

**THE EFFECT OF GOVERNMENT BONDS ON CAPITAL MARKET
GROWTH IN KENYA**

ALFRED KIBET

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DECLARATION

This research project proposal is my original work and has never been presented for an award of diploma or a degree in this or any other university.

Signature..... Date.....

ALFRED KIBET

REG: D63/67330/2013

This research project has been submitted for examination with my approval as the University supervisor.

Signature..... Date.....

PROF. JOSIAH ADUDA

DEAN SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

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DEDICATION

I dedicate this research project to my sovereign Father in Heaven who makes all things possible. I further dedicate the project to the people who always encouraged me to push on despite the many challenges; my lovely parents Mr. and Mrs. Maina. I am also grateful to my siblings for their continued support and constant encouragement.

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LIST OF ABBREVIATIONS

| | |
|----------------|-------------------------------------|
| CBK | Central Bank of Kenya |
| CMA | Capital Markets Authority |
| EMH | Efficient Markets Hypothesis |
| GDP | Gross Domestic Product |
| GNP | Gross National Product |
| KNBS | Kenya National Bureau of Statistics |
| NSE | Nairobi Securities Exchange |
| T-BILLS | Treasury Bills |
| TFA | Total Financial Assets |
| UK | United Kingdom |
| USA | United States of America |

ABSTRACT

Interest in the relationship between the real and the financial sector has usually been on the banking sector and the stock markets, thus mostly leaving the Bond Markets out as a third essential source of external finance. The capital markets play important roles in the economic growth of a country. The role of public debt in promoting economic growth in Kenya has been the subject of much debate among economists, development specialists and researchers. In spite of this, there are only few empirical studies that investigate the contributions of public debt and in this case, the issuance of Treasury/ Government bonds to capital market growth in Kenya. This gap is filled by providing empirical evidence to establish the relationship between the capital market growth (represented by market capitalization) and issuance of Government Bonds in Kenya. This study explores the relationship between issuance and performance of Treasury/ Government bonds and capital market growth in Kenya using data that spans from the year 2004 to the year 2014 and establishing through causal study if changes in one variable cause changes in the other. The time series data is on market capitalization, market capitalization of bonds, value of bonds traded and total new issues of bonds. Regression analysis is used to analyze the data used in this study. The results show that the issuance of Government bonds has a positive effect on the level of capital market growth in Kenya. The findings imply that Kenya could enhance its capital market growth by effectively and strategically strengthening the Bonds market and the uptake of Government Bonds. The conclusion of the study is that the supply-leading hypothesis of capital market growth prevailed in Kenya during the period under study from 2004 to 2014. It is recommended therefore that the regulatory authority should initiate policies that would encourage more companies to access the market and also be more proactive in their surveillance role in order to check sharp practices which undermine market integrity and erode investors' confidence.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Capital markets are markets for trading long term financial securities, including ordinary shares, long term debt securities such as debentures, unsecured loan stock and convertible bonds. Government bonds and other public sector securities such as Treasury bills and gilt-edged stocks are also traded on capital markets. Capital market plays an important role in the economic development of a country (Kenya). It is the link between savers and investors in an economy as they provide an institutional mechanism for mobilizing domestic savings and efficiently channeling them into productive investments, they lower the cost of capital to investors and accelerate economic growth of the country. Financial intermediation between borrowers and savers is done by commercial banks.

The bond market forms part of the capital markets whose theories are the Efficient Market Hypothesis (EMH) and Modern Portfolio theory (MPT). Efficient Market Hypothesis of financial economics states that the prices reflect all relevant information that is available about the intrinsic value of the asset. According to Reilly and Brown (2006) an efficient capital market is one in which security prices adjust rapidly to the arrival of new information and, therefore the current prices of securities reflect all information about the security. Modern Portfolio Theory (MPT) also called portfolio theory or portfolio management theory on the other hand is sophisticated investment approach/strategy and is the philosophical opposite of traditional stock picking (Shefrin, 2001). It is the creation of economists who try to understand the market as a whole, rather than business analysts who look for what makes each investment opportunity unique.

Investments are described statistically in terms of their expected long-term return rate and their expected short-term volatility. The volatility is equated with risk, measuring how much worse than average an investment's bad years are likely to be. The goal is to identify the acceptable level of risk tolerance and then to find a portfolio with the maximum expected return for that level of risk.

The structure of a global capital market has three components which are primary capital market, secondary market, and the derivative market. The capital market enables investors to make effective investment choices which suit their own preferences of risk and returns based on available information. (Aduda, Masila, & Onsongo, 2012) As such, capital markets help the economy to generate more savings and productive investments in Kenya. Throughout the first three years of independence in 1963, the stock market experienced steady growth, rekindling confidence in the market.

However nine years later growth of the market halted when the oil crisis introduced inflationary pressures in the economy that depressed the shares. It is for this reason that the government realized the need to design and implement policy reforms to foster sustainable economic development supported by an efficient and stable financial system. In order for the capital market to achieve its vision which is to realize its vast potential and attain its vision “To be the leading securities exchange in Africa with a global reach” (The NSE website) the government of Kenya had to create an enabling environment conducive for the growth and development of the country’s capital markets by formation of The Capital Markets Authority (CMA) in 1989.

1.1.1 Government Bonds

Government Bonds or Treasury Bonds are medium to long term Government Securities while Treasury bills are short-term Government securities, in the case of Kenya both sold by the CBK on behalf of Treasury (<http://www.centralbank.go.ke/securities/default.aspx>). Government Bonds form part of the Capital Markets which together with Money Markets constitute the financial market. The Capital Market consists of institutions and procedures that provide for transactions in long term financial instruments with a maturity of more than one year. The major instruments that are used in raising funds in the Kenya Capital Market include Debts -Government bonds (Central and Local Governments), Debentures, preference stocks, and Equities – ordinary shares. Instruments classified as Debt securities are generally referred to as bonds because of their fixed income characteristics except for preference stock which is a hybrid instrument. A bond is a certificate of indebtedness issued by a borrower to a lender. Therefore investors in bonds are essentially lending money to the issuer. The bond market is the channel through which government and corporations that need to borrow money are matched with investors who have funds to lend.

1.1.2. Capital Market Growth

Capital market development is an important component of financial sector development and supplements the role of the banking system in economic development. Specifically, capital markets assists in price discovery, liquidity provision, reduction in transactions costs, and risk transfer. They reduce information cost through generation and dissemination of information on firms leading to efficient markets in which prices incorporate all available information Garcia and Liu (1999)].

Overall, stock markets provide market liquidity that enables implementation of long term projects with long term payoffs thereby promoting a country's economic growth endeavor. Moreover, efficient capital markets not only avail resources to investors, they also facilitate inflow of foreign financial resources into the domestic economy. Capital market development is determined by stock market liquidity and Institutional quality. Despite the role that capital market plays in the overall development of the economy, several challenges hamper its development.

Demirguc-knut and Levine (1993) provided a dichotomy of stock market characteristics as comprising traditional characteristics; which include market capitalization, amount of new stock offerings, number of listed companies and turnover and institutional characteristics, which include regulation, information disclosure transparency rules and trading costs and finally asset pricing characteristic. Whether Government Bonds actually have an impact on capital market growth is an issue that is yet to be determined. This dichotomy provides a blue print of key areas which impinge in development of stock exchange. According to Kumar and Tsetsekos (1999) the differences between the emerging markets and developed market is based on the institutional set up. Demirguc-Kant and Levine (1996) observed that economics with strong information disclosed laws internationally accepted accounting standards and unrestricted international capital flow tend have more liquid markets.

1.1.3 Capital Market and Bond Market Development in Kenya

The capital market in Kenya is made up of stock market, bonds, development financial institutions, and pension funds. The Nairobi Securities Exchange was established in the 1920's by the British as an informal market for Europeans only. In 1954, the market was formalized through incorporation into a company.

In 1963, Africans were allowed to join and trade in the market. For many years, the market operated through the telephone with a weekly meeting at the Stanley Hotel. At the dawn of independence, stock market activity slumped due to uncertainty about the future of independent Kenya. However, after three years of calm and economic growth, confidence in the market was rekindled and the exchange handled a number of highly over-subscribed public issues. The growth was, however, halted when the oil crisis of 1972 introduced inflationary pressures on the economy which depressed share prices. A 35% capital gains tax introduced in 1975 (suspended since 1985) inflicted further losses to the exchange. The bourse lost its regional character following the nationalizations, exchange controls and other inter-territorial restrictions introduced in neighboring Tanzania and Uganda. For instance, in 1976 Uganda compulsorily acquired a number of companies which were either quoted, or were subsidiaries of companies quoted on the Nairobi Securities Exchange.

In the 1980s the Kenyan Government realized the need to design and implement policy reforms to foster sustainable economic development with an efficient and stable financial system. In particular, it set out to enhance the role of the private sector in the economy, reduce the demands of public enterprises on the exchequer, rationalize the operations of the public enterprise sector to broaden the base of ownership and enhance capital market development. In 1984 an IFC/CBK study, "Development of Money and capital Markets in Kenya", became a blueprint for structural reforms in the financial markets, culminating in the formation of a regulatory body- The Capital Markets Authority (CMA) in 1989, to assist in the creation of an environment conducive to the growth and development of the country's capital markets.

The NSE was registered under the Companies Act in 1991 and phased out the “call over” trading system in favor of the floor- based “open Outcry System”. Subsequently the stock exchange embarked on an extensive modernization exercise, including a move to more spacious premises at the Nation Centre in July 1994. The facilities included a modern information centre. The improvement of market infrastructure through the development of an automated central clearing settlement and depository system (CDS) intended to serve the East African region. With the incorporation of the central Depository & settlement corporation, share trading became electronic via the Central Depository System. This contributed to increased turnover. The Electronic Trading System (ETS) recently implemented (2007) is also expected to increase turnover and efficiency at the bourse.

The Nairobi Securities Exchange has played an increasingly important role in the Kenyan economy, especially in the privatization of state- owned enterprises. In the last ten years, nine public enterprises have been successfully privatized through the NSE where the government has raised billions of shillings. The privatization process started in 1988 when the government floated 7.5 million shares (20% equity) of the Kenya Commercial Bank. The issue was over- subscribed 2.3 times. Subsequent issues have also proved highly popular, with subscription rates as high as 400%. In the privatization of Kenya Airways, for example, the stock exchange enabled more than one hundred and ten thousand shareholders to acquire a stake in the airline, while the KenGen IPO saw over two hundred and fifty thousand new shareholders join the company register in 2006. While the stock market has been in existence since 1920s, it failed to pick the growth momentum and currently, the market has just above sixty listed firms which are less than what the country inherited at independence.

