DETERMINANTS OF ISSUANCE OF CORPORATE BONDS BY
LISTED FIRMS IN THE NAIROBI SECURITIES EXCHANGE

JOYCE WAIRIMU KARANJA

REG NO: D61/79564/2012

A PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF FOR
THE AWARD OF MASTER OF BUSINESS ADMINISTRATION
(MBA) DEGREE TO THE SCHOOL OF BUSINESS, UNIVERSITY
OF NAIROBI

OCTOBER, 2014
DECLARATION

I, the undersigned, declare that this is my original work and has not been presented to any institution or university other than the University of Nairobi for examination.

Signed: ___________________________ Date: ______________

JOYCE WAIRIMU KARANJA

REG NO: D61/79564/2012

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

Signed: ___________________________ Date: ______________

DR. JOSIAH ADUDA

Lecturer,

Department of Finance and Accounting, School of Business

University of Nairobi
ACKNOWLEDGEMENTS

First of all I extend my gratitude to the Almighty God for providing me with strength, knowledge and vitality that helped make this project possible. I acknowledge with gratitude my supervisor Dr. Josiah Aduda, whose patience, guidance, encouragement, suggestion and constructive criticisms were instrumental for the success of this project. To all my family members and friends who have given me their unending support throughout my study.
DEDICATION

I dedicate this project to my family.
ABSTRACT

The main purpose of the study was to investigate the determinants of corporate bonds issuance by listed firms in the Nairobi Securities Exchange, Kenya. The study used both descriptive and quantitative research designs. The population of the study was made up of all the eleven companies which have issued Corporate Bonds in Kenya from 2001 to 2013. From the population of all eleven companies that issued CB during the period under the study, only those listed on the Nairobi Securities Exchange were selected this was due to the availability of data and other information as they were required by the Companies Act to publish their annual report. The study employed the use of secondary data, from which data was largely quantitative in nature was extracted from audited annual reports and financial statements of individual sampled companies sourced from CMA, NSE and CBK. Multiple regression analysis was used to determine how factors identified above relate to the Corporate Bond amount issued as presented in the previous chapter. Descriptive statistics like frequencies, ranking and mean were used. This was done using SPSS Statistical computer package and advanced MS Excel. The study findings established that tenure period of corporate bonds affects their demand. Investors being rational are skeptical about postponing consumption of money for longer period of time and would rather invest in ‘short-term’ periods. The higher the frequency of redemption of the principle reduces the return of the bonds as it affect interest generating ability of the bonds, thus investors don’t prefer higher short redemption periods. long subscription period of corporate bonds affect investments in the same. This follows that some investors take longer to decide on whether to invest in the bond and/or others look to financial resources for the same thus short period cut them off. Interest rate is the major revenue centre for corporate bonds, thus, the higher the interest, the higher the return. Thus, investors prefer higher interest generating bonds. The study recommends that in order to increase bond subscription, the issuers should address the regulations governing the particular issue. Of more importance are the regulations on the tenure period which should be short and principle redemption structure to be reduced as this increases the interest generating ability of the bonds making it more attractive.
# TABLE OF CONTENT

DECLARATION .................................................................................................................. ii  
ACKNOWLEDGEMENTS ................................................................................................... iii  
DEDICATION ....................................................................................................................... iv  
ABSTRACT .......................................................................................................................... v  
LIST OF TABLES ................................................................................................................ viii  
LIST OF FIGURES ............................................................................................................... ix  
LIST OF ABBREVIATION ................................................................................................... x  

## CHAPTER ONE: INTRODUCTION ............................................................................... 1  
1.1 Background to the Study ......................................................................................... 1  
1.1.1 Corporate Bonds .................................................................................................... 2  
1.1.2 Determinants of corporate bonds issue ................................................................. 3  
1.1.3 Relationship between factors and corporate bonds issue .................................... 4  
1.1.4 Nairobi Securities Exchange ................................................................................. 6  
1.2 Research Problem .................................................................................................... 7  
1.3 Research Objectives ............................................................................................... 9  
1.4 Value of the Study ................................................................................................... 9  

## CHAPTER TWO: LITERATURE REVIEW ................................................................. 11  
2.0 Introduction .............................................................................................................. 11  
2.1 Theoretical review .................................................................................................. 11  
2.2.1 Trade Off Theory .................................................................................................. 11  
2.2.2 Pecking Order Theory ......................................................................................... 13  
2.2.3 Liquidity Preference Theory ................................................................................. 15  
2.3 Chapter Summary .................................................................................................... 17  

