulatory and legal systems are established, the stock return should be harder to predict and therefore markets would become more efficient. Marunga and Shimizu (1999) argue that market liquidity is an important factor that impact market efficiency. Their model shows that an increase in liquidity is followed by a decline in market price uncertainties and by a decline in liquidity premium such as bid-ask spreads and market impact, thereby improving market efficiency.

Brown and Zang (1997) discuss the impact of liquidity on informational efficiency.

Specifically they compare a dealer market and a limit-order book. Dealer may be better informed than other traders. They show that the introduction of a limit-order book lowers the execution-price risk faced by speculators and leads to them to trade more aggressively on their information. This implies that the introduction of the limit order book also lowers dealer profits, but increases the information efficiency of prices. Easley and O'Hara (1993) examine how trading volume affects the spread of price adjustment to information, and demonstrate how this price effect differs across markets. Their results suggest that the efficiency of price adjustment to new information may differ dramatically depending on security market structure, specifically differences in liquidity.

Henry (2000b) argues that stock market liberalization reduces cost of equity through the decrease of interest rate and risk premium. This fall of the cost of equity stimulates capital accumulation, since some of investment projects that had a negative net present value before liberalization turn to become profitable after liberalization. Levine and Zarvos (1998b) argue that increase capital inflows may improve financial market liquidity and this increased liquidity will also reduce this equity premium. Besides, improved risk sharing and more liquid stock markets may also facilitate the undertaking of longer duration investments with high returns (Devereux and Smith (1994), Obstfeld (1994), Bencivenga et al, 1995). Consequently, if equity market enhences liquidity, it will provide great incentives to invest in information gathering (Holstrom and Tirole ,1993), improve the allocation of resources, and again promote growth. Stock market liberalization may improve corporate control by allowing foreign investors to put performance pressures on managers (Levine, 2001).

Conversely, Shieldfer and Vishny (1986) have argued that improvement of stock market liberalization may weaken corporate governance by reducing the incentives for shareholders to monitor managers, leading to a less efficient allocation of resources. In addition, even if liberalized financial sectors give better protection against future uncertainties, this may in fact lower the needs to save for the future (Devereux and Smith (1994)), which might lead to a better stock market without an increase in investment and savings. Furthermore, stock market liberalization may trigger financial instability, as well as misallocation of capital that are detrimental to economic growth (Eichengreen, 2001).

2.6 THE THEORETICAL UNDERPINNINGS OF FINANCIAL LIBERALIZATION PROGRAMMES

There are three theories of financial liberalization thesis (Serieux, 2008): the McKinnon-Shaw (or financial liberalization) thesis, differing perspectives-mainstream and differing perspectives-heterodox.

2.6.1 The McKinnon-Shaw (or Financial Liberalization) Thesis: The justification for policies of financial liberalization find their initial expression in the propositions contained in the independent (and nearly simultaneous) publications of Roland McKinnon (1973) and Edward Shaw (1973). These propositions, taken together, have since become known as the Mckinnon-Shaw hypothesis or the financial liberalization thesis.

In a nutshell, these authors argued that the financial sectors of most developing economies were repressed by misguided financial and monetary policies,

overregulation of the financial sector and other forms of public sector intervention, and excessive public borrowing from the financial system. The outcome of that repression was low savings and investment rates and retarded growth.

McKinnon and Shaw argued that the solution to this problem lay in a liberalized financial sector able to more efficiently and extensively intermediate between savers and investors. However, at both the theoretical and empirical levels, they described slightly different means through which improved financial sector performance would have real economic effects.

McKinnon (1973) argued that the limited capital market development of developing countries meant that firms were largely constrained to self-finance at the same time that indivisibilities in physical capital required the accumulation of savings prior to physical capital accumulation. Quasi money holdings were the main instruments through which firms accummulated savings prior to lumpy investment. Thus, the accumulation of broad money balances generated greater investment (this is McKinnon's 'conduit' effect of money balances). Effectively, the accumulation of money balances and physical capital accumulation were complementary.

Shaw (1997) argued that increased financial intermediation provide the impetus for growth more directly. Liberalization would result in an expanded, improved and intergrated financial sector that would lead to an increase in the saving rate, an increase in the rate of investment by facilitating more lumpy investment, increase in liquidity and a direct enhencement to growth via improved financial technologies. These growth-inducing consequences of increased monetization and financial sector

intermediation are refered to as Shaws's 'intermediation' effect.

2.6.2 Differing Perspectives-Mainstream: Campbell and Mankiw (1989; 1990; 1991) posited that a substantial proportion of households in both developed and developing countries are liquidity-constrianed and thus unable to smooth consumption across time. As a consequence, these households' consumption is more highly dependent on current income than would be predicted by the life-cycle/permanemt-income hypothesis.

If this condition does, in fact, hold, a number of authors have argued that a reduction in the number of liquidity-constrained households, as a consequence of financial liberalization, would result in a fall in the savings rate (Bayoumi, 1993; Vaidyanathan, 1993). In effect, if the Campbell-Mankiw condition holds (meaning that a significant proportion of pre-liberalization households are liquidity-constrained), the effect of liberalization on the private savings rate would be negative because the increased access of a significant number of households to capital markets will result in a consumption boom.

Ogaki, Ostry and Rainhart (1996) argued that , if substantial proportion of households have income near the subsistence level, the intertemporal elasticity of substitution will approach zero. Under these conditions, the private savings rate will not be sensitive to the real rate of interest. Thus, financial liberalization, which is expected to result in a rise in the real interest rate, will have no effect on the private savings rate.

In this context, several types of government intervention in the financial sector could be pareto improving. Stiglitz (1994) argued therefore that while govenment

intervention (beyond financial sector regulation) could not guarantee a more productive and efficient financial sector, a partially repressed financial sector clearly had the capacity to outperform more liberalized finance.

2.6.3 Differing Perspectives-Heterodox: Economists working in the neostructuralist tradition argued that, contrary to the presumption of the financial liberalization thesis, the formal financial sector was not necessarily the most efficient means of financial intermediation in developing economies. They suggested, instead, that the informal financial sector (curb market) was a more efficient conduit of savings (Taylor, 1983; Van Wijnbergen, 1983; Buffie, 1984). In their view, while financial liberalization would lead to an increase in the share of savings intermediated through the formal financial sector, if that increase came at the expense of the informal financial sector, the net effect on output and, presumably, investment would be negative.

Against these theories, the Mckinnon-Shaw hypothesis is adopted as the framework in this study. Also, since most of the sudies on financial liberailization focus on both money and capital markets of developed countries and considering the nature of the macroeconomic environment in which the developed countries (such as UK, France and Germany) operate is different as compared to the developing countries' (such as Nigeria, Ghana and Zimbabwe) system. Even though there are more studies in developing countries on financial liberalization with particular emphasis on money market, the study will close the gaps by looking into the capital market development

(liquidity and efficiency) in Sub-saharan Africa particularly Nigeria.

2.7 SUMMARY

Stock market liberalization is the openness of the capital markets to both internal and external investors to invest in instruments that are traded in the stock markets. Nigerian government has embarked upon liberalizing its financial system since 1986 with the expectation to boosting liquidity and efficiency of the markets. This is also determined by the nature of the rules and regulations governing the markets. There are many proponents and opponents of financial liberalization theory among them are liberalist and conservatives. Various measures of liquidity and efficiency have been given in the literature and those used are also stated.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter attempts to explain various techniques and criteria needed in arriving at an inference of this study. Therefore, the selection of sample, the method in which data are sourced and analyzed, and the instruments put in used are all discussed.

3.2 RESEARCH DESIGN

There are numerous research methods available to researchers. However, the method adopted by a researcher in a particular study depends on the problems and situation that he is confronted with. For the purpose of this study, the ex post factor research design is used. Ex post factor research is a research that is undertaken after the events have taken place and the data are already in existance.

3.3 POPULATION DESIGN

The study is focused on the impact of financial liberalization on liquidity and efficiency of Nigerian stock market. The population of the study consists of all the 212 companies participating in the market. The participating companies are; Emerging Markets, Agriculture/Agro-Allied sector, Air line services sector, Automobile & Tyre sector, Aviation sector, Banking sector, Bereweries sector, Building materials sector, Chemical & paints, Commercial/Services sector, Computer & office equipment sector, Conglomerates sector, Construction sector, Construction sector, Engineering Technology sector, Food/Beverages & tobacco sector, Footweer sector, Helthcare

sector, Hotel & Tourism sector, Industrial/ Domestic products sector and Insurance sector.

3.4 SAMPLE SIZE AND SAMPLING TECHNIQUE

The sample size of the study is 212 quoted companies in the Nigerian Stock Exchange. The sampling technique used in the study is census. This is because the overall companies quoted in the Exchange have been utailized for the study.

3.5 METHODS OF DATA COLLECTION

The study utilized secondary data that are sourced from Nigerian Stock Exchange (NSE) annual financial statements, Securities and Exchange Commission (SEC) Data Bank and some listed companies' annual financial statements, National Bureau of Statistics (NBS), manuals, text books, journal articles, workshop papers and reports. The data are classified into pre and post liberalization periods, and the official implementation policy date is used in determining the liberalization period. The pre-liberalization periods range from 1986-1995, and the post-liberalization periods range from 1996-2005.

3.6 TECHNIQUES OF DATA ANALYSIS

The study used paired sample *t*- test in testing the hypotheses. Instead of testing the hypotheses by using manual computations, SPSS 14.0 soft ware is made use of. The decision criteria for the t test is arrived at by comparing two outcomes: mean and *p*-values. If the calculated mean value before an event is less than the calculated mean value after the event, null hypothesis is rejected and alternative hypothesis accepted, and vice-versa.

Also, the decision criteria for the *p*-value is arrived at by comparing the calculated value of *p* and level of significance, when the *p*-calculated is less than the level of significance, the null hypothesis is rejected and alternative hypothesis accepted, and vice-versa. The 5% level of significance is used in this study.

3.7 JUSTIFICATION OF THE METHODS AND TECHNIQUES.

The research work relied heavily on secondary source of data that are mainly obtained from the Nigerian Stock Exchange, this is because they provide room for comparative analysis between pre-and post-liberalization periods, and also give a direction to the research work.

Paired sample *t*-test is used to test if two related samples come from populations with the same mean which often result from an experiment in which thesame object is observed before and after an intervention. The basic reason for testing only at 5% level of significance is the fact that the study aims at minimizing the possibility of type one error, which can be commited where level of significance are chosen to be high.

And of course, ex post factor research design is adopted because the study is empirical in nature and that the researcher does not in any way control independent variables because the situation for the study already exists.