The NSE is in its 61st year as a bourse, having opened in 1954. Trading now is fully electronic, and in June 2013 the bourse ended a 60-year presence in Nairobi's central business district in favor of a new facility in the Westlands neighborhood. The NSE is currently host to 61 equities, 57 government bonds and 28 commercial ones, according to officials at the bourse.

Market capitalization as of early 2014 was \$21.52bn, and the goal is to boost the total to \$93.72bn by 2023. That would imply an increase in market capitalization from 50% of GDP currently to 70% of GDP in 2023, based on the projections of the Capital Markets Authority (CMA), market regulator and implementing body of the master plan for the sector. Total public debt stood at KSh2.37trn (\$27.02bn) as of August 2014, according to data from the Ministry of Finance as reported by Reuters.

There are two main domestically created indices that track Kenyan stocks. The NSE All Share Index is a market capitalization-weighted index of all equities, whereas the NSE 20 is a more exclusive measure of larger and more liquid counters. Members of this latter index are based on weighted market performance with factors including market capitalization and several liquidity measures. The All Share Index rose 44.05% in 2013, while the NSE 20 climbed 19.21%. Foreign investors have taken on an increased importance in providing liquidity on the NSE.

According to data from Standard Investment Bank, in the first two months of fiscal year 2013/14, which began in July 2013, foreign investors accounted for a majority of turnover. Foreign investment has been climbing steadily since bottoming out at 7.8% of total market capitalization in 2008, in the wake of post-election violence.

Treasury securities are debt financing instruments issued by the Government of Kenya through the Central Bank of Kenya as envisaged in section 4(A) (1) of the CBK Act (Cap 491), which is: “The Bank shall act as advisor to and as fiscal agent of the Government of Kenya” (<http://www.centralbank.go.ke/securities/default.aspx>).

The bonds market in Kenya trades in both the treasury and corporate bonds. Mbewa, Ngugi & Kithinji (2007) noted that although treasury bonds were introduced into the market in the early 1980s, the market faced various challenges that constrained its development.

Until 2001 when the government took a deliberate effort to shift domestic debt to long term instruments, government bonds maturities were short. Bonds market is an alternative vehicle for mobilizing finance for both the government and the private sector in financing long term projects such as housing and infrastructure development, in addition to financing government deficit. There is no model for determining prices of bonds.

1.2 Statement of the Problem

The primary purpose of a well-developed capital market is to provide cheaper, longer term finance to fund capital investments. Due to its positive influence on the development of an economic and financial system, and numerous advantages that a bond market provides, the development of a bond market remains critical to a country’s financial system and economy (Sprcic and Wilson, 2007).

The benefits range from: a new source of capital available for long-term investments; a lower cost of capital, compared to interest rates on bank loans; a reduced sensitivity of the economy to any crises in the banking sector; the creation of more competition for banks putting downward pressure on bank interest rates; the opportunity for

investors to invest in a wider range of assets with a range of risk profiles; the strengthening of a financial system by encouraging companies to show their financial information in a more transparent way; among others (Beck et al, 1999).

(Ochenge, 2014) cited Ngugi and Agoti (2004), who established that bond liquidity in Kenya is low however there is no study that we know of which comprehensively addresses the question of what impact does the liquidity especially the government bond market has to the capital market growth .In (2007) they also added that Kenyan bond market was inefficient after investigating the issue using a simple technique; price dispersion. Mwangi (2013) attempted to study the four determinants of liquidity in Kenyan government bonds; however his study only discussed the newly introduced benchmark bonds.

The research is written for government debt managers, central bank, capital market authority, portfolio managers and traders, investors and researchers interested in the facts and issues concerning the securities (government bonds) and how its effect the capital market. The government of Kenya has formulated The Capital Market Master Plan intended to ensure that the capital market is well positioned to support accelerated national economic growth, to bring reality to the vision for the financial sector, to leverage future opportunities from regional integration and to ensure the competitiveness of the Kenyan markets in an increasingly globalized environment as Kenya endeavors to be a hub for international financial services and the heart of capital markets financing on the African continent.

It is for this reason and importance of the capital market in fostering growth that the study seeks to find out the effect of the government bonds on the capital market growth in Kenya. The study sought to answer the following research question; what effect does the government bonds issuance have on capital market growth in Kenya?

1.3 Objectives of the study

1.3.1 General objective

To determine the impact of issuance of government bonds on the capital market growth .

1.3.2 Specific -objectives of the study

- i. To find out the level of volatility of the Kenyan government bonds market.
- ii. To determine the efficiency government bonds market in Kenya.

1.4 Value of the Study

Results from this study will be of interest to; government debt managers, central bank, capital market authority, portfolio managers and traders, investors and researchers. As agents of the taxpayer, government debt managers have an obligation to ensure that the government bonds market functions smoothly generally characterized by efficient and liquid markets. This will enable them to minimize both the costs and risk of borrowing the bond. Thus they would be interested to understand what actually drives liquidity and what policy options can be adopted to boost the bonds liquidity. They will also be eager to know the progress and efficacy of the reforms they have implemented to foster market efficiency thus economic growth as a whole. The central bank is also keen to have liquid government bonds market so as to help in their daily open market operations in the conduct of monetary policy.

The central bank would on the other hand wish to know the efficiency of the government bonds market as this will be useful ingredient to the pricing of new bonds

issues. The Capital Markets Authority would also be interested to in this financial market since it has a responsibility of ensuring a sound and fair functioning government securities market.

Portfolios mangers, investors and traders would also benefit from the results, especially the volatility-volume relationship which will provide more insights into the structure of the Kenyan government bonds market. Finally this study is a useful addition to the existing rare studies of the bonds market, especially from developing market.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter will deal with the review of theoretical framework and related literature with a specific emphasis on the impact of the government bonds on the capital market growth. The main goal for every developing country like Kenya is to have stable financial market. The bond market forms part of the capital markets whose theories are the Efficient Market Hypothesis (EMH) and Modern Portfolio theory (MPT).

2.2.1 Efficient Market Hypothesis (EMH)

Efficient Market Hypothesis of financial economics states that the prices reflect all relevant information that is available about the intrinsic value of the asset. According to Reilly and Brown (2006) an efficient capital market is one in which security prices adjust rapidly to the arrival of new information and, therefore the current prices of securities reflect all information about the security. This is referred to as an informationally efficient market meaning that one cannot consistently achieve returns in excess of average market returns on a risk adjusted basis, given the information publicly available at the time the investment is made. In relating the EMH to the economy and economic growth, deviations from efficiency may offer profit opportunities to better-informed traders at the expense of less-informed traders. However, deviations from informational efficiency would also result in a large cost that will be borne by all citizens, namely, inefficient resource allocation. In a capitalist economy, investments in real assets such as plant, equipment, and know-how are guided in large part by the prices of financial assets.

In this manner, capital market prices guide allocation of real resources. If markets were inefficient and securities commonly mispriced, then resources would be systematically misallocated. Corporations with overpriced securities will be able to obtain capital too cheaply and corporations with undervalued securities might forgo investment opportunities because the cost of raising capital will be too high. Therefore, inefficient capital markets would diminish one of the most potent benefits of a market economy.

There are three versions of the EMH: the weak, semi-strong, and strong forms of the hypothesis. The weak-form hypothesis asserts that stock prices already reflect all information that can be derived by examining market trading data such as the history of past prices, trading volume, or short interest. The semi-strong form hypothesis states that all publicly available information regarding the prospects of a firm already must be reflected in the stock price. Finally, the strong-form version of the efficient market hypothesis states that stock prices reflect all information relevant to the firm, even including information available only to company insiders.

2.2.2 Modern Portfolio Theory

Although the benefits of diversification in reducing risk have been appreciated since the inception of financial markets, the first mathematical model for portfolio selection was formulated by Markowitz (1952, 1959). In 1951, Harry Markowitz ushered in the modern era of portfolio theory by applying simple mathematical ideas to the problem of formulating optimal investment portfolios. In the Markowitz portfolio selection model, the "return" on a portfolio is measured by the expected value of the random portfolio return, and the associated "risk" is quantified by the variance of the portfolio return.

Markowitz showed that, given either an upper bound on the risk that the investor is willing to take. He argued that single-minded pursuit of high returns constitutes a poor strategy, and suggested that rational investors must, instead, balance their desires for high returns and for low risk, as measured by variability of returns or take a lower bound on the return the investor is willing to accept, the optimal portfolio can be obtained by solving a convex quadratic programming problem.

This mean-variance model has had a profound impact on the economic modeling of financial markets and the pricing of assets - the Capital Asset Pricing Model (CAPM) developed primarily by (Litner, 1965; Mossin, 1966; Sharpe, 1964) was an immediate logical consequence of the Markowitz theory. In 1990, Sharpe and Markowitz shared the Nobel Memorial Prize in Economic Sciences for their work on portfolio allocation and asset pricing. In the financial theory tradition, portfolios are used to achieve an optimal mix of risk and return (Markowitz, 1952). The typical portfolio matrix attempts diversification across certain variables in order to minimize the earnings variability at a given earnings level.

Modern Portfolio Theory (MPT) also called portfolio theory or portfolio management theory is sophisticated investment approach/strategy and is the philosophical opposite of traditional stock picking (Shefrin, 2001). It is the creation of economists who try to understand the market as a whole, rather than business analysts who look for what makes each investment opportunity unique. Investments are described statistically in terms of their expected long-term return rate and their expected short-term volatility. The goal is to identify the acceptable level of risk tolerance and then to find a portfolio with the maximum expected return for that level of risk.

The key tenet of Modern portfolio theory therefore is that if one wishes to increase the performance and reduce the risk in an overall investment portfolio, he or she should combine investments that are non-correlated with one another (Thaler and Shefrin, 1981). Simply put a diversified portfolio of non-correlated investments can provide the highest returns with the least amount of volatility given that the risk of loss in futures trading can be substantial and an investor could potentially lose more than the initial investment.

2.3 Determinants of Capital Market Growth

Despite the role that capital market plays in the overall development of the economy, several challenges hamper its development. Demirguc-knut and Levine (1993) provided a dichotomy of stock market characteristics as comprising traditional characteristics; which include market capitalization, amount of new stock offerings, number of listed companies and turnover and institutional characteristics, which include regulation, information disclosure transparency rules and trading costs and finally asset pricing characteristic. This dichotomy provides a blue print of key areas which impinge in development of stock exchange.

According to Kumar and Tsetsekos (1999) the differences between the emerging markets and developed market is based on the institutional set up. Demirguc-Kant and Levine (1996) observed that economics with strong information disclosed laws internationally accepted accounting standards and unrestricted international capital flow tend have more liquid markets. Developing markets are characterized as having a low level of liquidity, high information asymmetry and thin trading because of their weak institutional infrastructure. The emerging markets are directly influenced by macroeconomic conditions (Madhavan, 1992).