## CHAPTER THREE: RESEARCH METHODOLOGY ................................................... 19  
3.1 Introduction .............................................................................................................. 19  
3.2 Research Design ..................................................................................................... 19  
3.3 Population of the Study ......................................................................................... 19  
3.4 Sample ..................................................................................................................... 20  
3.5 Data Collection ....................................................................................................... 20  
3.6 Data Analysis ......................................................................................................... 20  

## CHAPTER FOUR: DATA ANALYSIS AND FINDINGS ........................................... 22  
4.1 Introduction .............................................................................................................. 22  
4.2 Descriptive Statistics ............................................................................................. 22  
4.3 Correlation Analysis ............................................................................................... 24  
4.4 Multicollinearity ...................................................................................................... 25  
4.5 Regression Analysis ............................................................................................... 26
4.4 Discussion of Findings ......................................................................................... 31

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS .......... 33

5.1 Introduction ......................................................................................................... 33
5.2 Summary of the Findings ................................................................................... 33
5.3 Conclusions ......................................................................................................... 34
5.4 Recommendations .............................................................................................. 35
5.5 Limitations of the Study ...................................................................................... 35
5.6 Suggestions for Further Research ...................................................................... 35

REFERENCES ......................................................................................................... 36

Appendix I: CB ISSUED BETWEEN THE YEAR 2001 TO 31/12/2011 ............... 42
Appendix II: SOURCE CMA ................................................................................. 43
Appendix III: Corporate Bond Data ........................................................................ 44
Appendix IV: Issuers of Corporate Bonds ............................................................... 46
LIST OF TABLES

Table 4.1: Descriptive Statistics ................................................................. 22
Table 4.2: Correlation Matrix .................................................................... 25
Table 4.3: Collinearity Statistics ................................................................. 26
Table 4.4: Model Goodness of Fit ............................................................... 27
Table 4.5: Analysis of Variance (ANOVA) .................................................. 28
Table 4.6: Regression Coefficients .............................................................. 28
LIST OF FIGURES

Figure 4.1: P-P Plots for Normality of Residuals ................................................................. 30
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBK</td>
<td>Central Bank of Kenya</td>
</tr>
<tr>
<td>CMA</td>
<td>Capital Market Authority</td>
</tr>
<tr>
<td>EADB</td>
<td>East African Development Bank</td>
</tr>
<tr>
<td>FDI</td>
<td>Foreign direct investment</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>NSE</td>
<td>Nairobi Securities Exchange</td>
</tr>
<tr>
<td>PSCGT</td>
<td>Private Sector Corporate Governance Trust</td>
</tr>
<tr>
<td>US</td>
<td>United States</td>
</tr>
<tr>
<td>YTM</td>
<td>Yield to maturity</td>
</tr>
<tr>
<td>CB</td>
<td>Corporate Bonds</td>
</tr>
<tr>
<td>EAC</td>
<td>East Africa Community</td>
</tr>
<tr>
<td>SSA</td>
<td>Sub Sahara Africa</td>
</tr>
<tr>
<td>TB</td>
<td>Treasury Bonds</td>
</tr>
<tr>
<td>YC</td>
<td>Yield Curve</td>
</tr>
<tr>
<td>PSCGT</td>
<td>Private Sector Corporate Governance Trust</td>
</tr>
<tr>
<td>CDS</td>
<td>Central Depository System</td>
</tr>
</tbody>
</table>
CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The recent financial crises has significantly increased the importance of the bond market as a source of finance as corporate shift from overreliance on bank debt and increased government borrowing. Developed countries such as the US have the largest, the best and the most developed bond market in the world. The bond statistics from the BIS (2009) indicates that the bond market is dominated by the developed countries. The US accounted for 39% of the world value of outstanding domestic bonds, (BIS, 2009) its market is well diversified with products such as mortgage backed securities, federal agency securities, corporate and treasury bonds. It is followed by Japan (18%). U.K and Emerging markets follow closely.

During the last decade, the capital market in Kenya has changed rapidly in the range of sophistication of market, intermediaries and product range (CMA, 2009). However, the history of the bond market can be traced back in 1986 when the capital market reforms process begun. The reforms were necessitated by the need to mobilize long term capital for the government and private sector capital projects. The government used Treasury bond for the first time in 1986 to finance budget deficit. As the budgetary deficit was worsening in the 1990’s, overreliance on Treasury bills becoming expensive, foreign direct investment FDI into Kenya was deteriorating and relationship with key donors was soaring. This made the Treasury and the CBK to go long-term by use of Treasury Bonds (Kibua and et al, 2005). This was also intended to enhance stability in the securities
market, lengthen maturities of domestic bonds as well as develop a yield curve for pricing corporate bonds (Ngugi & Agot, 2007).