3.8 SUMMARY

The chapter deals with the methodology of conducting the research. It examines the research method, population and sample size, sources and method of data collection, and finally the techniques used in data analysis.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 INTRODUCTION

This chapter presents, analyses and interprets data collected from various sources as identified in section 3.3 of this study. The trend analysis on the data is first presented and thereafter hypotheses formulated in section 1.4 are tested using paired sample t-test. The study will establish the findings based on the trend analysis and hypotheses tested.

4.2 TREND ANALYSIS OF LIQUIDITY AND EFFICIENCY OF THE NIGERIAN STOCK MARKET FOR THE PERIOD UNDER STUDY

The following tables (4.1 and 4.2) represent the measures of liquidity and efficiency of equity in the stock market. The measures are used for the period before and after financial liberalization as identified in the study.

Table 4.1: Liquidity of the Stock Market

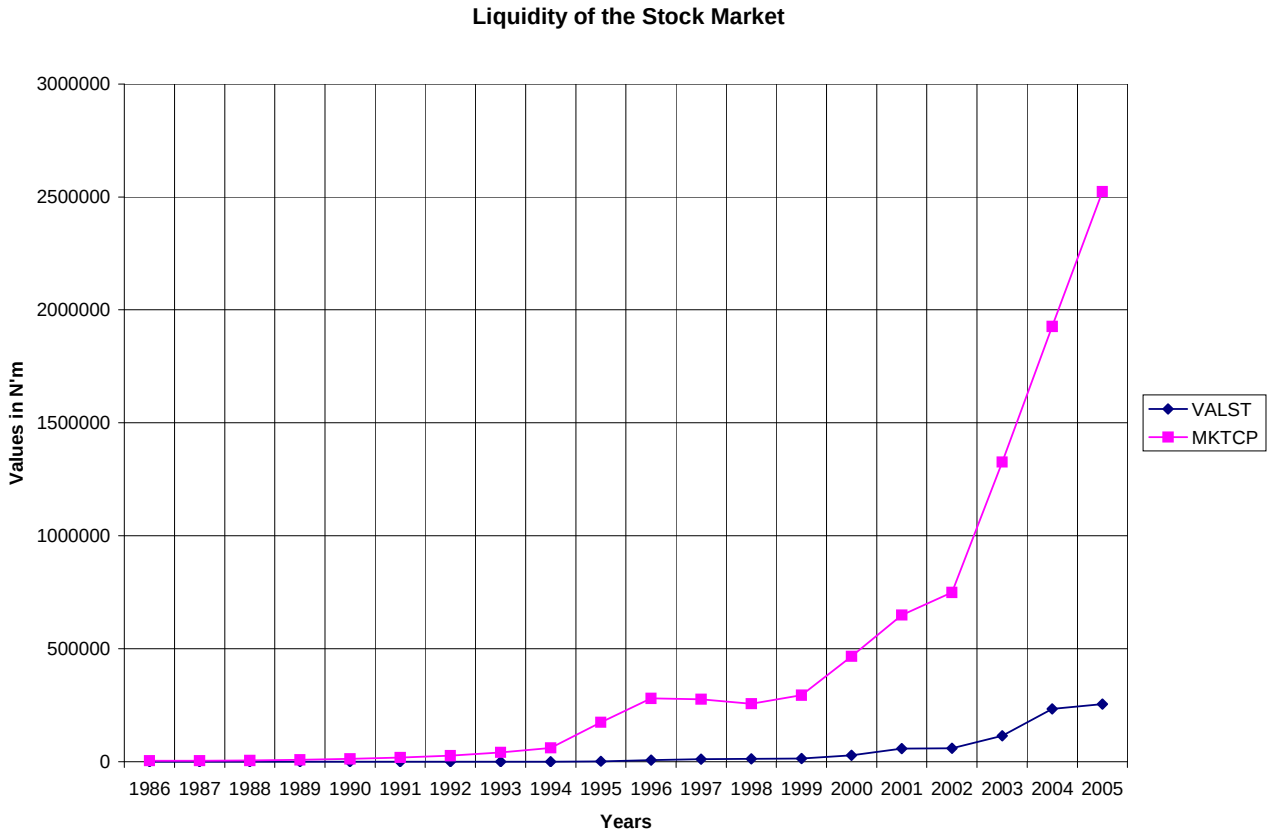
Period	Value of shares traded *(VALST)* (=N=’M)*	Market capitalization (*MKTCP)** (=N=’M)	% change**	
			VALST	*MKTCP*
1986	22.0	3,687.8	-	-
1987	27.2	4,031.6	23.6	9.3
1988	22.4	5,089.0	-17.6	26.2

1989	22.9	8,034.7	2.2	57.9
1990	87.8	12,134.8	283.4	51.0
1991	90.0	18,447.5	2.5	52.0
1992	237.1	26,245.8	163.4	42.3
1993	286.6	41,830.9	20.9	59.4
1994	401.3	61,023.9	40.0	45.9
1995	1,788.1	175,064.7	345.6	186.9
1996	6,922.6	279,783.2	287.1	60.0
1997	10,923.2	276,304.6	57.8	-1.2
1998	13,555.3	256,774.7	24.1	-7.1
1999	14,026.6	294,465.3	3.5	14.7
2000	28,154.6	466,058.7	100.7	58.3
2001	57,612.6	648,449.5	104.6	39.1
2002	59,612.6	748,734.6	3.5	15.5
2003	113,886.6	1,325,672.9	91.0	77.1
2004	233,885.6	1,926,465.1	105.4	45.3
2005	254,707.8	2,523,493.3	8.9	31.0

Source: * SEC and NSE annual reports and Accounts, Various issues

** Authors' Computation

Figure 4.1



Source: Column 2 and 3 of Table 4.1

From table 4.1 and figure 4.1 above, value of shares traded (VS) and market capitalization (MK) are used for measuring liquidity of the stock market. The VS has the highest value figure of N254,707.8 million in the year 2005, and the least figure of N22.0 million in the year 1986. Through out the periods under study the VS value has been increasing with the exception of the year 1988, when the figure declined from N27.2 million in 1987 to N22.4 million in 1988; a decreased of 17.6%. The decline in the VS could be due to resistance of the structural reform introduced by the Nigerian government in 1986 as documented by Herbst and Soludo (1999), that the structural adjustment programme introduced in Nigeria because of lack of proper understanding of the reform, coupled with the complexities of the reform creates unrelenting and

intense criticisms from all sectors of the society. The VS began to increase again in the year 1989, but because the declining factors are still having impact within the year, it has increased only by 2.2%. One basic reason for the increment in VS from 1989 upward was active participation of private sector in the market. According to Ologunde *et al.*(2006), as of the year 1989 about N800 million was raised from the market, of which about 85% was attributable to the private sector, leaving about 15% of the auction to the government. From the year 1996 up to the year 2005, the VS has been increasing. Looking at the figure 4.1, the impact of financial reforms starts reflecting on the stock market within these periods, reaching peak in the year 2005. The reasons for the gradual upward movement were due to the facts that the Nigerian stock market was internationalized, Automated Trading System (ATS) introduced, privatization of public enterprises, and banking sector consolidation among others.

As for the MK, the least capitalization figure was in the year 1986 with a recorded figure of N3687.8 million and since then the capitalization figure has been increasing upward though not at an exact proportion. The reason for the increment in capitalization could be due to oil wind fall of the 1990s. In the year 1997 and 1998, the MK decreased by 1.2% and 7.1% respectively. The likely reason for the decline especially in the year 1998 could be attributed to uncertainty in the financial system due to transition from military to civilian regime as there were shortages of stocks in the market. From the year 1999 to 2002, MK continued to move upward. But between year 2003 to 2005, there was accelerated increased in the MK, which according to Nigerian Stock Exchange Annual Report (2006) was due to so many activities that took place in the market within the stipulated periods. Notably among the activities

are market descipline instituted, pension reform, steady increase in all-share index and investor education scheme.

Table 4.2 Efficiency of the Stock Market

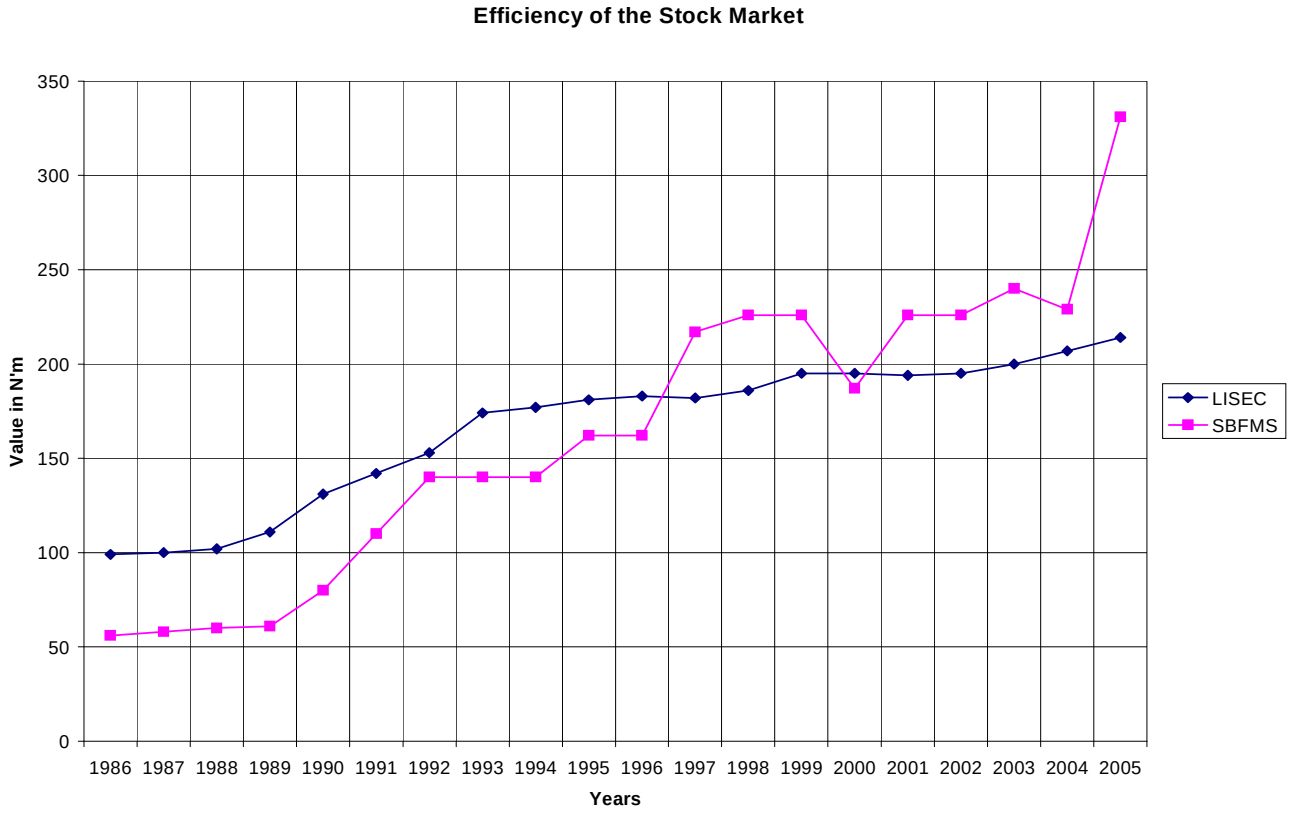
Period	No. Of Listed Securities (equities) (*LISEC*)*	No. Of Stock Broking Firms (*SBFMS*)*	% Change**	
			LISEC	*SBFMS*
1986	99	56	-	-
1987	100	58	1.0	3.6
1988	102	60	2.0	3.4
1989	111	61	8.8	1.7
1990	131	80	18.0	32.8
1991	142	110	8.4	37.5
1992	153	140	7.7	27.3
1993	174	140	13.7	0.0
1994	177	140	1.7	0.0
1995	181	162	2.3	15.7
1996	183	162	1.1	0.0
1997	182	217	-0.5	33.9
1998	186	226	2.2	4.1
1999	195	226	4.8	0.0