Kim and signal (2000) made a general observation that high volatility of stock prices in emerging markets makes investors more averse to hold stocks and lead them to demand a high risk premium, thus increasing the cost of capital. There are critical building blocks necessary for a thriving securities market; macroeconomic and fiscal environment conducive to the supply of good quality securities and sufficient demand for them and a market infrastructure capable of supporting operation of securities market (Pardy, 1992).

According to Osei (1998) the macroeconomic environment seems very important for foreign investors, that if more foreign investors are expected to play an active role in emerging stock market, then serious attempts should be made to reduce Inflation and rapidly depreciating currency so that their capital base not eroded. Mbaru (2003) argue that the high interest rates that have been rising because of domestic borrowing have caused many investors to liquidate their equities in preferences for high yielding government papers. Differences in effective tax rates on income from different financial Instruments can influence how investors make their financial and investment decisions (Osei, 1998).

He argues that differences also determine whether an individual should invest in securities or whether a corporate body should raise funds though equity or debt instruments. Therefore high tax rates may discourage investors from investing in financial instruments. The political environment and particularly political stability is also crucial to the development of emerging stock markets. Mbaru (2003) opines that political stability reduces the chances of unexpected violent upheavals that threaten Investments and life and this guarantees safety nets for investments.

Instability on the other hand discourages foreign investments in the stock market, which is a characteristic of many emerging economies. In a study by Muyundo and Kibua (2004) a coordinated, consistent and predictable policy must be maintained to enhance the development of the stock market. Monetary policy also has an impact on capital market behavior. A useful explanation of the impact of monetary policy on capital market performance is offered by the monetary portfolio hypothesis, which predicts that a change in the money supply results into a change in the equilibrium position of money, in relation to other assets in the portfolio. Investors respond by adjusting the proportion of the asset portfolio held in money balances.

However, because all money balances must be held, the system does not adjust until changes in the prices of various assets lead to a new equilibrium. Fiscal policy also has a direct impact on capital market behavior. The impact of fiscal policy on capital market behavior tends to occur indirectly through transaction costs and directly through taxes. Brean (1996) notes that taxation and other government fees raise the new issue barriers by increasing the transaction costs for new listings in the stock market in South Africa.

In addition, discriminatory tax policies, including personal income taxes, tax on dividends, tax on firm profits as well as on different financial assets, render inefficient the mobilization of domestic savings through the capital market. Further, Amihud and Murgia (1997) shows that higher tax on dividends is a necessary condition for dividends to signal company value. Green, Maggioni and Murinde (2000) find that stamp duty and other tax measures tend to increase transaction costs and thus serve the purpose of 'throwing sand in the wheels' of the stock market.

Mbaru (1998) explains in detail the aspect of globalization in capital markets. In his speech, he shows how globalization of capital markets has affected the Nairobi Securities Exchange. According to him, globalization of financial markets means the lowering of national boundaries as barriers to the movement of money around the world. Globalization has made it possible for investors to move vast sums of capital across boundaries at minimal transaction costs and at high speed through electronic devices, thanks to the increased sophistication in the information technology that has gradually formed the universe into a global village. In Kenya, for example, participation by foreign investors constituted 60% of market turnover by the last quarter of 1997.

The improved liquidity of stock exchanges further enhances their appeal to investors. Secondly, globalization has awakened African stock exchanges to the necessity of enhancing their standards and infrastructure, Kenya being no exception. Investors will generally have a preference for exchanges where they can transact business fast enough, obtain timely and adequate information and where there are efficient qualified personnel. Where these assets are not in place capital will move out quickly to more enabling markets. A case already in point is that of the “tiger world miracle economies” crisis.

Globalization is, therefore, increasingly forcing the NSE to improve its markets’ infrastructure if it is to be competitive. Enhancing market infrastructure includes introducing automated Central Depository and Settlement System (CDS). Again, the spillover effect cannot be overlooked. With globalization of the capital markets, the NSE is expected to reap from inflow of ideas and this to spill over to the rest of the economy leading to the more endeared goal of balanced growth.

Thirdly, to the extent that it may be regarded as an offshoot of globalization, the regionalization of stock exchanges will confer further advantages to the Stock Exchange and the Kenyan economy in general. When the East African Stock Exchanges are fully integrated, hopefully in the next few years, we anticipate a number of advantages. Firstly, through cross-border listing in which foreign firms are listed on African local exchanges, shareholders will benefit from international profits by way of dividend. Shareholders will also be able to use foreign investment in the foreign company as a hedge to local currency.

Secondly, the NSE will also benefit from the listing of foreign firms on their local exchanges through facilitating the expansion of foreign companies which will create jobs, through increasing tax base of local revenue as listed companies will be taxed on local earnings and through increased foreign investments in Kenya as a result of venture capital raised offshore.

Finally, economies in Africa will benefit through the listing of their companies in foreign stock exchanges. Such listings will enable local firms to raise funds offshore, to expand and become more competitive. However, globalization also imposes considerable challenges on the NSE and the economy at large. Some of these challenges relate directly to stock the exchanges while others relate to the wider economic and political circumstances obtaining in African countries. At the stock exchange level, we must address several challenges before we can be globally competitive. Firstly, the NSE must increase its liquidity to date. Kenya's ability to mobilize capital and allocate risk is relatively poor.

The comparative statistics below are worth perusal; market capitalization figures in US \$ - Kenya (1,824 million), Thai (23,538 million), South Africa (232,069 million), Mauritius (1,665.1 million), Value traded ratios - Kenya (0.012), Mauritius (0.033), South Africa (0.34), Malaysia (1.64). To remedy this there must be; minimized restrictions on foreign participation beyond the 40% tag and development of an equity culture amongst local community for a wider investor base to quote but a few.

Besides liquidity African Stock Exchanges in general and NSE in particular, need to improve stock market regulation. Stock market regulation is principally aimed at investor protection and is therefore important as it affects investor confidence. It is encouraging to note that reforms in African financial markets have improved investor confidence. Thirdly, stock exchanges need to improve stock market operations and especially Clearing and Settlement procedures. Finally, the NSE needs to take measures to enable them contain systemic risks successfully. The increasing globalization of financial markets has brought increased risk that capital.

2.4 Review of empirical studies

Mbaru (2003) argues the key feature of a stock market is the speedy transfer of ownership. He pointed out that developing capital markets experience delays in the issue of transfer of securities. Banser-Neal and Dewenter (1999) contend that cost of trading play a major role in defining the investment strategies. This implies that the higher the cost of trading the lower the investor participation and it is expected that the cost of trading and conducting operation in emerging market is high. This is reinforced by Mbaru (2003) when he argues that investor generally have a preference to transact business fast, obtain timely and adequate information and at low cost.

Kimura and Amoro, (1999) argue that the major factor contributing to poor performance of the NSE is general lack of awareness and information on the role,

functions and operations of the stock exchange. For companies, the question is not so much lack of knowledge but a concern that the risks associated with additional disclosure are not adequately compensated by additional returns. In addition, banks tend to indirectly discourage the stock exchange as a means of raising capital since they play the dual role of being investment advisors as well as lenders. For the stock exchange itself, there is both inadequate marketing of itself as well as lack of a sufficient number of products to attract the investing public.

Fink, Haiss & Hristoforova (2003) examine long-term causal links between the development of bond markets and economic growth in USA, UK, Switzerland, Germany, Austria, the Netherlands and Spain. They draw on a relatively long observation period spanning 1950 to 2000. They describe bond markets using the volume of outstanding bonds, wherein all types of bonds (public sector bonds, corporate bonds, financial institution bonds) are considered.

Using the Granger Causality Test (Granger, 1969), the authors find results which point to the “Supply Leading Hypothesis” according to which the financial sector provides services via its institutions which promote real economic growth for Austria, Germany, Switzerland, the United Kingdom and the United States and to a weaker extent in the Netherlands and Spain. Evidence for the “Demand Following Hypothesis”, according to which real economic growth creates demand for services of the financial sector and thus contributes to its growth, was not found by the authors. They therefore conclude that real economic growth is fostered by the development of bond markets.

In a further analysis, Fink, Haiss & Hristoforova (2006) extend their bond-based examination by incorporating share market capitalization and credit volume to the private sector. Generally this study supports the “Supply Leading Hypothesis” wherein a development of the financial sector or of its individual segments has positive effects on economic growth. The authors find feedback relationships in which long-term equilibria between financial variables and economic growth exist, in Japan between the credit volumes to the private sector and economic growth, and in the Netherlands and Japan between stock market capitalization and economic growth.

Patara & and Yoonbai (2007) investigated the role of the bond market in economic growth. For the years 1989-2003, they employed the bond market data for 38 countries and the procedure that can better handle the econometric problems such as simultaneity, omitted variables or unobserved country-specific effects. They also considered simultaneously the three major financial instruments and markets: bank credits, bonds, and stocks. Their estimation results indicated that the development in the financial sector in general has a positive impact on economic growth. Both banking development and stock market development help promote economic growth.

However, in the case of the bond market, only government bonds are strongly positively related to growth while the effects of private bonds are positive but insignificant. Kimotho (2010) undertook a research project on the relationship between foreign direct investments and economic growth in Kenya covering the period between 2000 and 2009. He concluded that there was a strong and significant positive relationship between foreign direct investments and economic growth in Kenya. This positive relationship indicated that there was a direct proportionate relationship between foreign direct investments and economic growth.

Kanyingi (2011) carried out a research study that investigated the impact of financial deepening on economic growth in Kenya for the period between 1997 and 2010. His findings revealed that all financial deepening measures, that is, total domestic credit, money supply and domestic financial savings rose steadily from 1997 to 2010. The correlation analysis carried out in his study showed a strong relationship between economic growth and proxies of financial deepening. He concluded that financial deepening had a positive effect on economic growth.

Omoke (2010) undertook a study on the relationship between capital market development and economic growth in Kenya for the four years from 2004 to 2007. The findings of his study revealed that market capitalization, trading volume and change in stock market prices affect the GDP. His analysis showed strong positive relationship between GDP and change in stock market prices. His analysis further showed that the relationship between GDP, market capitalization and trading volume was a weak relationship. In his research study on the relationship between financial development and economic growth in Kenya, Ndigwa (2011) arrived at the conclusion that financial development stimulates economic growth in Kenya by a positive margin. The economic growth required investments from banks and mobilizations of financial assets.

2.5 Summary of the Literature

In comparison with bank loans and trade credits, which are the most important sources of external finance in Kenya, stocks and bonds play a less important role as financing instruments. Notwithstanding this assertion, a closer analysis of the financial markets shows that the aggregate bond market capitalization and particularly government bonds is as important as stock market capitalization.