2000	195	187	0.0	-17.3
2001	194	226	-0.5	20.9
2002	195	226	0.5	0.0
2003	200	240	2.6	6.2
2004	207	229	3.5	-4.6
2005	214	331	3.4	44.5

Source: * SEC and NSE annual reports and Accounts, Various issues

** Authors' Computation

Figure 4.2



Source: Column 2 and 3 of Table 4.2

From table 4.2 and figure 4.2 above, number of listed securities (LSEC) and number of stock broking firms (SBF) are used for measuring stock market efficiency. The LSEC has the highest value figure of 214 in the year 2005, and the least value figure of 99 in the year 1986. Through out the periods under study, the value of the LSEC has been increasing though not at exact proportion. Looking at the figure 4.2, in the year 1995, 1996, 1998, 1999, 2000, 2002 up to 2005, the LSEC has been increasing at the values of 181, 183, 186, 195, 195 up to 214 respectively. The reason for the increment could be attributed to the introduction of open door policy where the listing requirements as a result of liberalization were reviewed as stated by the security and exchage commision annual report (2006). But the values of LSEC in the year 1997 and the year 2001, there were decline in the number of LSEC, and in the year 2000,

the value remains the same as the previous year's value. The reasons for the this could be due to the fact that the liberalization process was not familiar with by many companies and also the cost of listing securities was still not reduced (SEC, 2004).

As for the SBF, the least figure was in the year 1986 with a recorded figure of 56, and the highest recorded figure of 162 was in the year 1995. From the year 1986 up to year 1992, the figures for SBF have been increasing, on reaching 1992, the figures remain stagnant at 140 up to the year 1994, where it suddenly shifted to 162. The reasons for the stagnation and decline for the periods could be due to the fact that most stockbroking houses whose marging facilities expired cannot renew such because of the directive by the Central Bank of Nigeria (CBN) (NSE, 2004) and the strick scrutiny of the conduct of stockbrockers by the Chartered Institute of Stockbrockers in the interest of the orderly development of the capital market (Al-Faki and Osaze, 2005).

The figures of SBF have been fluctuating. SBF decline in value in the year 2000 by 17.3% when compared to the previous year. The values for SBF remain stagnant in the year 1999 and the year 2002. The reasons for the fluctuation could be attributed to the abilty of the prospective stock brokers to meet the license requirements of the exchange and Central Bank of Nigeria's monetary policy (SEC, 2004). In the year 2004 and 2005, the curve in figure 4.2 of SBF shifted upward this is because during the periods there was a move by the Nigerian government to consolidate banking sector and the activities of stock broking firms have increased.

4.3 HYPOTHESES TESTING

In order to validate our hypotheses formulated in section 1.4, the following paired sample t-test results were obtained from the respective analysis of liquidity and efficiency:

Table 4.3 Impact of Financial Liberalization on Liquidity-Value of Shares Traded

Variable	Number of pairs	t-sig.	Mean
PRVS	**10**	**0.004**	**0.2985**
PSVS			**79.3288**

t-value is significant at the 0.05 level
Source: Imported From SPSS Version 14.0

Table 4.4 Impact of Financial Liberalization on Liquidity-Market Capitalization

Variable	Number of pairs	t-sig.	Mean
PRMK	**10**	**0.000**	**35.5591**
PSMK			**874.6202**

t-stat. is significant at the 0.05 level
Source: Imported From SPSS Version 14.0

Table 4.3 reperesents the t-test results obtained on liquidity measure (value of share traded (VS)) pre (PR) and post (PS) liberalization. The p-value of 0.004 is compared with the 0.05 significant level and the p-value is less than the significant level. Similarly, table 4.4 represents the results obtained on liquidity (market capitalization (MK)) pre and post liberalization. The p-value of 0.000 is less than the significant

level of 0.05. Since in both tables, as defined by the decision criteria, the p-values are less than the significant level the null hypothesis ($H0_1$) is rejected.

However, on computing the mean values in tables 4.3 and 4.4, we obtained 0.2985 and 35.5591 pre-liberalization and 79.3288 and 874.6202 post-liberalization repectively. In both cases, the value of the mean pre-liberalization is less than the value of the mean post-liberalization. As defined by the decision criteria, the null hypothesis is rejected.

Table 4.5 Impact of Financial Liberalization on Efficiency-Listed Securities

Variable	Number of pairs	t-sig.	Mean
PRLSEC	**10**	**0.000**	**137.0000**
PSLSEC			**195.1000**

t-value is significant at the 0.05 level
Source: Imported From SPSS Version 14.0

Table 4.6 Impact of Financial Liberalization on Efficiency-Stock Broking Firms

Variable	Number of pairs	t-sig.	Mean
PRSBF	**10**	**0.031**	**100.7000**
PSSBF			**227.0000**

t-value is significant at the 0.05 level
Source: Imported From SPSS Version 14.0

Table 4.5 reperesents the t-test results obtained on efficiency measure (listed securities (LSEC)) pre (PR) and post (PS) liberalization. The p-value of 0.000 is compared with the 0.05 significant level and the p-value is less than the significant level. Similarly,

table 4.6 represents the results obtained on efficiency measure (stock broking firms (SBF)) pre and post liberalization. The p-value of 0.031 is less than the significant level of 0.05. Since in both tables, as defined by the decision criteria, the p-values are less than the significant level the null hypothesis ($H0_2$) is rejected.

However, on computing the mean values in tables 4.5 and 4.6, we obtained 137.0000 and 100.7000 pre-liberalization and 195.1000 and 227.0000 post-liberalization repectively. In both cases, the value of the mean pre-liberalization is less than the value of the mean post-liberalization. As defined by the decision criteria, the null hypothesis is rejected.

4.4 DISCUSSIONS OF RESULTS

Our findings, based on the trend analysis, revealed that liquidity of the stock market in terms of both value of shares traded and market capitalization have increased significantly in the aftermath of the financial liberalization. Similarly, efficiency of the market in the aftermath of the financial liberalization, both in terms of number of listed equity securities and stock broking firms, have increased significantly. The fluctuations as revealed by the literature were due to certain changes that happened in the country. Notably among them are; structural reform introduced by the Nigerian government in 1986, active participation of private sector in the market, pension reforms in 2004, change in monetary policy, market descpline instituted and transitional changes in the country.

Findings based on the hypotheses formulated in the study revealed significant improvements. Both Hypotheses are tested by using paired t-test. Hypotheis one has to do with whether financial liberalization has significant impact on liquidity of the stock market. The t-test results indicated that value of shares traded and market capitalization as measures of liquidity have significantly improved post-liberalization. When looking at their p-values and means post-liberalization of 0.004 and 79.3288 and 0.000 and 874.6202 respectively there are positive variations of these values as compared to the pre-liberalization period. This gives the chance to reject the null hypothesis formulated in the study. This is also in consistent with the findings of Dey and Flaherty (2004), Baker and Stein (2002) and Eleswarapu and Krishnamurti (2007). This also negates the findings of other scholars like Baker and Stein (2003). The negation could be due to the methodology adopted as found in the literature.

Hypothesis two deals with whether financial liberalization has significant impact on efficiency of the stock market. The t-test results indicated that listed securities and stock broking firms as measures of efficiency have significantly improved post-liberalization as compared with the pre-liberalization era. When looking at their p-values and means post-liberalization of 0.000 and 195.1000 and 0.031 and 227.0000 respectively there are positive variations of these values as compared to the pre-liberalization values. This gives the chance to reject the null hypothesis formulated in the study. This is also in line with the findings of Wu and Ray (2005) in U.S., Jain-Chandra (2002) in emerging economies and Ngugi, Maurinde and Green (2003) in Nigeria amongst others.

4.5 CHAPTER SUMMARY

The above chapter presents, analyses and interpretes data for the periods under study. Trend analyses for both the liquidity and efficiency measures were made. Test of hypotheses were made using paired t-test relating the impact of financial liberalization on liquidity and efficiency. The overall results indicated that financial liberalization has significant impact on the liquidity and efficiency of the Nigerian stock market.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 SUMMARY OF MAJOR FINDINGS

Based on the trend analysis and hypotheses tested, the following findings were obtained:

Results based on trend analysis have indicated a significant improvement on both the liquidity and efficiency of the Nigerian stock market in the aftermath of financial liberalization. Analysis of the results on liquidity indicated that before the introduction of financial liberalization in the Nigerian stock market, both the VS and MK were very low due to the fact that most of the structural adjustment reforms introduced by the Nigerian government in the stock market that partains its activities and operations were not fully understood by players (financial institutions) in the various sectors of the economy. Consequently, the level of patronage by market participants was low. But with the introduction of liberalization in 1995, activities in the market have continued to increase which led to market improvement in both the VS and MK. This improvement was as a result of factors such as market descipline instituted, pension reform and steady increase in all-share index, amongst others. Analysis on the efficiency also indicated that measures of efficiency-LSEC and SBF- have been fluctuating for the different periods under study. The fluctuation could be attributed to factors such as the Central Bank of Nigeria's directives on marging facilities, the introduction of open door policy on the listing requirement of securities in the market and the banking sector consolidation exercise, amongst others.

Findings based on the hypothesis one revealed that both measures of liquidity (value of share traded and market capitalization) have improved significantly after the introduction of financial liberalization.

Furthermore, findings based on tested hypothesis two revealed that both measures of efficiency (listed securities and stock broking firms) have improved significantly in the aftermath of financial liberalization.

The overall findings of the study are consistent with those found in the literature, such as Dey and Flaherty (2004), Baker and Stein (2002), Eleswarapu and Krishnamurti (2007), Ngugi, Maurinde and Green (2003) and Jain- Chandra (2002).

5.2 LIMITATIONS OF THE STUDY

During the course of the study the following obstacles were encountered:

a) The researcher was faced with the difficulties in obtaining the relevant data necessary for the research work. Most organisations were reluctant to release vital information because of what they term “secrecy in organisations.” This made things very difficult for the researcher to cover other areas, like stock volatility, of capital market development.

b) There was also the problem of conflict between facts and figures obtained from the Securities and Exchange Commission (SEC) and the Nigerian Stock Exchange (NSE). It was quite a Herculean task for the researcher to harmonise these conflicting data.

5.3 CONCLUSIONS

The role of stock markets in the economic development of countries cannot be overemphasised. Since the introduction of structural adjustment programme in 1986, the Nigerian stock market has been experiencing rapid growth. This in turn positively influenced the rate of Nigeria's economic growth during the period in question. Investigations into the impact of financial liberalization on liquidity and efficiency of the the Nigerian stock exchange showed that the market liquidity and efficiency is affected by factors such as; the Nigerian regulatory framework, the banking consolidation reforms, market discipline, the level of participation of private sector in the market, pension reform, investor education, macroeconomic and financial instability and the demand and supply of stocks amongst others.

Despite the influence of the aforementioned factors, however, the study showed that financial liberalization has significant impact on liquidity and efficiency of the Nigerian stock market. This shows that the Nigerian stock market is achieving relative stability, which is an ingridient of economic development. Improved liquidity will go a long way in boosting investors confidence in the market, and this invariably enhances the efficiency of the market. Thus, liquidity and efficiency in stock markets are interwoven.

5.4 RECOMMENDATIONS

To better enhance the development of Nigerian capital market in particular and the development of the Nigerian economy in general as compared with those of Eupropean countries such as United Kingdom and Japan, the following underlisted recommendations should be taken into consideration:

1) The Need to Educate Market Participants: The greatest challenge to the Nigerian stock market (NSM) is to improve the level of knowledge of the local investors. A programme of continuous education for the investor, the intermediary, the issuer and the regulator are extremely important for the successful development of the NSM. As markets becomes more sophisticated, there is increasing need for investment advisors and personnel who are capable of analyzing complex financial concepts such as options and other derivatives. Hence, in order to sustain and even strengthen the performance of the Nigerian stock market, it is expedient that investors are educated and well – informed on market activities, operations and procedures. This is especially necessary where new set of rules have been introduced or existing ones have been reviewed for enhanced performance. Thus, informed market participants would act within market regulatory confines and hence reduce the cost of non – compliance for the market, and by implication the economy as a whole.

It is the responsibility of the SEC, which is the apex regulator in the market to put in place certain programmes that would get market participants informed about new market development and how they can best be tackled. The periodic publications of the SEC in recent times is a step in the right direction.

2) Follow Prudent Macroeconomic Policies: The aim of macroeconomic policies (both fiscal and monetary) in any economy is to make it robust and performance – driven. The Nigerian government from time to time announces policies aimed at bettering the economy but unfortunately, the government does not go extra miles to ensure enforcement. Also, operators do not comply with such policies, which ordinarily are in their best interest. Hence, there is need for the Nigerian government

to follow prudent macroeconomic policies. The high interest and inflation rates, budget deficits, marging facilities fluctuations etc., that have become persistent not only create financial instability, but also feed uncertainty, which affects stock market development.

3) Improvement in Liquidity*:* liquidity is a most cherished feature of a capital market. Infact, liquidity is a lingering issue in stock markets accross the globe. This is considered so because the more liquid a market is, the better its efficiency. Like most emerging and perhaps even a few developed stock markets, Nigerian stock market's liquidity is considered inadequate to propel rapid market development. This is as a result of the investment habit of Nigerians. An average Nigerian investor buys securities for keeps. Every investor wants to buy and no one wants to sell because shareholders assume that if they sell they may never be able to refill their portfolios. This problem is caused by a general lack of knowledge or sophistication in the intricacies of the stock market and also heightened by poor delivery and ineffective transaction. Furthermore, the level of participation of financial institutions in the Nigerian Stock market is relatively low. These and other factors add up to stunt the growth of liquidty in the market. Hence, there is need for the regulatory authorities to educate the average Nigerian investor and also ensure increased participation of financial institutions in the market.

4) Nurture a progressive and Sound banking System: the banking sector is vital to the development of the capital markets. A progreesive and sound banking system is required to quicken the development of the financial market.

BIBLIOGRAPHY

Abreu, D. and Brunnermeier, M. (2003), "Bubbles and Crashes," *Econometrica* Vol. 71 No.1, pp. 173-204.

Agarwal, R. N. (1997), "Inflow of Foreign Portfolio Portfolio Investment in Developing Countries: A Study of Determinants and Macroeconomic Impact," *The Indian Economic Review,* Vol. 32. No. 2, pp. 217-229.

Aghion, P. Banerjee, A. and Piketty, T., (1999), "Dualism and macroeconomic Volatility," *Quarterly Journal of Economics*, Vol. 114, No. 4, pp.1359-97.

Akyuz, Y. (2002), *Reforming the Global Financial Architecture: Issues and Proposals*, Zed Books, London.

Akyuz, Y. (1995), "*Financial Liberalization in Developing Countries: Keynes, Kalechi and the Rentiers*" In Poverty, Prosperity and the World Economy; Essays in Memory of Sidney Dell, Gerry Helleiner et al. (eds.), London: MacMillan Press Ltd.

Alexander, G. C. Eun, C., and Janakiramanan, S., (1987), "Asset Pricing and Dual Listing on Foreign Capital Markets*: A Note" Journal of Finance,* Vol. 42, pp. 151-158.

Al-Faki, M and Osaze, E. B. (2005), *The Nigerian Capital Market at 60: A Historical Odyssey*; SEC Press Abuja, Nigeria .

Allen, F. and Gorton, G. (1993), "Churning Bubble," *Review of Economic Studies*, Vol. 60, No.4, pp.813-836.

Allen, F. Morris, S. and Postelwaite, A., (1993), " Finate Bubbles With Short Sales Constraints and Asymmetric Information" *Journal of Economic Theory*, Vol.61, No. 2, pp. 206-229.

Adegbite, M.A. and Babalola, T. A. (2001), "The Performance of the Nigerian Capital Market since Deregulation in 1986*"*, *Central Bank of Nigeria Economic and Financial Review* Vol. 37 ,No. 3.

Aderibigbe J.O. (2004), "An Overview of the Nigerian Financial System*"*, *CBN Bullion* Vol. 28, No. 1 Jan/March.

Adeyemi K.S. (1998), "Options for Effective Development of the Nigerian Capital Market*"*;In The Capital Market and Nigeria's Economic Development. Proceedings of the one-day seminar held at the NIITA Lagos on January 21, 1998 by Nigerian Economic Society (NES).

Alile, H.I. (1997), "The Nigerian Stock Exchange and Capital Formation in Nigeria" being the text of a paper at the seminar, Executive course No. 19 organised by the National Institute for Policy and Strategic Studies, Kuru, Jos. 17th March, 1997.

Alile, H.I. and Anao, R.A. (1986), *The Nigerian Stock Market in Operation*, Jeromelaiho & Associates Limited, Lagos.

Areago R. B. (1990) *The Nigerian Stock Exchange Genesis Organisation*, Jeremiah and Associates Ltd., Nigeria 4th Edition.

Amihud, Y. (2002), "Illiquidity and Stock Returns: Cross-Section and Time-Series Effects" *Journal of Financial Markets*, Vol. 5, pp. 31-56.

Amihud, Y. Mendelson, H., (1986), "Asset Pricing and the Bid-ask Spread", *Journal of Financial Economics*, Vol. 17, pp. 223-249.

Amihud, Y. Mendelson, H. and Lauterbach, B., (1997), "Market microstructure and Securities values: Evidence from Tel Aviv Stock Exchange," *Journal of Financial Economics*, Vol. 45, pp. 365-90.

Antoniou, A. And Nuray, E. (1997), "Market Efficiency, Thin Trading and Non-Linear Behavior: Evidence From an Emerging Market", *European Financial Management*, Vol.3, No. 2, pp. 175-190.

Arestis, P. (2005), "Financial Liberalization and The Relationship Between Finance and Growth ": *Centre for Economic and Public Policy Working Paper*, No. 05/05, Cambridge University, cambridge.

Asiedu, E. (2006), "Foreign Direct Investment in Africa: The Role of Natural Resources, Market Size, Government Policy, Institutional and Political Instability." *The World Economy*, Vol. 21(1) pp.63-77.

Balaban, E. (1995), "Informational Efficiency of the Instambul Securities Exchange and Some Rationale for Public Regulation", *Discussion Paper No. 9502*, Central Bank of the Republic of Turkey Research Department.

Baker, M. and Stein, J. C. (2002) "Market Liquidity as A Sentimental Indicator" *Journal of finance*, Harvard Business School.

Barclay, M. J. Kandel, E. and Marx, L (1998), "The Effects of Transaction Costs on Stock Market Returns", *Journal of Finance*, Vol.58, No.1, pp. 78-108.

Basu, P. and Morey, M. (1998), "Trade Liberalization and the Behavior of Emerging Stock Market Price" *Working Paper*, Fordham Institute for Research in Economics.

Battacharya, U. and Daouk, H. (2002), "The World price of Insider Trading", *Journal of Finance*, Vol.57, No.1, pp. 75-108.

Bayoumi, T. (1993), "Financial deregulation and Household saving," *The Economic Journal*, Vol. 103, No. 421, pp.1432-43.

Becchetta, P. and van Wincoop, E. (2000), " Capital Flows to Emerging Markets: Liberalization, Overshooting and Volatility," in Edwards, S., *Capital Flows and the Emerging Economies-Theory, Evidence, and Controversies*, University of Chicago press, Chicago, pp.61-98.

Beck, T. Levine, R. and Loayza, N., (2001), "Finance and the Sources of Growth," *Journal of Financial Economics*, Vol. 58, No. 1-2, pp.261-300.

Bekaert, G. Harvey, C. R. and Lundbland, C., (2004a),"Does Financial Liberalization Spur Growth," *Journal of Finance*, pp. 1-32.

Bekaert, G. Harvey, C. R. and Lundbland, C., (2004b), "Growth Volatility and Financial Liberalization," *Journal of Finance*, pp. 1-31.