Bonds as financial contracts combine some features of both bank credit and stocks, but exhibit differences with regard to transaction costs, liquidity, the level of information disclosure and cost, scale, marketability, investor type, borrower type and institutional setup. These product-related issues translate into the respective financing channels and the range of triggers for GDP growth. Hence the question at the core of this research study is “Can capital which is made available via the issue of government bonds cause capital market growth?”

A range of macro-level, industry level, market level and firm level factors influence the rate at which capital markets develop. Among others, some of the determinants have included: banking concentration; corporate governance and transparency; law and order; riskiness of investment environment; geographical/disease endowment environment; interest rate variability; size of an economy; the stage of economic development; the openness of an economy; the exchange rate variability, the size of the banking system; and interest rate variability.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1. Introduction

This chapter presents the methodology that will be used to carry out this study. The chapter describes the research design, population and sample, data collection and data analysis of the study.

3.2. Research Design

Dooley (2007) defines a research design as the scheme, outline or plan that is used to generate answers to research problems. The research design adopted is Correlational research design which attempts to determine the extent of a relationship between two or more variables using statistical data. In this type of design, relationships between and among a number of facts are sought and interpreted. This type of research recognizes trends and patterns in data, but it does not go so far in its analysis to prove causes for these observed patterns. Cause and effect is not the basis of this type of observational research.

The data, relationships, and distributions of variables are studied only. Variables are not manipulated; they are only identified and are studied as they occur in a natural setting. Sometimes correlational research is considered a type of descriptive research, and not as its own type of research, as no variables are manipulated in the study. This study aimed to measure performance of bonds and capital market growth to establish if bond market performance affects the capital market growth in Kenya.

3.3. Population and Sample

The target population for this study was all the government bonds issued in Kenya from 2004 to 2014 and the figures on the capital market growth in Kenya to be calculated as the percentage of GDP for the same period.

3.4. Data Collection

Secondary data was used in this study. The data on government bonds was obtained from the Nairobi Securities Exchange while the data on GDP was obtained from reports published by KNBS. Data obtained from NSE and KNBS is considered authentic and can therefore be relied upon for deriving conclusions. Both GDP and Government Bond data and capital market capitalization was captured for the last 11 years, from 2004 to 2014

3.5. Data Analysis

Descriptive and regression analyses were used to analyze the data, all in an effort to investigate the relationship between government bonds issue and capital market growth in Kenya. The variables for data collection was total new issues per year of government bonds in Kenya over a 11-year period from 2004 to 2014, value and turnover of bonds traded and capital market capitalization values over the same period. The guiding hypothesis for the purposes of testing the result of the analysis is given below: -

H₀: There is no significant relationship between performance of Kenyan Government Bond issues and capital market growth.

H₁: There is a significant relationship between performances of Kenyan Government Bond issues and capital market growth.

The hypothesis was tested using the Analysis of Variance (ANOVA) at 5% significance level. Regression analysis was used to evaluate the degree of relationship between the issuance and performance of governance bonds and capital market growth. Linear regression was applied to analyze the relationship between the independent and dependent variable to predict the score of the dependent variable

from the independent variable. The research used the Statistical Package for the Social Sciences (SPSS) version 21 to perform the various analyses.

The following multivariate regression model was used for the purpose of the analysis:-

$$Y = \beta_0 + \beta_1 \text{GMCR} + \beta_2 \text{VT} + \beta_3 \text{TNI} + \varepsilon$$

Where;

Y is the capital market growth calculated as the percentage of the GDP representing growth;

GMCR is the market capitalization of government bonds (the aggregate value of the tradable government bonds);

VT is the value traded (the total number of bonds traded multiplied by their respective matching prices);

TNI is the Total New Issues;

β_0 is the constant term;

β_1 to β_3 are the coefficients of each of the independent variables;

ε is the error term

CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION OF FINDINGS

4.1. Introduction

This chapter covers data analysis, interpretation and discussion of the research findings. The data is analyzed and presented in the form of tables and graphs. This chapter established whether there exists a relationship between performance of bonds issued by the Government of Kenya and capital market growth.

4.2. Capital Market Growth in Kenya.

Capital market growth in Kenya was measured by the yearly market capitalization as a percentage of Gross Domestic Product (GDP) as shown in table 1 below:-

Table 4.1: Market capitalization and GDP Figures

| Year | GDP at market prices (Ksh. Millions) | Yearly Market capitalization (Ksh .Millions) | Market Capitalization as A percentage of GDP |
|------|---|--|---|
| 2014 | 3,833,876.00 | 2,300,000 | 59.99 |
| 2013 | 3,639,938.00 | 1,921,000 | 52.78 |
| 2012 | 3,444,066.00 | 1,272,000 | 36.93 |
| 2011 | 3,294,026.20 | 868,000 | 28.70 |
| 2010 | 3,104,303.10 | 1,167,000 | 45.77 |
| 2009 | 2,366,984.20 | 832,000 | 35.15 |
| 2008 | 2,107,589.40 | 854,000 | 40.52 |
| 2007 | 1,825,960.00 | 851,000 | 46.61 |
| 2006 | 1,622,434.00 | 792,000 | 48.82 |
| 2005 | 1,415,200.00 | 462,000 | 32.65 |
| 2004 | 1,282,500.00 | 306,000 | 23.86 |

Source: Kenya National Bureau of Statistics, Facts and Figures (2006, 2009, 2012 & 2015) for GDP & NSE for Market capitalization.

The above data shows that the GDP figures of Kenya from 2004 to 2014 were increasing by small percentages. The GDP value has increased on average by about 13% over the 11 years with the highest increase being by 18.63% in 2011 and with a drop being seen in 2010 whereby the growth was by 7.7%. The GDP growth is further outlined in Figure 1 below.

Trend of GDP Growth in Kenya from 2004 to 2015

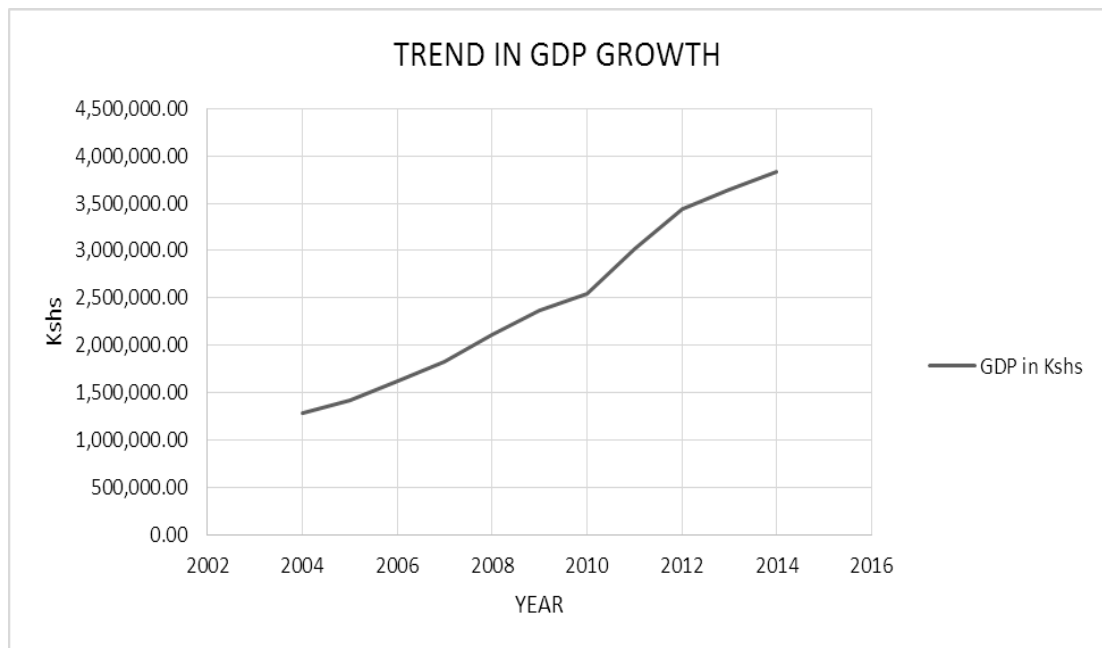


Figure 4.1: Trend in GDP Growth in Kenya

Trend of Capital Market Growth in Kenya from 2004 to 2015

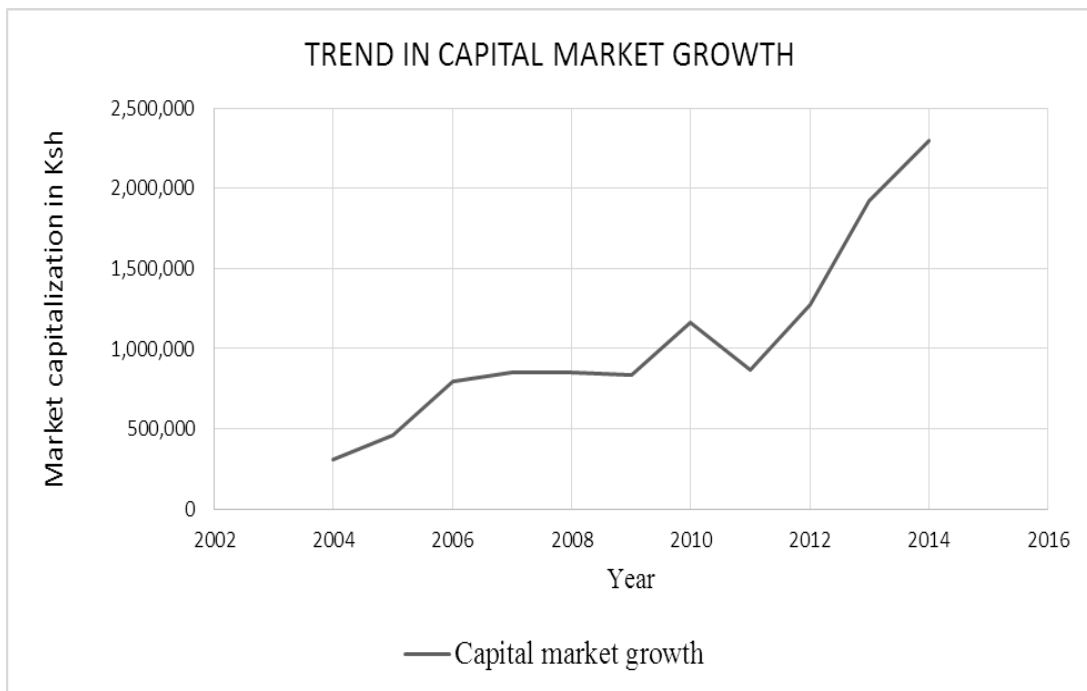


Figure 4.2: Trend in Capital Market Growth

4.3. Issuance of Government Bonds

The Government of Kenya issues Government Bonds or Treasury Bonds periodically and normally once a month through the Central Bank of Kenya. The total new issues, market capitalization and value traded of government bonds from the years 2004 to 2014 are as shown in table 2 below:-