Bhattacharya, S. (2008), "Determinants of Corporate Investment: Post Liberalization Panel Data Evidence from Indian Firms", *MPRA Paper No. 6702*, available from http://mpra.ub.uni-muenchen.de/6702/

Bhattacharya, U. and Daouk, H. (2002), "The World Price of Insider Trading", *Journal of Finance*, Vol. 57, pp. 75-108.

Bhinde, A. (1993), "The Hidden Cost of Stock Market Liquidity," *Journal of Financial Economics*, Vol.34, pp.31-51.

Black, F. And Myron, S. (1974), "The Valuation of Option Contracts and Testing of Market Efficiency", *Journal of Finance*, Vol. 27, pp. 399-418.

Bonfiglioli, A. (2005),"How Does Financial Liberalization Affect Economic Growth," *Journal of Finance* , pp. 1-22.

Bortolotti, B. Jong, F. Nicodano, G., and Schindele, I. (2007), "Privatization and Stock Market Liquidity" *Journal of Banking and Finance*, Vol. 31, pp. 297-316. Available from www.elsevier.com/locate/jbf

Bris, A. Goetzman, W. and Zhu, N. (2006) "*Short Sales in Global Perspective*," Mimeo, Yale School of Management.

Brown, D. P. and Zhang, M. Z. (1997), "Market Orders and Market Efficiency", *Journal of Finance*, Vol. 52, No. 1, pp. 277-308.

Buffie, E. F. (1984), “Financial Repression, the New Structuralist, and Stabilization Policies in Semi-industrialized Economies,” *Journal of Development Economics*, Vol.14, No. 3, pp. 305-322.

Burkett, P. and Dutt, A. K. (1990), “Interest Rate Policy,Effective Demand and Growth in LDCs,” *International Review of Applied Economics*, Vol. 5, No. 2, pp.127-153.

Bundoo, S. K., (1999), “The Mauritius Stock Exchange: An Assessment,” *Social Science & Humanities and Law & Management Research Journal*, University of Mauritius, Mauritius.

Butler, K. C. and Malaikah, S. J. (1992), “Efficiency and Inefficiency in Thinly Traded Stock Markets: Kuwait and Saudi Arabia”, *Journal of Banking and Finance*,Vol. 16, pp. 197-210.

Calvo, G. (1998), “ The Simple Economics of Sudden Sops,” *Journal of Applied Economics*, Vol.1, No. 1, pp. 35-54.

Calvo, G. Leiderman, L., and Reinhart, C. (1993), “Capital Inflows and Real Exchange Rate Appreciation in Latin America: The Role of External Factors,” *IMF Staff Papers*, No. 40, pp. 108-151.

Campbell, J. Y. Andrew, W. L. and Mackinlay, A. C. (1997), *The Econometrics of Financial Markets*: Princeton University Press, Princeton, New Jersey, USA.

Campbell, J. and Mankiw, G. (1989), “ Consumption, Income, and Interest Rates: Reinterpreting the Time Series Evidence,” *NBER Macroeconomics Annual*, No.4, pp.185-216.

Campbell, J. and Mankiw, G. (1990), “Permanent Income, Current Income, and Consumption,” *Journal of Business & economic Statistics*, Vol.8, No. 3, pp. 265-279.

Campbell, J. and Mankiw, G. (1991), “The Response of Consumption to Income; a Cross-country investigation,” *European Economic Review*, Vol. 35, No. 4, pp. 723-767.

Cecchetti, S. G. Lam, P., and Mark, N. C., (1990), “Mean Reversion in Equilibrium asset Prices,” *American Economic Review*, Vol. 80, No. 3, pp. 398-418.

Chae, J. and Wang, A. (2004), “Who Makes Markets? Cross-Sectional Variation in Voluntary Liquidity Provision,” *Journal of Financial Planning*, pp. 1-28.

Chandrasekhar, C. P., (2004),"Financial Liberalization and Macroeconomics of Poverty Reduction," Draft Thematic Summary on Financial Liberalization for the Asia-pacific Programme on the Macroeconomics of Poverty Reduction.

Chang, R. P. Hsu, S. Huang, N. and Rhee, S. G. (1999), "The Effects of Trading Methods on Volatility and Liquidity: Evidence from Taiwan Stock Exchange," *Journal of Business Finance and Accounting*, Vol. 26, pp.137-70.

Chinn, M. D. And Ito, H. (2005), "What Matters for Financial Development? Capital Controls, Institutions, and Interactions," *Journal of Development Ecomonics*, Vol. 81, No. 1, pp.163-192.

Christopher, B. Vince, H. and Martin, J. (2000), "The Impact of Liberalization and Regionalism Upon Capital Markets in Emerging Asian Economies" *School of Banking and Finance Working Paper*, University of New South Wales.

Claessence, S. Dasgupta, S. and Glen, J. (1995), "Return Behavior in Emerging Stock Market", *World Bank Economic Review*, Vol. 9, No. 1, pp. 131-151.

Chordia, T. Roll, R. and Subrahmanyam, A., (2001) "Market Liquidity and Trading Activity" *The Journal of Finance*, Vol. LVI, No. 2.

Cootner, P. H. (1962), "Stock Prices: Random vs. Sysytematic Changes", *Industrial Management Review*, Spring, Vol. 3, pp. 25-45.

Cowles, A. and Jones, H. E. (1937), "Some Posteriori Probabilities in Stock Market Actions", *Econometrica*, Vol. 5, pp. 280-294.

Cristoffersen, P. Chung, H. and Errunza, V. (2002), "Size matters: The Impact of Capital market Liberalization on Individual Firms," *Journal of Finance*, pp.1-18.

Das, M. and Mohapatra, S. (2000), "Income Inequality: The Aftermath of Stock Market Liberalization in Emerging Markets". *Journal of Finance*, Vol. 2, No. 4, pp. 111-27

Datar, V. Naik, N and Radcliffe, R. (1998) "Liquidity and Stock Returns: An Alternative Test", *Journal of Financial Intermediation*, Vol.1, pp. 203-219.

DeLong, J. B. Shleifer, A. Summers, L. H., and Waldmann, R. J. (1990), " Noise Trader Risk in Financial markets," *The Journal of Political Economy*, Vol. 98, No. 4, pp.703-738.

Demirgruc-Kunt, A. and Detragiache, E. (1998), " Financial Liberalization and Financial Fragility," in: "*Annual World Bank Conference on Development Economics,*" World Bank, DC, pp. 1-49.

Demirgruc-Kunt, A. and Levine, R. (1996), "Stock Market Development and Financial Intermediation: Stylized Facts", *World Bank Economic Review*, Vol. 20, pp. 291-322.

Demirguc-Kunt, A. and Detragiache, E. (1999), " Financial Liberalization and Financial Fragility," in: "*Annual World Bank Conference on Development Economics,*" World Bank, DC, pp. 303-331.

Demsetz, H. (1968) "The Cost of Transacting", *Quarterly Journal of Economics*, Vol.82, pp. 33-53.

DeSantis, G. and Imrohoglu, S. (1997), "Stock Return and Volatility in Emerging Financial Markets", *Journal of International Money and Finance*, Vol. 16, pp. 561-579.

Dey, M. K. and Flaherty, M. (2004) "Turnover and Return in Global Stock Market" *Department of Accounting and Finance Journal*, Morgan State University, Baltimore.

Dhir, P. (2007), "The Impact of Stock Market Liberalization on Emerging Equity Market Volatility", *Honors Thesis*, Economics Department, Macalester College, Spring. Available from http://diditalcommons.macalester.edu/economics_honors_projects/5

Easley, D. and O'Hara, M. (1993), "Adverse Selection and Large Trade Volume: The Implications for Market Efficiency", *Journal of Financial and Quantitative Analysis*, Vol. 27, No. 2, pp. 185-208.

Edison, H. And Warnock, F. (2003), "Simple Measure of the Intensity of Capital Controls," *Journal of Empirical Finance*, Vol. 10, No. 1-2, pp. 81-103.

Eisfeld, A. (2004), "Endogenous Liquidity in Asset Markets", *Journal of Finance*, Vol. 50, pp. 1-30.

Eleswarapu, V. and Krishnamurti, C. (2007), "Liquidity, Stock Returns and Ownership Structure: An Empirical Study of the Bombay Stock Exchange" *Journal of Finance*.

El-Erani, M. and Kumar M. S. (1995), "Emerging Equity Markets in the Middle Eastern Countries", *IMF Staff Pappers*, Vol. 42, No. 2, pp. 313-343.

Emenuga C. (1998), "The Nigerian capital market and Nigerian Economic Performance", in, The Capital Market and Nigeria's Economic Development, Proceedings of the one-day seminar held at the NIITA Lagos on January 21, 1998 by Nigerian Economic Society (NES).

Errunza, V. and Losq, E. (1985), "How Risky Are Emerging Markets? Myths and Perceptions Versus Theory and Evidence", *Journal of Portfolio Management*, pp. 62-67.

Fama, E. (1965), "The Behaviour of Stock Market", *The Journal of Business*, Vol. 38, pp. 34-105.

Fama, E. (1970), "Efficient Capital Market: A Review of Theory and Empirical Work", *Journal of Finance*, Vol. 25, pp. 383-417.

Feldman, R. A. and Kumar, M. S. (1995), "Emerging Equity Markets: Growth, Benefits, and Policy Concerns", *The World Bank Research Observer,* Vol. 10, No. 2, pp. 181-200.

Feldstein, M. (2003), *Economic and Financial Crises in Emerging market Economies*, University of Chicago Press, Chicago.

Fuchs-Schundeln, N. and Funke, N. (2001), "Stock Market Liberalizations: Financial and Macroeconomic Implications", *IMF Working Paper*.

Ghosh, J. (2005), "The Economic and Social Effects of Financial Liberalization: A Primer for Developing Countries," *DESA Working Paper* No. 4.

Gerschenkron, A. (1962), *Economic Backwardness in Historical Perspective: A Book of Essays:* Harvard University Press, Cambridge.

Ghosh, J. and Chandrasekhar, C. P. (2003), *Work and Well-being in the Age of Finance:* Tulika, New Delhi.

Ghosh, S. and Revilla, E. (2007), Enhancing the efficiency of Securities Markets in East Asia" *The World Bank Journal*, pp.1-27.

Glen, j. (1994), "An Introduction to the Macrostructure of Emerging Markets," International Finance Corporation, *Discussion Paper No. 2,*Washington.

Glen, J. and Singh, A. (2003), "*Capital Structures, Rates of Return and Financing Corporate Growth: Comparing Developed and Emerging Markets, 1994-2000,"* In Litan et al, *The Future of Developed Capital Markets in Developing Countries,* Washington: brookings Institution.

Gourinchas, P. and Jeanne, O. (2005), "*Capital Mobilty and Reform*" Mimeo, University of California, Berkeley.

Grabel, I. (1995), "Assessing the Impact of Financial Liberalization on Stock Market Volatility in Selected Developing Countries," *Journal of Development Studies*, Vol. 31, No. 6, pp. 903-917.

Grabel, I. (1995), "Assessing the Impact of Financial Liberalization on Stock Market Volatility in Selected Developing Countries", *The Journal of Development Studies*, Vol. 31, No. 1, pp.903-17.

Green, W. H. (2003), *Econometric Analysis*, Printice Hall.

Greenwood, J. and Smith, B. D., (1997), "Financial Markets in Development and the Development of Financial Markets," *Journal of Economic Dynamics*, Vol. 3, pp. 145-181.

Grieb, T. and Reyes, M. G. (1999), "Random Walk Tests for latin American Equity Indices and Individual Firms", *Journal of Financial Research*, Vol. 4, pp. 371-383.

Hassan, K. M. Al-Sultan, W. S. and Al-Saleem, J. A., (2003),"Stock Market Efficiency in the Gulf Cooperation Council Countries: The Case of Kuwait Stock Exchange," *Scientific Journal of Administrative Development*, Vol. 1, No. 1.

Hassan, M. K. and Charles, R. (2002)," Thin Trading and efficiency in the New Zealand Stock Market" *Papper presented at the Academy of Financial Services Annual Meetings held in San Antonio*, Taxas on October 14, 2002.

Haugen, R. A. (1999), *The Inefficient Stock Market:* Prentice-Hall

Hazem, D. Charles, M. C. L. and David, T. Ng. (2005), "Capital Market Governance: How Do Securities Laws Affect Market Performance," *Journal of Finance*, pp. 1-31.

Hellman, T. Murdock, K. and Stiglitz, J. (2000), "Liberalization, Moral Hazard in Banking, and Prudential regulation: Are Capital Requirements Enough?" *Emerican Economic Review*, Vol. 90, No. 1, pp. 147-165.

Henry, P. B. (2006), "Capital Account Liberalization: Theory, Evidience, and Speculation" *Stanford Graduate School of Business Research Paper* No. 1951, pp. 1-52. Available from http://ssrn.con/abstact=946788

Henry, P. B. and Chari, A. (2001), "Stock Market Liberalizations and the Repricing of Systematic", *NBER Working Paper*, No. 8265.

Henry, P (2000a), "Stock Market Liberalization, Economic Reform, and Emerging Market Equity Prices" *Journal of Finance*, Vol. 55, No. 2, pp. 529-563.

Henry, P. (2000b), "Do Stock Market Liberalizations Cause Investment Booms?" *Journal of Financial Economics*, Vol. 58, No. 1-2, pp. 301-334.

Hodrick, R. J. and Bekaert, G. (1992),"Characterizing Predictable Components in Excess Returns on Equity and Foreign Exchange Markets", *Journal of Finance*, Vol. 47, pp. 467-509.

IOSCO ,(2005), "Exchange Demutualization in Emerging Markets," Emerging Markets Committee of the International Organization of securities Commission (IOSCO).

Jain-Chandra, S. (2002), "*The Impact of Stock Market Liberalization on Liquidity and Efficiency in Emerging Stock Markets"* Columbia University, Mimeo.

Jones, C. (2001), "A Century of Stock Market Liquidity and Trading Costs", *Working Paper*, Columbia University. Available from http://www.columbia.edu/~cj88/papers/century.pdf

Kaminskey, G. and Reinhart, C. (1999), "The Twin Crises: the Causes of Banking and Balance-of-Payments Problems," *American Economic Review*, Vol. 89, No. 3, pp. 473-500.

Kaminsky, G. L. and Schmukler, S. L. (2007), "Short-Run Pain, Long-Run Gain: Financial Liberalization and Stock Market Cycles*": Geoge Washington University Working Paper*, Washigton, DC.

Kassimatis, K. (2002), "Financial Liberalization and Stock Market Volatility in Selected Developing Countries," *Applied Financial Economics*, Vol. 12, No. 6, pp. 389-394.

Kavajecz, K. A. (1999) "The Specialist's Quoted Depth and the Limit Order Book," *Journal of Financial planning.*

Kawakatsu, H., and Morey, H. (1999), "Financial Liberalization and Stock Market Efficiency: An Empirical Examination of Nine Emerging Market Countries", *Journal of Multinational Financial Management,* Vol. 9, pp. 353-371.

King, R. and Levine, R. (1993), "Finance and Growth: Schumpeter Might be Right", *Quarterly Journal of Economics*, Vol. 108, pp. 25-66.

Koutmos, G. (1992), Asymmetric Volatility and Risk Trade off in Foreign Stock Markets", *Journal of Multinational Financial Management,* Vol. 2, pp. 27-42.

Krugman, P. (1998), "Asia: What Went Wrong" *Furtune*, 2nd March 1998.

Krugman, P. (1995), "Bubble, Boom, Crash: Theoretical Notes on Asia's Crisis*" MIT Working Paper*, Cambridge, Massachausetts.

Kumar, S.M. (1984), *Growth, Acquisition, and Investment:* Cambridge: Cambridge University Press.

Kwan, B. F. and Reyes, M. G. (1997), "Price Effects of Stock Market Liberalization in Taiwan" *The Quarterly Review of Economics and Finance*, Vol. 37, pp. 511-22.

Kyle, A. S. (1985), "Continuous Auctions and Insider Trading", *Econometrica*,Vol. 53, pp.1315-1336.

La Porta, R., Florencio, L. and Shleifer, A. (2003), "What Works in Securities Laws?" *National Bureau of Economic Research (NBER) Working paper* No. 9882, Boston.

La Porta, R., Lopez-de-Silanes, F. Shleifer, A. and Vishny, R. (2002), "Investor Protection and Corporate Valuation", *Journal of Finance*, Vol. 57, pp. 1147-70.

Lallchand, J. (2001), " Capital Markets Development in Sub-Saharan Africa: A case of Mauritius," *PhD Thesis*, Cambridge: University of Cambridge.

LaPorter, R., Lopez-de-Silanes, F. Shleifer, A. and Vishney R. W. (1998), "Law and Finance," *Journal of Political Economy*, Vol. 106, No. 6, pp.1113-55.

LaPorter, R., Lopez-de-Silanes, F. Shleifer, A., and Vishney R. W. (1997), "Legal Determinants of External Finance*," Journal of Finance*, Vol. 54, pp. 471-517.

Levine, R. (2002), "Bank-Based or Market-Based Financial Sysytems: Which is Better?*" NBER Working Paper* No. 9138.

Levine, R. and King, R. G. (1993), "Finance and Growth: Schumpeter Might Be Right," *Quarterly Journal of Economics*, Vol. 108, pp. 717-38.

Levine, R. and Schmukler, S. (2006), "Internationalization and Stock Market Liquidity," *Review of Finance*, Vol. 10, No. 1, pp. 153-187.

Levine, R. and Zervos, S. (1996), "Stock Market development and long-Run Growth" *World Bank Economic Review*, Vol. 10 (2),pp.323-340.

Levine, R., and Zervos, S. (1998), "Stock Markets Banks and Economic Growth" *American Economic Review*, Vol. 88, pp.537-58.

Liliana, R. S. (2005), "Financial Regulations in Developing Countries: Can they Effectively Limit the Impact of Capital account Volatility?" *Center for Global Development Working Paper* No. 59. Available from *http://ssrn.com/abstract=997369*

Lo, A. W. (1997), *Market Efficiency: Stock Market Behavior in Theory and Practice*: Edward Elgar Publishing, Ltd., London.

Loayza, N. and Ranciere, R. (2004), " Financial Development, Financial Fragility, and Growth" *Journal of Money, Credit, and Banking*, Vol. 38, No. 4, pp. 1051-1076.

Lopez-de-Silances, F. (2004), "A Survey of Securities Laws and Enforcement," *Policy Research Working Paper* No. 3405, Washington: The World Bank.

Lucas, R. (1978), "Asset Prices in an Economy" *Econometrica*, Vol. 46, No. 6, pp. 1429-1445.

Lunde, A. and Timmermann, A. (2004), "Duration Dependence in Stock Prices: An Analysis of Bull and Bear Markets," *Journal of Business & Economic Statistics*, Vol. 22, No. 1, pp. 253-273.

Madhavan, A. (1992), "Trading Mechanisms in Securities Markets," *Journal of Finance*, Vol. 2, pp. 607-41.

Maheu, J. M. and McCurdy, T. H. (2000), "Identifying Bull and Bear Markets in Stock Returns," *Journal of Business & Economic Statistics*, Vol. 18, No. 1, pp. 100-130.

Mala, R. and White, M. (2006), "Assessment of an Emerging Stock Market: The Case for Fiji's Stock Market," *International Research Journal of Finance and Economics*. Available from http://www.eurojournals.com/finance.htm

Marsh, T. and Rock, K. (1986) "Exchange Listing and Liquidity: A Comparison of the American

Martell, R. and Stulz. (2003), "Equity Market Liberalization as Country IPOs," *Working Paper* No. 9481. Cambridge, Mass.: National Bureau of Economic Research.

MC Authur A.G. and Loveridge J.W. (1972), Economic Theory and Organisation; Collins and Glasgow, London.

McKinnon, R. I. (1973), Money and Capital in Economic Development, Washington, D.C.: The brookings Institutions.

McKinnon, R. and Pill, H. (1997), "Credible Economic Liberalization and Overborrowing," *American Economic Review*, Vol. 87, No. 2, pp. 189-193.

Merton, R. C., and Bodie, Z., (2004), " The Design of Financial Systems: Towards a Synthesis of Function and Structure," *Harvard Business School Working Paper* No. 02-074.

Michayluk, D. and Kofman, P. (2001), "Liquidity, Market Structure and Stock Splits", *School of Banking and Finance Journal*, University of New South Wales, Sydney, Australia.

Mishkin, F. (2003), " Financial Policies and the Prevention of Financial Crises in Emerging Market Countries," in: M. Feldstein, *Economic and Financial Crises in Emerging market Countries*, University of Chicago press, Chicago, pp. 93-130.

Michayluk, D., and Kofman, P. (2001) "Liquidity, Market Structure, and Stock Splits" *Journal of Economics*.

Moss, T. (2003), *Adventure Capitalism: Globalization and the Political Economy of Stock Markets in Africa:* London: Palgrave Macmillan.

Morck, R. and Yeung (2002), "The Puzzle of the Harmonius Stock Prices," *World Economics*, Vol. 3 No. 3.