Table 4.2: Government Bond Issues

| Year | Total New Issues | Market Capitalization (Ksh) | Value Traded (Ksh) |
|-------------|-------------------------|--|-------------------------------|
| 2014 | 34 | 3,824,291,250 | 504,280,000,000 |
| 2013 | 22 | 2,549,527,500 | 451,600,000,000 |
| 2012 | 22 | 1,830,685,000 | 563,800,000,000 |
| 2011 | 25 | 1,307,450,000.00 | 437,147,400,000.15 |
| 2010 | 13 | 160,000,000.00 | 466,900,000,000 |
| 2009 | 11 | 107,000,000.00 | 110,645,360,000.0 |
| 2008 | 9 | 913,000,000.00 | 95,362,630,817.0 |
| 2007 | 10 | 58,000,000.00 | 84,881,115,328.00 |
| 2006 | 10 | 37,000,000.00 | 48,574,860,000.0 |
| 2005 | 3 | 5,058,333.33 | 13,590,496,910.0 |
| 2004 | 5 | 14,414,000.00 | 34,111,640,955.0 |

Table 3 shows that the total number of government bonds issued in 2004 was 5 and the number had steadily increased after the year 2006. Within the study period, the highest number of bonds issued was in 2014 (34 new issues) while market capitalization was highest in 2014. The value of bonds traded has also increased from the year 2006 with the highest turnover having been experienced in the year 2012. The graphical trend of government bonds issue (market capitalization) from the years 2003 to 2011 is as shown in figure 4.3.2 below.

Government Bonds Issue (Market Capitalization) from 2004 to 2014

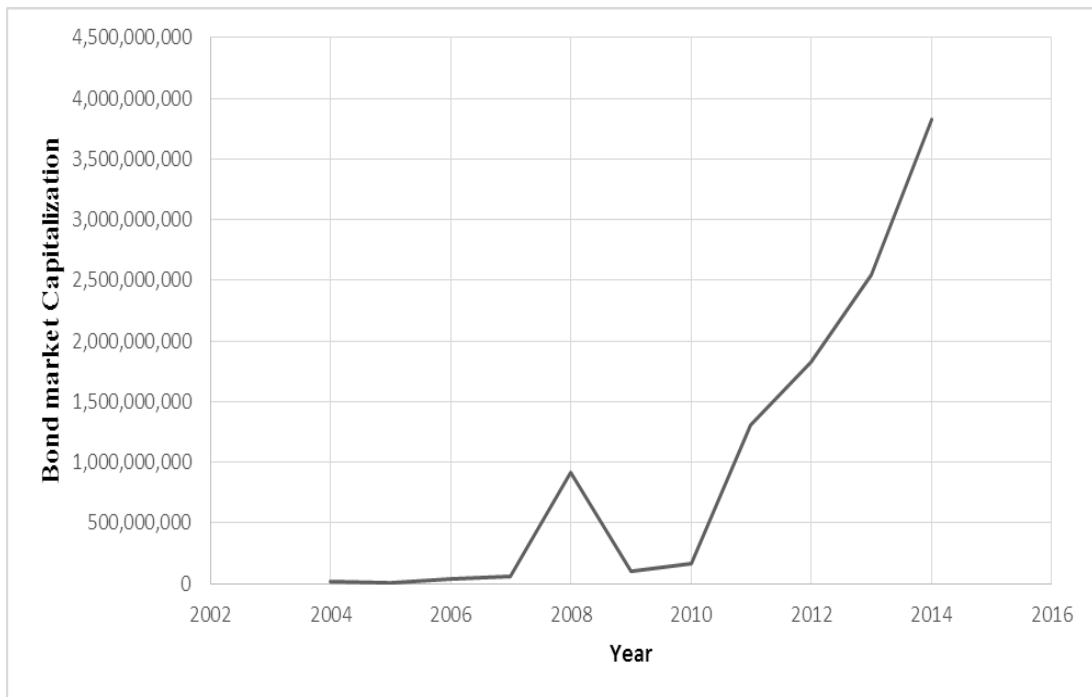


Figure 4.3: Government bonds Issue from 2004-2014

4.4. Testing of Hypothesis

The guided hypothesis for the purposes of testing the result of the analysis is given below: -

H₀: There is no significant relationship between performance of Kenyan Government Bond issues and Capital Market Growth.

H₁: There is a significant relationship between performance of Kenyan Government Bond issues and Capital Market Growth.

The hypothesis was tested using the Analysis of Variance (ANOVA) at 5% significance level. H₁ is accepted if F Statistics calculated is greater than F Statistics tabulated or the P Value (observed significance of F) is less than the alpha (0.05).

The H0 is accepted if the P Value is greater than alpha (0.05) thus indicating that there is no significant relationship between performance of Kenyan Government Bond issues and Capital Market Growth.

Variables for bonds issue and performance (New issues, Market Capitalization and Value Traded) and Market Capitalization were input into the Statistical Package for the Social Scientists (SPSS) spreadsheet and the Coefficient of Multiple Determination, R2 was computed. The result is shown in Tables below.

Table 4.3: Descriptive Statistics

Descriptive Statistics

| | Mean | Std. Deviation | N |
|---|-------------------|--------------------|----|
| Capital market growth calculated as the percentage of the GDP | 41.0709 | 10.86518 | 11 |
| market capitalization of government bonds | 982402371.2118 | 1282398255.27608 | 11 |
| Value traded | 255535773091.8318 | 223421124015.82956 | 11 |
| Total New Issues | 14.9091 | 9.53367 | 11 |

Table 4.4: Correlation Coefficient for the variables

| Correlations | | | | | |
|---------------------|---|---|---|--------------|------------------|
| | | capital market growth calculated as the percentage of the GDP | market capitalization of government bonds | value traded | Total New Issues |
| Pearson Correlation | capital market growth calculated as the percentage of the GDP | 1.000 | .563 | .359 | .495 |
| | market capitalization of government bonds | .563 | 1.000 | .734 | .904 |
| | value traded | .359 | .734 | 1.000 | .854 |
| | Total New Issues | .495 | .904 | .854 | 1.000 |
| Sig. (1-tailed) | capital market growth calculated as the percentage of the GDP | . | .036 | .139 | .061 |
| | market capitalization of government bonds | .036 | . | .005 | .000 |
| | value traded | .139 | .005 | . | .000 |
| | Total New Issues | .061 | .000 | .000 | . |

Table 4.5: Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .569 ^a | .524 | .034 | 10.68079 |

a. Predictors: (Constant), Total New Issues, value traded, market capitalization of government bonds

From the findings, coefficient of determination is 0.524, this implies 52.4% of capital market growth is explained by predictors of value of bonds traded, bond market capitalization and total new bond issues in the market.

Table 4.6: ANOVA

ANOVA^a

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|----|-------------|-------|--------------------|
| 1 | Regression | 381.966 | 3 | 127.322 | 1.116 | .0405 ^b |
| | Residual | 798.555 | 7 | 114.079 | | |
| | Total | 1180.520 | 10 | | | |

a. Dependent Variable: capital market growth calculated as the percentage of the GDP

b. Predictors: (Constant), Total New Issues, value traded, market capitalization of government bonds

At 5% significance level, the P Value (0.0405) is less than 0.05, therefore we reject the null hypothesis and accept the alternative hypothesis that there is a significant relationship between performance of Kenyan Government Bond issues and Capital Market Growth.

Table 4.7: Coefficients of the variables

Coefficients^a

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|---|-----------------------------|------------|---------------------------|-------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 36.518 | 8.301 | | 4.399 | .003 |
| | market capitalization of government bonds | 5.041E-009 | .000 | .595 | .808 | .446 |
| | value traded | -7.459E-012 | .000 | -.153 | -.253 | .808 |
| | Total New Issues | .101 | 1.096 | .089 | .092 | .929 |

a. Dependent Variable: capital market growth calculated as the percentage of the GDP

The model predicted by $Y = \beta_0 + \beta_1 \text{GMCR} + \beta_2 \text{VT} + \beta_3 \text{TNI} + \varepsilon$ is thus explained by

$$Y = 36.518 + 5.041E-009\text{GMCR} + -7.459E-012\text{VT} + .101\text{TNI}$$

Where;

Y is the GDP representing economic growth;

GMCR is the market capitalization of government bonds (the aggregate value of the tradable government bonds);

VT is the value traded (the total number of bonds traded multiplied by their respective matching prices);

TNI is the Total New Issues;

Graphical trend analysis for bond issue performance (value traded) and Capital Market Growth (Market Capitalization)

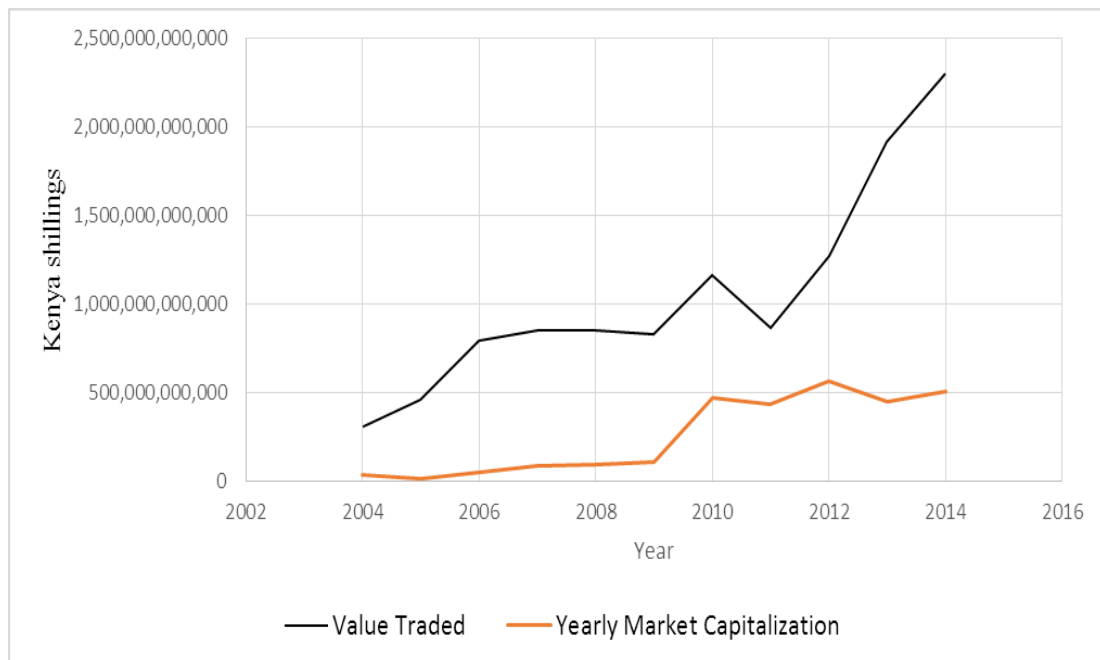


Figure 4.4: Graphical Trend Analysis

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Summary

This study has examined the impact of issuance of government bonds to the capital market growth in Kenya. The study explored the relationship between issuance of Treasury/ Government bonds and capital market growth in Kenya using data that spans from the year 2004 to the year 2014.

Regression analysis was performed on the time series data on capital market growth, market capitalization of bonds, value of bonds traded and total new issues of bonds. The results showed that the issuance of Government bonds has a positive effect on the level of capitalmarket growth in Kenya.

The results of the analysis supported the supply-leading hypothesis that development of the bond markets enhances capital market growth. The research constitutes a step towards the integration of the aggregate bond markets in the discussion on the finance-growth connection. The presented results are encouraging in unveiling the existence of causal relations between the fixed-income financial sector (government bonds) and the real sector (capital market growth), a path that has been largely neglected in favor of the extensive research on the role of the stock markets in promoting economic growth.

The findings imply that growth of capital market in Kenya was contributed by the issuance of government bonds. It is recommended therefore that the regulatory authority should initiate policies that would encourage more companies to access the bonds market as well as to make it easier for individual investors to trade in the bond market.

5.2. Conclusion

From the findings above, one can conclude that issuance of government bonds has had a strong positive effect on capital market. This paper has examined the impact of issuance of government bonds to the capital market growth in Kenya. From the findings above, one would conclude that based on the evidence from a sample period of 2004 to 2014, the supply-leading hypothesis of capital market growth prevailed in Kenya.

The results from regression analysis above show the summary of the effects of issuance and performance of government bonds on capital market growth. Using the number of new issues of government bonds, market capitalization and value traded as the indicators of government bonds performance and yearly market capitalization as an indicator of capital market growth, the coefficient obtained was positive indicating that positive performance of government bonds had a positive influence on capital market growth. This implies that government bonds issuance has promoted capital market growth in Kenya.

Capital market growth is dependent on other factors other than public debt and issuance of government bonds. However, the contribution of issuance of government bonds to the capital market growth cannot be ignored. The issuance and performance of government bonds has a positive contribution to the economic growth of a country. The empirical results obtained fulfilled the objective of this research and indicated that the issuance of government bonds has a strong positive contribution to the capital market growth of a country.

5.3. Policy Recommendations

In general, the evidence from the study suggests that policy makers in Kenya should encourage the issuance of more government bonds to the public and further to enhance the efficiency of the capital markets, both primary and secondary. This will in no doubt lead to the mobilization of more funds and have a positive effect on capital market growth.

Since the bond market motivates capital market growth, it is important that all stakeholders in the public and private sector as well as investors should engage and promote activities that will enhance the development of the bond market. Thus efficient markets through availability of information to the public should be a priority.

The private sector should be encouraged to invest in the capital market through educating and enlightening the public, using knowledgeable people and experts or professionals that are competent in stock market dealings.

The capital market should be made more liquid by improving the illiquidity status to make it more viable for small and individual investors to invest, and such improvements can contribute to economic growth.

The funds raised by government in the form of government securities in the capital market should be put into productive sectors of the economy that will necessitate to growth in all facets of the economy and also encourage investors who may be hesitant to invest without visible results.

The government should issue bonds in lower denominations to encourage the uptake by individual and small investors in volumes suitable to them. This will rally volumes due to large uptake which can contribute to capital market growth.

5.4. Recommendations for further study

The study was limited to issuance of government bonds for a period of 11 years. However, a longer term study of up to 15 years is recommended in order to see the results of the time series data over a longer period of time.

Secondly, a study on issuance of Corporate Bonds and the effect on the capital market growth is recommended for further study as this study covered only government/treasury bonds.

Thirdly, a further study on Treasury Bills and their effect on the capital market growth in the country is also recommended as this study did not cover the short-term debt instruments issued by the Government of Kenya.

5.5. Limitations of the Study

It should be noted that there were various limitations of this study. Firstly, obtaining data from the NSE was a challenge due to the cost involved as a result of the data vending services that were introduced. Secondly, all the data was collected from secondary sources and though all sources are reliable, any error in original data might not have been unavoidable. Thirdly, the study used time series data which means that all limitations of estimation and analysis of time series data apply to this study.

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APPENDICES

Appendix I: List of Government / Treasury Bonds issued from 2003 to 2012

| Issue Reopen date | Issue No | ISIN Number | Maturity date | Coupon Rate (%) | Redemption Yield (%) |
|--------------------------|----------------------|--------------------|----------------------|------------------------|-----------------------------|
| 3/24/2014 | FXD1/2014/2 | KE3000008902 | 3/21/2016 | 10.803 | 10.803 |
| 5/26/2014 | FXD2/2014/2 | KE3000009233 | 5/23/2016 | 10.793 | 10.793 |
| 7/28/2014 | FXD2/2014/2(R1) | KE3000009233 | 5/23/2016 | 10.793 | 10.764 |
| 12/22/2014 | FXD3/2014/2 | KE4000001325 | 12/19/2016 | 10.89 | 10.89 |
| 8/25/2014 | FXD2/2013/5 (R1) | KE2000006920 | 6/25/2018 | 11.305 | 11.126 |
| 4/28/2014 | FXD1/2014/5 | KE3000009013 | 4/22/2019 | 10.87 | 10.87 |
| 6/23/2014 | FXD2/2014/5 | KE3000009563 | 6/17/2019 | 11.934 | 11.934 |
| 6/30/2014 | FXD2/2014/5 (Tap 1) | KE3000009563 | 6/17/2019 | 11.934 | 11.934 |
| 1/27/2014 | FXD1/2014/10 | KE3000008890 | 1/15/2024 | 12.18 | 12.18 |
| 9/29/2014 | FXD1/2014/10 (R1) | KE3000008890 | 1/15/2024 | 12.18 | 12.296 |
| 11/24/2014 | FXD1/2010/15(R1) | KE1000001900 | 3/10/2025 | 10.25 | 12.422 |
| 2/24/2014 | FXD1/2013/15(R2) | KE2000005258 | 2/7/2028 | 11.25 | 12.375 |
| 12/22/2014 | FXD1/2013/15(R3) | KE2000005258 | 2/7/2028 | 11.25 | 12.766 |
| 6/23/2014 | FXD1/2012/20(R3) | KE2000002473 | 11/1/1932 | 12 | 13.357 |
| 6/30/2014 | FXD1/2012/20 (Tap 1) | KE2000002473 | 11/1/1932 | 12 | 13.357 |
| 8/25/2014 | SDB1/2011/30(R3) | KE2000002135 | 1/21/1941 | 12 | 13.775 |
| 9/1/2014 | SDB1/2011/30(Tap 1) | KE2000002135 | 1/21/1941 | 12 | 13.775 |
| 9/8/2014 | SDB1/2011/30(Tap 2) | KE2000002135 | 1/21/1941 | 12 | 13.775 |
| 9/15/2014 | SDB1/2011/30(Tap 3) | KE2000002135 | 1/21/1941 | 12 | 13.775 |
| 9/22/2014 | SDB1/2011/30(Tap 4) | KE2000002135 | 1/21/1941 | 12 | 13.775 |
| 9/29/2014 | SDB1/2011/30(Tap 5) | KE2000002135 | 1/21/1941 | 12 | 13.775 |
| 10/27/2014 | IFB1/2014/12 | KE4000001109 | 10/22/2018 | 11 | 11.263 |
| 11/3/2014 | IFB1/2014/12 (Tap 1) | KE4000001109 | 10/22/2018 | 11 | 11.263 |
| 11/10/2014 | IFB1/2014/12 (Tap 2) | KE4000001109 | 10/22/2018 | 11 | 11.263 |

| | | | | | |
|------------|----------------------|--------------|------------|--------|--------|
| 11/17/2014 | IFB1/2014/12 (Tap 3) | KE4000001109 | 10/22/2018 | 11 | 11.263 |
| 10/27/2014 | IFB1/2014/12 | KE4000001109 | 10/17/2022 | 11 | 11.263 |
| 11/3/2014 | IFB1/2014/12 (Tap 1) | KE4000001109 | 10/17/2022 | 11 | 11.263 |
| 11/10/2014 | IFB1/2014/12 (Tap 2) | KE4000001109 | 10/17/2022 | 11 | 11.263 |
| 11/17/2014 | IFB1/2014/12 (Tap 3) | KE4000001109 | 10/17/2022 | 11 | 11.263 |
| 10/27/2014 | IFB1/2014/12 | KE4000001109 | 10/12/2026 | 11 | 11.263 |
| 11/3/2014 | IFB1/2014/12 (Tap 1) | KE4000001109 | 10/12/2026 | 11 | 11.263 |
| 11/10/2014 | IFB1/2014/12 (Tap 2) | KE4000001109 | 10/12/2026 | 11 | 11.263 |
| 11/17/2014 | IFB1/2014/12 (Tap 3) | KE4000001109 | 10/12/2026 | 11 | 11.263 |
| 2/25/2013 | FXD1/2013/2 | KE2000005369 | 2/23/2015 | 12.844 | 12.844 |
| 3/25/2013 | FXD2/2013/2 | KE2000005476 | 3/23/2015 | 12.94 | 12.94 |
| 8/26/2013 | FXD3/2013/2 | KE2000007365 | 8/24/2015 | 12.939 | 12.939 |
| 12/23/2013 | FXD4/2013/2 | KE3000008452 | 12/21/2015 | 11.553 | 11.553 |
| 1/28/2013 | FXD1/2012/5 (R2) | KE2000002309 | 5/22/2017 | 11.855 | 12.791 |
| 4/29/2013 | FXD1/2013/5 | KE2000006704 | 4/23/2018 | 12.892 | 12.892 |
| 7/1/2013 | FXD2/2013/5 | KE2000006920 | 6/25/2018 | 11.305 | 11.305 |
| 11/25/2013 | FXD3/2013/5 | KE3000008344 | 11/19/2018 | 11.952 | 11.952 |
| 3/25/2013 | FXD1/2012/10(R2) | KE2000002368 | 6/13/2022 | 12.705 | 13.72 |
| 7/1/2013 | FXD1/2013/10 | KE2000006037 | 6/19/2023 | 12.371 | 12.371 |
| 8/26/2013 | FXD1/2013/10(R1) | KE2000006037 | 6/19/2023 | 12.371 | 12.371 |
| 2/25/2013 | FXD1/2013/15 | KE2000005258 | 2/7/2028 | 11.25 | 13.629 |
| 7/29/2013 | FXD1/2013/15(R1) | KE2000005258 | 2/7/2028 | 11.25 | 13.769 |
| 4/29/2013 | FXD2/2013/15 | KE2000006817 | 4/10/2028 | 12 | 13.661 |
| 1/28/2013 | FXD1/2012/20(R1) | KE2000002473 | 11/1/1932 | 12 | 13.694 |
| 5/27/2013 | FXD1/2012/20(R2) | KE2000002473 | 11/1/1932 | 12 | 12.981 |
| 9/30/2013 | IFB1/2013/12 | KE3000008130 | 9/25/2017 | 11 | 12.363 |
| 10/28/2013 | IFB1/2013/12 TAP | KE3000008130 | 9/25/2017 | 11 | 12.363 |
| 9/30/2013 | IFB1/2013/12 | KE3000008130 | 9/20/2021 | 11 | 12.363 |
| 10/28/2013 | IFB1/2013/12 TAP | KE3000008130 | 9/20/2021 | 11 | 12.363 |