Muranga, J. and Shamizu, T. (1999), "Market Microstructure and Market Liquidity", Bank of Japan, Mimeo.

Mutenheri, E. and Green, C.J. (2003), "Financial Reform and Financing Decisions of Listed Firms in Zimbabwe," *Journal of African Business*, Vol. 4 (2), pp.155-170.

Ngugi, R.W. Murinde, V. and Green, C. (2003) "How have the emerging Stock Exchanges in Africa Respond to Market Reform?" *Journal of African Business* Vol. 4, No. 2, pp. 89-127.

Nnanna O.J (2005), "Financial Sector Development and Economic Growth in Nigeria: An Empirical Investigation", *Central Bank of Nigeria Economic and Financial Review* Vol. 42 No. 3.

O'Hara, M. (1995), *Market Microstructure Theory*: Basil Blackwell, Cambridge, USA.

O'Hara, M. (2004), "Liquidity and Financial Market Stability" *NBB Working Paper*, No. 55.

Obstfeld, M. and Rogoff, K. (2000), " The Six Major Puzzles in International Macroeconomics: Is There a Common Cause?" *NBER Macroeconomics Annual*, Vol. 15, pp. 339-390.

Obstfeld, M. and taylor, A. (2004), *Global Capital markets: Integration, Crisis, and Growth*: Cambridge University Press, New York.

Odife D. O (1980), "Revitalizing the Capital Market to a Strong Financial Base", *a seminar on the Nigerian capital Market* organized by NSE.

Odife D. O (1986), Understanding the Nigerian Stock Market: Vintage Press, New York.

Odoko F.O (1998), "Internationalization of the Nigerian Capital Market: Lessons of Experience" In, The Capital Market and Nigeria's Economic Development. Proceedings of the one-day seminar held at the NIITA Lagos on January 21, 1998 by Nigerian Economic Society (NES).

Ogaki, M. Ostry, J. and Reinhart, C. (1996), "Saving Behavior in Low-and Middle-Income Developing Countries: A Comparism," *IMF Staff Papper*, Vol. 43, No.1, pp. 38-71.

Okereke N. O. (2004), "A Review of the Performance of the Nigerian Stock Exchange in

2004", *NSE Publication*.

Olayemi S. B. (1992), Factors Affecting Stock Prices in the Nigerian Stock Market**,** In, Alile and Osaretin (eds) Pricing of Securities and Replacement Cost under Deregulation, NSE/AFBS Ltd, Lagos.

Onosode G.O. (1998), "The Imperative of an Effective Capital Market" In, The Capital Market and Nigeria's Economic Development. Proceedings of the one-day seminar held at the NIITA Lagos on January 21, 1998 by Nigerian Economic Society (NES).

Ojah, K. and Karemera, D. (1999), "Random Walk and Market Efficiency Tests of Latin American Emerging Equity Markets: A Revisit" *The Financial Review*, Vol. 34, pp. 57-72.

Pagan, A. R. and Sossounov, K. A. (2003), " A Simple Framework for Analyzing Bull and Bear Markets" *Journal of Applied Econometrics*, Vol. 18, No.1, pp. 23-46.

Patro, K. and Wald, J. K. (2002), "Firms Characteristics and the Impact of Emerging Market Liberalizations", *Seminar Papper*, Department of Fianace and Economics, Rutgers Business School, Newark.

Perotti, E. and Oijen, P. (1999), "Privatization, Political Risk and Stock Market Development in Emerging Economies," University of Amsterdam. *CEPR Discussion paper 2243*, London: Centre for Economic Policy Research.

Pill, H. and Pradhan, M. (1997), "Financial Liberalization in Africa and Asia", Journal of fianace and Development, pp. 7-10.

Pirrong, C., (2000), “A Theory of Financial Exchange Organization,” *Journal of Law and Economics* No. 43, pp. 437-471.

Poterba, J. M. and Summers, L. H., (1988), “*Mean-Reversion in Stock Prices: Evidence and Implications,” Journal of Financial Economics*, Vol. 22, No. 1, pp. 7-59.

Prasad, E. Rogoff, K. Wei, S., and Kose, A. (2003), “The Effects of Financial Globalization on Developing Countries: Some Empirical Evidence,” *Occasional Paper No. 220*, International Monetary Fund.

Price, M. M. (1994), *Emerging Stock Markets: A Complete Investment Guide to New Market Around the World*: McGrow Hill, pp. 41-49.

Quinn, D. P. and Inclan, C. (1997),“The Origins of Financial Openness: A Study of Current and Capital Account Liberalization,” *American Journal of Political Science*, Vol. 41, pp.771-813.

Quinn, D. P. and Tayoda, A. M. (2003), “Does Capital Account Liberalization Lead to Economic Growth? An Empirical Investigation,” Mimeo, Georgetown University.

Rajan, R. G. and Zingales, L. (2003a), “The Great Reversals: The Politics of Financial Development in the Twentieth Century” *Journal of Financial Economics*, Vol. 69, No. 1, pp. 5-50.

Rajan, R. G. and Zingales, L. (2003b), *Saving Capitalism from the Capitalists*: Random House, New York.

Ramey, G. and Ramey , V. A. (1994), “Cross-Country Evidence on the Link Between Volatility and Growth,” *NBER Working paper* No. 4959.

Rodrik, D. (1998), “Who Needs Capital-Account Convertibility?,” *Essays in International Finance No. 207*, Department of Economics, Princeton University.

Ryden, B. (1995), “The Reform of the Stockholm Stock Exchange,” Stockholm Stock Exchange, November.

Sachs, J. and Warmer, A. M. (1995), “Economic Reforms and the Process of Global Integration”, *Brookings Paper on Economic Activity*, pp. 1-118.

Serieux, J. (2008), “Financial Liberalization and Domestic Resource Mobilization in Africa: An Assessment” *International Poverty Center Working Paper*, No. 45.

Shala, D. (1998), Understanding Capital Market and Secrets of Making Money on The Stock Exchange**:** Macmillan Ltd., London.

Shaw, E. (1973), *Financial Deepening in Economic Development*: New York: Oxford.

Shirai, S. (2004), "Impact of Financial and Capital Market Reforms on Corporate Finance in India," *Asia-Pacific Development Journal*, Vol. 11, No. 2, pp. 33-52.

Shliedfer, A. and Vishny, R. W. (1986), "Large Shareholders and Corporate Control*"* *Journal of Political Economy*, Vol. 94, pp. 461-88.

Singh, A. (1971), *Takeovers:Their Relevance to the Stock Market and the Theory of the Firm*, Cambridge: Cambridge University Press.

Singh, A. (1997), " The Stock market, Industrial Development and the Financing of Corporate Growth in India," In Nayyar, D., *Trade and Industrialization*, Oxford University Press , Delhi.

Singh, A. (1997), "Financial Liberalization, Stock Markets, and Economic Development," *The Economic Journal*, Vol. 107, pp. 771-782.

Singh, A. (1999), "Should Africa promote Stock market Capitalism?*"* *Journal of International Development*, Vol. 11, pp.343-365.

Singh, A. and Hamid, J. (1992), "Corporate Financial Structures in Developing Countries," *IFC Technical Paper*, No. 1, Washington DC: International Finance Corporation.

Spyrou, S. and Kassimatis, K. (1999), "Did Equity Market Volatility Increase Following the Opening of Emerging Markets to Foreign Investors*?"* *Journal of Economic Development*, Vol. 24, No. 1, pp.39-51.

Stapleton, R. and Subrahmanyam, M. (1977), "Market Imperfections, Capital Market Equilibrium, and Corporate Finance", *Journal of Finance*, Vol. 32, pp. 307-319.

Stiglitz, J. (2000),"Capital Market Liberalization, Economic Growth, and Instability" *World Development*, Vol. 28, No. 6, pp. 1075-1086.

Stiglitz, J. E. (1994), "The Role of the State in Financial Markets,"Proceedings of the World Bank Annual Conference on Development Economics 1993, Washigton D.C: The World Bank.

Stoll, H. (2000) "Friction", *Journal of Finance*, Vol. 55, pp.1479-1514

Stulz, R. (1999a), "Globalization of Capital Markets and the Cost of Capital*"* *Journal of Applied Corporate Finance*, Vol. 12, No. 3, pp. 8-25

Stulz, R. (1999b), "International Portfolio Flows and Security Markets*"* *Working Paper*, Dice Center for Financial Economics, The Ohio State University. .

Stulz, R. (2005), "The Limits of Financial Globalization (Presedential Address to the American Finance Association)," *Journal of Finance*, Vol. 60, No. 4, pp. 1595-1638.

Subrahmaniam, S. and Titman, S. (1999), "The Going Public Decision and the Development of Financial Markets", *Journal of Finance*, Vol. 54, pp. 1045-1082.

Taylor, L. (1983), Structuralist Macroeconomics: Applicable Models for the Third World, New York Books, Inc.

Taylor, L. and John, E. (2002), *International Capital Markets: Systems in Transition*, Oxford University Press, New York.

Tharavanij, P. (2007), "Capital Market Development, Frequency of Recession, and Fraction of Time the Economy in Recession," *MPRA Paper* No. 4954, Department of Economics, Monash University. Available From *http://mpra.ub.uni-muenchen.de/4954/*

Thorsten, B. Demirguc-Kunt, A. and Levine, R. (1999)," A New Database on Financial Development and Structure," *World Bank Working Paper* No. 2146, Washington.

Tornell, A. and Westermann, F. (2005), *Boom-Bust Cycles and Financial Liberalization*: IMT Press, Cambridge, Massachusetts.

Tornell, A. Westermann, F. and Martinez, L. (2003), "Liberalization, Growth and Financial Crises: Lesson from Mexico and the Developing World," *Brookings Papers on Economic Activity*, Vol. 2, pp. 1-88.

Torre, A. D. L. Gozzi, J. C. and Scmukler S. L. (2007), "Stock Market Development Under Globalization: Whither the Gains From Reforms," *The Policy Research Working Paper Series* No. 4184.

Tun W.U. and Hugh T. P. (1973), "Stock, and Bond Issue and Capital Markets in Less Developed Countries", *IMF Staff. Papers*, Vol. 20 No. 2, pp. 253- 317.

Urruitia, J. L. (1995), "Tests of Random Walk and Market Efficiency for Latin American Emerging Markets", *Journal of Financial Reseach*, Vol. 18, pp. 299-309.

Van Wijnbergen, S. (1983), "Interest Rate Management in LDC's," *Journal of Monetary Economics*, Vol. 109, No.1, pp. 83-109.