| | | | | | |
|------------|----------------------|--------------|------------|--------|--------|
| 9/30/2013 | IFB1/2013/12 | KE3000008130 | 9/15/2025 | 11 | 12.363 |
| 10/28/2013 | IFB1/2013/12 TAP | KE3000008130 | 9/15/2025 | 11 | 12.363 |
| 1/30/2012 | FXD1/2012/1 | KE2000002283 | 1/28/2013 | 21.082 | 21.082 |
| 2/27/2012 | FXD2/2012/1 | KE2000002291 | 2/25/2013 | 18.03 | 18.03 |
| 3/26/2012 | FXD3/2012/1 | KE2000003216 | 3/25/2013 | 16.432 | 16.432 |
| 4/30/2012 | FXD1/2012/2 | KE2000003356 | 4/28/2014 | 13.826 | 13.826 |
| 8/27/2012 | FXD2/2012/2 | KE2000002414 | 8/25/2014 | 11.114 | 11.114 |
| 10/29/2012 | FXD3/2012/2 | KE2000002034 | 10/27/2014 | 12.496 | 12.496 |
| 12/24/2012 | FXD4/2012/2 | KE2000002693 | 12/22/2014 | 12.382 | 12.382 |
| 5/28/2012 | FXD1/2012/5 | KE2000002309 | 5/22/2017 | 11.855 | 11.855 |
| 7/30/2012 | FXD1/2012/5(R1) | KE2000002309 | 5/22/2017 | 11.855 | 13.548 |
| 6/25/2012 | FXD1/2012/10 | KE2000002368 | 6/13/2022 | 12.705 | 12.705 |
| 7/30/2012 | FXD1/2012/10(R1) | KE2000002368 | 6/13/2022 | 12.705 | 13.63 |
| 9/24/2012 | FXD1/2012/15 | KE2000002426 | 9/6/2027 | 11 | 12.089 |
| 11/26/2012 | FXD1/2012/20 | KE2000002473 | 11/1/1932 | 12 | 13.54 |
| 1/2/2012 | IFB1/2011/12 (Tap 3) | KE2000002242 | 9/28/2015 | 12 | 16.64 |
| 2/6/2012 | IFB1/2011/12 (Tap 4) | KE2000002242 | 9/28/2015 | 12 | 16.64 |
| 2/27/2012 | IFB1/2011/12 (Tap 5) | KE2000002242 | 9/28/2015 | 12 | 16.64 |
| 1/2/2012 | IFB1/2011/12 (Tap 3) | KE2000002242 | 9/23/2019 | 12 | 16.64 |
| 2/6/2012 | IFB1/2011/12 (Tap 4) | KE2000002242 | 9/23/2019 | 12 | 16.64 |
| 2/27/2012 | IFB1/2011/12 (Tap 5) | KE2000002242 | 9/23/2019 | 12 | 16.64 |
| 1/2/2012 | IFB1/2011/12 (Tap 3) | KE2000002242 | 9/18/2023 | 12 | 16.64 |
| 2/6/2012 | IFB1/2011/12 (Tap 4) | KE2000002242 | 9/18/2023 | 12 | 16.64 |
| 2/27/2012 | IFB1/2011/12 (Tap 5) | KE2000002242 | 9/18/2023 | 12 | 16.64 |
| 12/26/2011 | FXD1/2011/1 | KE2000002267 | 12/24/2012 | 21.41 | 21.408 |
| 12/5/2011 | IFB1/2011/12(Tap2) | KE2000002242 | 9/18/2023 | 12.00 | 16.64 |
| 11/28/2011 | FXD4/2011/2(TAP) | KE2000002259 | 11/25/2013 | 22.84 | 22.844 |
| 11/28/2011 | FXD4/2011/2 | KE2000002259 | 11/25/2013 | 22.84 | 22.844 |
| 10/31/2011 | FXD3/2011/2(R1) | KE2000002234 | 9/23/2013 | 10.50 | 16.526 |

| | | | | | |
|------------|-------------------|--------------|------------|-------|--------|
| 10/3/2011 | IFB1/2011/12 | KE2000002242 | 9/18/2023 | 12.00 | 16.64 |
| 9/26/2011 | FXD3/2011/2 | KE2000002234 | 9/23/2013 | 10.50 | 13.897 |
| 8/29/2011 | SDB1/2011/30(R2) | KE2000002135 | 1/21/2041 | 12.00 | 16.397 |
| 8/29/2011 | FXD2/2010/5(R2) | KE2000001228 | 11/23/2015 | 6.67 | 13.887 |
| 7/25/2011 | FXD2/2011/2(R3) | KE2000002150 | 4/22/2013 | 7.44 | 12.684 |
| 7/25/2011 | FXD2/2010/10(R2) | KE1000001998 | 10/19/2020 | 9.31 | 13.089 |
| 6/27/2011 | FXD2/2010/5(R1) | KE2000001228 | 11/23/2015 | 6.67 | 12.529 |
| 6/27/2011 | FXD2/2011/2(R2) | KE2000002150 | 4/22/2013 | 7.44 | 12.442 |
| 6/27/2011 | FXD1/2011/20(R1) | KE2000002176 | 5/5/2031 | 10.00 | 14.822 |
| 5/30/2011 | FXD2/2011/2(R1) | KE2000002150 | 4/22/2013 | 7.44 | 10.387 |
| 5/30/2011 | FXD1/2010/10 (R1) | KE1000001921 | 4/13/2020 | 8.79 | 12.531 |
| 5/30/2011 | FXD1/2011/20 | KE2000002176 | 5/5/2031 | 10.00 | 13.974 |
| 4/25/2011 | FXD2/2010/15(R1) | KE2000001558 | 12/8/2025 | 9.00 | 12.388 |
| 4/25/2011 | FXD2/2011/2 | KE2000002150 | 4/22/2013 | 7.44 | 7.439 |
| 3/28/2011 | FXD1/2011/5(R1) | KE2000001994 | 1/25/2016 | 7.64 | 8.501 |
| 3/28/2011 | SDB1/2011/30(R1) | KE2000002135 | 1/21/2041 | 12.00 | 13.52 |
| 2/28/2011 | SDB1/2011/30 | KE2000002135 | 1/21/2041 | 12.00 | 12.959 |
| 2/28/2011 | FXD1/2011/2 | KE2000001119 | 2/25/2013 | 5.28 | 5.284 |
| 1/31/2011 | FXD2/2010/10(R1) | KE1000001998 | 10/19/2020 | 9.31 | 9.683 |
| 1/31/2011 | FXD1/2011/5 | KE2000001994 | 1/25/2016 | 7.64 | 7.636 |
| 12/27/2010 | FXD4/2010/2 | KE2000001442 | 12/24/2012 | 4.59 | 4.586 |
| 12/27/2010 | FXD2/2010/15 | KE2000001558 | 12/8/2025 | 9.00 | 10.923 |
| 11/29/2010 | FXD2/2010/5 | KE2000001228 | 11/23/2015 | 6.67 | 6.671 |
| 11/1/2010 | FXD2/2010/10 | KE1000001998 | 10/19/2020 | 9.31 | 8.646 |
| 9/27/2010 | FXD3/2010/2 | KE1000001964 | 9/24/2012 | 3.81 | 3.698 |
| 8/30/2010 | IFB 2/2010/9 | KE1000001954 | 8/19/2019 | 6.00 | 7.293 |
| 7/26/2010 | FXD1/2010/25(R1) | KE1000001945 | 5/28/2035 | 11.25 | 9.839 |
| 6/28/2010 | FXD1/2010/25 | KE1000001945 | 5/28/2035 | 11.25 | 10.438 |
| 5/24/2010 | FXD1/2010/5 | KE1000001935 | 5/18/2015 | 6.95 | 6.829 |

| | | | | | |
|------------|------------------|--------------|------------|-------|--------|
| 4/26/2010 | FXD1/2010/10 | KE1000001921 | 4/13/2020 | 8.79 | 8.633 |
| 3/29/2010 | FXD1/2010/15 | KE1000001900 | 3/10/2025 | 10.25 | 9.98 |
| 3/1/2010 | IFB1/2010/8 | KE1000001793 | 2/19/2018 | 9.75 | 9.579 |
| 2/1/2010 | FXD1/2009/5(R1) | KE1000001721 | 9/15/2014 | 9.50 | 9.592 |
| 12/28/2009 | FXD1/2008/20(R2) | KE1000001493 | 6/5/2028 | 13.75 | 13.691 |
| 12/7/2009 | IFB2/2009/12 | KE1000001757 | 11/22/2011 | 12.00 | 12.537 |
| 10/26/2009 | FXD1/2009/15 | KE1000001739 | 10/7/2024 | 12.50 | 13.709 |
| 9/21/2009 | FXD1/2009/5 | KE1000001721 | 9/15/2014 | 9.50 | 11.108 |
| 8/24/2009 | FXD3/2008/5(R1) | KE1000001544 | 8/19/2013 | 9.50 | 10.858 |
| 7/27/2009 | FXD2/2008/10(R1) | KE1000001527 | 7/16/2018 | 10.75 | 11.821 |
| 6/29/2009 | FXD1/2008/20(R1) | KE1000001493 | 6/5/2028 | 13.75 | 14.614 |
| 5/26/2009 | FXD3/2007/15(R1) | KE1000001360 | 11/7/2022 | 12.50 | 13.53 |
| 4/27/2009 | FXD1/2009/10 | KE1000001656 | 4/15/2019 | 10.75 | 11.723 |
| 4/27/2009 | FXD4/2008/5(R1) | KE1000001578 | 10/21/2003 | 9.50 | 10.849 |
| 2/23/2009 | IFB1/2009/12 | KE1000001637 | 2/8/2021 | 12.50 | 13.505 |
| 10/27/2008 | FXD4/2008/5 | KE1000001578 | 10/21/2003 | 9.50 | 11.549 |
| 9/29/2008 | FXD3/2008/10 | KE1000001555 | 9/17/2018 | 10.75 | 11.758 |
| 8/25/2008 | FXD3/2008/5 | KE1000001544 | 8/19/2013 | 9.50 | 10.86 |
| 7/28/2008 | FXD2/2008/10 | KE1000001527 | 7/16/2018 | 10.75 | 11.42 |
| 6/30/2008 | FXD1/2008/20 | KE1000001493 | 6/5/2028 | 13.75 | 14.741 |
| 4/28/2008 | FXD2/2008/5 | KE1000001436 | 4/22/2013 | 9.50 | 11.249 |
| 3/31/2008 | FXD1/2008/15 | KE1000001428 | 3/13/2023 | 12.50 | 13.31 |
| 2/25/2008 | FXD1/2008/10 | KE1000001313 | 2/12/2018 | 10.75 | 11.266 |
| 1/28/2008 | FXD1/2008/5 | KE1000001394 | 1/21/2013 | 9.50 | 10.792 |
| 11/26/2007 | FXD3/2007/15 | KE1000001360 | 11/7/2022 | 12.50 | 13.313 |
| 10/29/2007 | FXD1/2007/10 | KE1000001303 | 10/16/2007 | 10.75 | 11.316 |
| 9/24/2007 | FXD3/2007/5 | KE1000001006 | 9/17/2012 | 9.50 | 10.043 |
| 8/27/2007 | FXD2/2007/5 | KE1000000990 | 8/20/2012 | 9.50 | 9.767 |
| 7/30/2007 | FXD1/2007/7 | KE1000001170 | 7/21/2014 | 9.75 | 10.421 |

| | | | | | |
|------------|---------------|--------------|------------|-------|--------|
| 6/25/2007 | FXD2/2007/15 | KE1000001352 | 6/6/2022 | 13.50 | 12.968 |
| 5/28/2007 | FXD1/2007/12 | KE1000001337 | 5/13/2019 | 13.00 | 12.548 |
| 4/30/2007 | FXD1/2007/6 | KE1000001105 | 4/22/2013 | 11.50 | 11.288 |
| 3/26/2007 | FXD1/2007/15 | KE1000001345 | 3/7/2022 | 14.50 | 14.896 |
| 2/26/2007 | FXD1/2007/8 | KE1000001220 | 2/16/2015 | 12.75 | 12.955 |
| 12/25/2006 | FXD2/2006/7 | KE1000001162 | 12/16/2013 | 12.00 | 12.533 |
| 11/27/2006 | FXD2/2006/6 | KE1000001097 | 11/19/2012 | 11.50 | 1.804 |
| 9/25/2006 | FXD1/2006/11 | KE1000001311 | 9/11/2017 | 13.75 | 14.308 |
| 8/28/2006 | FXD1/2006/12 | KE1000001329 | 8/13/2018 | 14.00 | 14.355 |
| 6/26/2006 | FXD1/2006/6 | KE1000001089 | 6/18/2012 | 11.75 | 11.807 |
| 5/29/2006 | FXD2/2006/10 | KE1000001295 | 5/16/2016 | 14.00 | 13.778 |
| 4/24/2006 | FXD1/2006/9 | KE1000001253 | 4/13/2015 | 13.50 | 13.599 |
| 3/27/2006 | FXD1/2006/10 | KE1000001287 | 3/14/2016 | 14.00 | 14.595 |
| 2/27/2006 | FXD1/2006/8 | KE1000001212 | 2/17/2014 | 13.25 | 14.012 |
| 1/30/2006 | FXD1/2006/7 | KE1000001154 | 1/21/2013 | 13.25 | 13.661 |
| 20-Jun-05 | FXD1/2005/5Yr | KE1000000941 | 14-Jun-10 | 12.50 | 10 |
| 28-Nov-05 | FXD2/2005/5Yr | KE1000000958 | 22-Nov-10 | 13.00 | 10.2 |
| 26-Dec-05 | FXD1/2005/6Yr | KE1000001071 | 19-Dec-11 | 13.00 | 10.5 |
| 26-Jan-04 | FXD1/2004/7Yr | KE1000001139 | 17-Jan-11 | 6.75 | 10.2 |
| 23-Feb-04 | FXD1/2004/6Yr | KE1000001055 | 15-Feb-10 | 6.50 | 9.9 |
| 22-Mar-04 | FXD1/2004/8Yr | KE1000001204 | 12-Mar-12 | 7.50 | 10.5 |
| 26-Jul-04 | FXD2/2004/6Yr | KE1000001063 | 19-Jul-10 | 6.75 | 10 |
| 23-Aug-04 | FXD2/2004/7Yr | KE1000001147 | 15-Aug-11 | 7.00 | 10.4 |
| 24-Mar-03 | FXD1/2003/7Yr | KE1000001113 | 15-Mar-10 | 13.75 | 9.9 |
| 28-Apr-03 | FXD1/2003/8Yr | KE1000001188 | 18-Apr-11 | 12.50 | 10.2 |
| 5/26/2003 | FXD1/2003/9 | KE1000001238 | 5/14/2012 | 12.75 | 12.507 |
| 6/23/2003 | FXD1/2003/10 | KE1000001261 | 6/10/2013 | 13.25 | 10.826 |
| 7/28/2003 | FXD2/2003/9 | KE1000001246 | 7/16/2012 | 9.50 | 7.408 |
| 8/25/2003 | FXD2/2003/10 | KE1000001279 | 8/12/2013 | 8.50 | 7.474 |

| | | | | | |
|-----------|---------------|--------------|-----------|------|------|
| 29-Sep-03 | FXD2/2003/8Yr | KE1000001196 | 19-Sep-11 | 7.00 | 10.4 |
| 27-Oct-03 | FXD2/2003/7Yr | KE1000001121 | 18-Oct-10 | 6.50 | 10.1 |

Appendix 2: Turnover of Government Bonds at the NSE from 2003 to 2014

| Year | 2004 | 2005 | 2006 | 2007 | 2008 |
|-------|------------------|------------------|------------------|-------------------|-------------------|
| Jan | 4,576,350,000.00 | 1,015,246,910.00 | 1,054,900,000.00 | 2,601,750,000.00 | 5,937,900,000.00 |
| Feb | 4,991,500,000.00 | 636,250,000.00 | 4,696,250,000.00 | 6,234,200,000.00 | 3,212,550,000.00 |
| Mar | 3,623,925,000.00 | 132,650,000.00 | 2,859,700,000.00 | 7,807,810,000.00 | 14,281,750,000.00 |
| April | 2,140,800,000.00 | 1,005,100,000.00 | 6,002,150,000.00 | 6,266,300,000.00 | 2,343,700,000.00 |
| May | 3,177,200,000.00 | 787,700,000.00 | 4,783,250,000.00 | 9,55,150,000.00 | 3,037,200,000.00 |
| June | 5,337,650,000.00 | 1,295,300,000.00 | 8,128,350,000.00 | 8,970,150,000.00 | 4,912,035,382.00 |
| July | 2,397,450,000.00 | 1,461,900,000.00 | 7,383,500,000.00 | 8,128,350,000.00 | 2,397,930,000.00 |
| Aug | 842,800,000.00 | 1,784,500,000.00 | 6,440,400,000.00 | 10,829,550,000.00 | 18,490,356,350.00 |
| Sept | 1,442,800,000.00 | 1,283,500,000.00 | 1,497,000,000.00 | 9,523,150,000.00 | 22,611,941,83.00 |
| Oct | 2,253,800,000.00 | 1,524,100,000.00 | 1,872,060,000.00 | 3,486,950,000.00 | 4,344,113,732.00 |
| Nov | 2,119,100,000.00 | 1,184,100,000.00 | 2,847,800,000.00 | 4,705,900,000.00 | 6,319,712,659.00 |
| Dec | 1,208,265,955.00 | 1,480,150,000.00 | 1,009,500,000.00 | 7,662,105,328.00 | 7,473,441,011.00 |
| TOTAL | | | | | |

| Year | 2009 | 2010 | 2011 | 2012 | 2013 |
|------|-------------------|-------------------|-------------------|-------------|-------------|
| Jan | 6,643,400,000.00 | 26,746,900,000.00 | 19,894,000,000.00 | 24180000000 | 20730000000 |
| Feb | 6,859,800,000.00 | 41,638,700,000.00 | 49,226,500,000.00 | 26670000000 | 20200000000 |
| Mar | 8,187,600,000.00 | 50,411,000,000.00 | 40,116,050,000.00 | 47120000000 | 25460000000 |
| Apr | 3,816,310,000.00 | 23,241,000,000.00 | 42,620,900,000.00 | 35420000000 | 35300000000 |
| May | 11,555,950,000.00 | 37,204,450,000.00 | 31,446,250,000.00 | 47340000000 | 73430000000 |
| June | 10,766,600,000.00 | 95,241,750,000.00 | 61,115,450,000.15 | 28140000000 | 85880000000 |
| July | 8,359,100,000.00 | 63,517,000,000.00 | 34,245,550,000.00 | 34130000000 | 34130000000 |
| Aug | 6,140,950,000.00 | 23,189,800,000.00 | 44,111,700,000.00 | 24440000000 | 24440000000 |
| Sept | 9,951,200,000.00 | 30,839,400,000.00 | 36,112,400,000.00 | 29290000000 | 29290000000 |
| Oct | 13,212,950,000.00 | 29,871,000,000.00 | 34,567,950,000.00 | 72560000000 | 51640000000 |
| Nov | 9,214,850,000.00 | 33,876,500,000.00 | 26,691,600,000.00 | 38390000000 | 27260000000 |
| Dec | 15,936,650,000.00 | 23,068,250,000.00 | 24,999,050,000.00 | 26650000000 | 23610000000 |

| | |
|------|----------------|
| Year | 2014 |
| Jan | 42,440,000,000 |
| Feb | 27,480,000,000 |
| Mar | 32,050,000,000 |
| Apr | 58,560,000,000 |
| May | 38,260,000,000 |
| June | 28,720,000,000 |
| July | 49,470,000,000 |
| Aug | 54,860,000,000 |
| Sept | 41,830,000,000 |
| Oct | 37,550,000,000 |
| Nov | 50,310,000,000 |
| Dec | 42,750,000,000 |