Vickers. and Jarrow, G. (1988), *Privatization: An Economic Analysis*: MIT Press, Cambridge, MA.

Vaidyanathan, G. (1993), "Consumption, Liquidity Constraints and Economic Development," *Journal of Macroeconomics*, Vol. 15, No. 3, pp. 591-610.

Vittas, D. (1998), " International Investors and Securities Markets: Which Comes First?" *World Bank Working Paper* No. 2032, Washington: The World Bank.

Williams, M. (2002), "Financial Deregulation and Volatility in Emerging Equity Markets" *Journal of Economic Development,* Vol. 27, No. 2, pp. 113-126.

Williamson, J. and Mahar, M. (1998), "A Survey of Financial Liberalization," *Essays in International Finance* No. 211, Department of Economics, Princeton University.

Wooldridge, J. (1999), "Distribution-Free Estimation of Some Nonlinear Panel Data Models," *Journal of Econometrics*, Vol. 90, pp. 77-79.

Wooldrige, J. M. (2002), *Econometric Analysis of Cross Section and Panel Data*: MIT Press.

World Bank Policy Research Report, (1997), "Private Capital Flows to Developing Countries".

World Bank, (2005), *World Development Report*: Oxford University Press, New York, NY.

Wu, Y. and Ray, S. C. (2005), "Technical Efficiency and Stock Market Reaction to Horizontal Mergers", *University of Connecticut Working pappers* available from http://www.eco.econ.uconn.edu/

Wunnava, P. V. Pardee, S. And Tswamuno, D. T. (2007), "Financial Liberalization and Economic Growth: Lessons From the South African Experience", *International Journal of Applied Economics*, Vol. 4, No. 2, September, 2007, pp. 75-89.

Yartey, C. A. (2005), "Stock market Development, Corporate Finance and Economic Growth in Africa". *PhD Thesis*, Cambridge: Faculty of Economics.

Yartey, C. A. (2006), "The Stock Market and the Financing of Corporate Growth in Africa: The case of Ghana," *IMF Working Paper* WP/06/201 International Monetary Fund Washington D.C.

Yartey, C. A. (2007a), "The Institutional and Macroeconomic Determinants of Stock Market Development in African,": in Okpara, J., "Management and Economic Development in Sub-Saharan Africa: Theoretical and Applied Perspectives," London: Adonis and Abbey.

Yartey, C. A. (2007b)," Well Developed Financial Intermediary Sector Promotes Stock Market Development: Evidence from Africa," *Journal of Emerging market Finance*.

Yartey, C.A. and Adjasi, C.K., (2007), "Stock Market Development in Sub-Saharan Africa: Critical Issues and Challenges"; *International Monetary Fund (IMF) Working Paper*, No. WP/07/209, Washington.

APPENDICES

SPSS PRINTOUT

- - - t-tests for paired samples - - -

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD	SE of Mean
PRVS				.2985	.540	.171
	10	.814	.004			
PSVS				79.3288	92.994	29.407

Paired Differences					
Mean	SD	SE of Mean	t-value	df	2-tail Sig
-79.0302	92.555	29.269	-2.70	9	.024
95% CI (-145.258, -12.802)					

- - - t-tests for paired samples - - -

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD	SE of Mean
PRVS				.2985	.540	.171
	10	.814	.004			
PSVS				79.3288	92.994	29.407

Paired Differences					
Mean	SD	SE of Mean	t-value	df	2-tail Sig
-79.0302	92.555	29.269	-2.70	9	.024
95% CI (-145.258, -12.802)					

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD	SE of Mean
PRMK				35.5591	52.465	16.591
	10	.924	.000			
PSMK				874.6202	795.310	251.499

Paired Differences					
Mean	SD	SE of Mean	t-value	df	2-tail Sig
-839.061	747.120	236.260	-3.55	9	.006
95% CI (-1373.66, -304.458)					

- - - t-tests for paired samples - - -

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD	SE of Mean
PRVS				.2985	.540	.171
	10	.814	.004			
PSVS				79.3288	92.994	29.407

Paired Differences Mean	SD	SE of Mean	t-value	df	2-tail Sig
-79.0302	92.555	29.269	-2.70	9	.024
95% CI (-145.258, -12.802)					

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD	SE of Mean
PRMK				35.5591	52.465	16.591
	10	.924	.000			
PSMK				874.6202	795.310	251.499

Paired Differences Mean	SD	SE of Mean	t-value	df	2-tail Sig
-839.061	747.120	236.260	-3.55	9	.006
95% CI (-1373.66, -304.458)					

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD	SE of Mean
PRLSEC				137.0000	33.226	10.507
	10	.906	.000			
PSLSEC				195.1000	10.137	3.206

Paired Differences Mean	SD	SE of Mean	t-value	df	2-tail Sig
-58.1000	24.415	7.721	-7.53	9	.000
95% CI (-75.570, -40.630)					

- - - t-tests for paired samples - - -

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD	SE of Mean
PRVS				.2985	.540	.171
	10	.814	.004			
PSVS				79.3288	92.994	29.407

```
          Paired Differences       ″
  Mean        SD       SE of Mean  ″      t-value     df  2-tail Sig
 ″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″
-79.0302      92.555     29.269    ″        -2.70      9      .024
 95% CI (-145.258, -12.802)       ″
```

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD	SE of Mean
PRMK				35.5591	52.465	16.591
	10	.924	.000			
PSMK				874.6202	795.310	251.499

```
          Paired Differences       ″
  Mean        SD       SE of Mean  ″      t-value     df  2-tail Sig
 ″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″
-839.061     747.120    236.260    ″        -3.55      9      .006
 95% CI (-1373.66, -304.458)      ″
```

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD	SE of Mean
PRLSEC				137.0000	33.226	10.507
	10	.906	.000			
PSLSEC				195.1000	10.137	3.206

```
          Paired Differences       ″
  Mean        SD       SE of Mean  ″      t-value     df  2-tail Sig
 ″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″
-58.1000      24.415      7.721    ″        -7.53      9      .000
 95% CI (-75.570, -40.630)        ″
```

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD	SE of Mean
PRSBF				100.7000	42.111	13.317
	10	.679	.031			
PSSBF				227.0000	43.356	13.710

```
          Paired Differences       ″
  Mean        SD       SE of Mean  ″      t-value     df  2-tail Sig
 ″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″″
-126.300      34.261     10.834    ″       -11.66      9      .000
 95% CI (-150.815, -101.785)      ″
```

- - Correlation Coefficients - -

	PRLSEC	PRMK	PRSBF	PRVS	PSLSEC	PSMK
PRLSEC	1.0000	.7301	.9734	.6555	.9065	.8917

	(10)	(10)	(10)	(10)	(10)	(10)
	P= .	P= .017	P= .000	P= .040	P= .000	P= .001
PRMK	.7301	1.0000	.7474	.9916	.8505	.9237
	(10)	(10)	(10)	(10)	(10)	(10)
	P= .017	P= .	P= .013	P= .000	P= .002	P= .000
PRSBF	.9734	.7474	1.0000	.6891	.8540	.8688
	(10)	(10)	(10)	(10)	(10)	(10)
	P= .000	P= .013	P= .	P= .027	P= .002	P= .001
PRVS	.6555	.9916	.6891	1.0000	.7920	.8687
	(10)	(10)	(10)	(10)	(10)	(10)
	P= .040	P= .000	P= .027	P= .	P= .006	P= .001
PSLSEC	.9065	.8505	.8540	.7920	1.0000	.9221
	(10)	(10)	(10)	(10)	(10)	(10)
	P= .000	P= .002	P= .002	P= .006	P= .	P= .000
PSMK	.8917	.9237	.8688	.8687	.9221	1.0000
	(10)	(10)	(10)	(10)	(10)	(10)
	P= .001	P= .000	P= .001	P= .001	P= .000	P= .
PSSBF	.6369	.8816	.6790	.8777	.7546	.7798
	(10)	(10)	(10)	(10)	(10)	(10)
	P= .048	P= .001	P= .031	P= .001	P= .012	P= .008
PSVS	.8754	.8799	.8425	.8143	.9113	.9888
	(10)	(10)	(10)	(10)	(10)	(10)
	P= .001	P= .001	P= .002	P= .004	P= .000	P= .000

(Coefficient / (Cases) / 2-tailed Significance)

" . " is printed if a coefficient cannot be computed

	PSSBF	PSVS
PRLSEC	.6369	.8754
	(10)	(10)
	P= .048	P= .001
PRMK	.8816	.8799
	(10)	(10)
	P= .001	P= .001
PRSBF	.6790	.8425
	(10)	(10)
	P= .031	P= .002
PRVS	.8777	.8143
	(10)	(10)
	P= .001	P= .004
PSLSEC	.7546	.9113
	(10)	(10)
	P= .012	P= .000
PSMK	.7798	.9888
	(10)	(10)

```
            P= .008    P= .000

PSSBF        1.0000      .7333
            (   10)    (   10)
            P= .       P= .016

PSVS          .7333     1.0000
            (   10)    (   10)
            P= .016    P= .
```

(Coefficient / (Cases) / 2-tailed Significance)

" . " is printed if a coefficient cannot be computed

- - - S P E A R M A N C O R R E L A T I O N C O E F F I C I E N T S - - -

```
PRMK          1.0000
            N(   10)
            Sig .000

PRSBF            .9878      .9878
            N(   10)   N(   10)
            Sig .000   Sig .000

PRVS             .9636      .9636      .9510
            N(   10)   N(   10)   N(   10)
            Sig .000   Sig .000   Sig .000

PSLSEC           .9265      .9265      .9006      .8406
            N(   10)   N(   10)   N(   10)   N(   10)
            Sig .000   Sig .000   Sig .000   Sig .002

PSMK             .9515      .9515      .9387      .9394      .9019
            N(   10)   N(   10)   N(   10)   N(   10)   N(   10)
            Sig .000   Sig .000   Sig .000   Sig .000   Sig .000

PSSBF            .8567      .8567      .8356      .7941      .7976
.7441
            N(   10)   N(   10)   N(   10)   N(   10)   N(   10)   N(
10)
            Sig .002   Sig .002   Sig .003   Sig .006   Sig .006   Sig
.014

PSVS           1.0000     1.0000      .9878      .9636      .9265
.9515
```

```
             N(   10)   N(   10)   N(   10)   N(   10)   N(   10)   N(
10)
             Sig .000   Sig .000   Sig .000   Sig .000   Sig .000   Sig
.000

               PRLSEC       PRMK      PRSBF       PRVS     PSLSEC
PSMK


PSVS            .8567
             N(   10)
             Sig .002

                PSSBF

(Coefficient / (Cases) / 2-tailed Significance)

" . " is printed if a coefficient cannot be computed
```