The interest rates have been fixed or zero coupon and floating, with the latter being pegged on the 91-Day Treasury Bills. The first CB in Kenya was first issued in 1996 East African Development Bank, (EADB). Since then, CB market in Kenya has been characterized by low trading activity as compared to Treasury Bonds both in the primary and the secondary markets. It’s very thin market. The main investors in the Kenya’s corporate bond markets are the fund managers, insurance companies, investment companies and individuals. The bonds turnover has improved over the years since 2003.

The East African Bond market is dominated by government bonds and is significantly underdeveloped (Kibua et al, 2005). As compared to other EAC member countries, the Kenyan bond market is the largest and most developed. Beyond the EAC, financial markets in the Sub Saharan Africa (SSA) countries are shallow, and have inadequate access to finance (Adelegan & Radzewicz-Bak, 2009).

1.1.1 Corporate Bonds

A bond can be defined as a security that is issued with a borrowing arrangement. The borrower or the issuer sells a bond to a lender or the investor for a certain amount of money (Bodie et al, 2000). Solnik & Mcleavey, (2009) define bond as a long-term debt security with contractual obligations regarding interest payments and redemption. The
intrinsic features of a bond are: the coupon, maturity, its indenture provisions and type of ownership.

A variety of features affect bond maturity. These are the provisions that allow the issuer to buy back all or part of its outstanding bonds at a specified call price before maturity of the bond. Reilly & Brown, (2006) identifies three alternative call options that affects bond’s maturity. The first option is a freely callable provision which allows the issuer to retire the bond at any time with a special notification period of one to two months. The second option is the non callable provision which does not allow the issuer to retire the bond prior to maturity. The final option is the deferred provision which implies that the issue cannot be called for a certain time period after issue date. From general finance theory, the correct price of an asset equals the present value of all cash flows that the investor expects to receive during the life of the asset.

1.1.2 Determinants of corporate bonds issue

Issuance of bonds is based on the behavior of those who buy bonds or lenders or savers. In the bonds market, the investors who buy bonds are providing loans to issuers and are receiving interest. This implies that issuance of bonds represents the supply of LFs, (Blackwell and et al., 2007). The demand curve in the bond market is the relationship between the price and quantity of bonds that the investors demand all other factors constant. This curve shows an inverse relationship between the demand of bond and its price and a direct relation with interest rate, other factors constant. At higher bond prices, the quantity demanded falls and the interest rates also falls due to their inverse relation
with bond prices, (Fabozzi et al., 2010). This implies lower YTM and falling expected return.

The factors held constant are, the overall wealth of the economy/ state of the economy as measured by real output/GDP, Bond’s relative risk to other financial assets, and its liquidity relative to other financial assets, expected future interest rates and inflation and government policies. Change in the above factors leads either to rightward or leftward shift in the demand curve at each interest rate or price. A change in relative risk of a bond changes its demand. An increase in relative risk decreases the demand of a bond and vice versa, (Fischer & Jordan, 2009) as investors opt for less riskier assets. The relative liquidity of a bond also affects its demand which decreases with increase in the former.

From the general economic theory, the price of a commodity, income of the consumer, price of substitute and government policy are some of the factors that affect demand in the commodities market.

1.1.3 Relationship between factors and corporate bonds issue

For the purposes of this study, the commodity is CB and the quantity demanded is the amount of CB issued to investors. Recall that the price paid by the borrower to the lender for use of money during some interval is the interest rate. It is a cost to the issuer and a measure of return to the investor (Fabozzi, 2000). Suppliers issue bonds in order to borrow money from investors, who cumulatively make up demand in a given bond market. What is unique about the bond market is that the most relevant and often quoted characteristic of a bond is not the price, but the interest rate. Bond prices are a function
of, and inversely related to, the interest rate (Fixler, 2010). Therefore higher bond prices means lower interest rate which encourages borrowing from the CB market other factors constant. The supply curve of bond is upward sloping reflecting the fundamental assumption that; firms, government and bond intermediaries will supply more bonds as the price increase or as the interest rate decline.

In this study, it has been assumed that the price of CBs is controlled by the prices of TB which provide a benchmark yield curve and help establish the overall credit curve. Government bonds typically are backed by the “faith and credit” of the government, not by physical or financial assets, (IMF, 2001). The YC is very important in CBs pricing. TBs are used as monetary policy tools during various economic cycles. The difference between the TB and CB yields constitutes the credit spread which is also used in pricing the CBs. The later have higher yields since their prices are usually lower due to their higher risk of default as compared to TBs. The credit spread between the CB and TB widen with rising inflation as investors must be compensated for additional risk associated with CB.

There are two government policies that affect the supply side of the bonds market; namely the Monetary and Fiscal policies. The more restrictive covenants are stringent the more the companies are unwilling to issue corporate bonds (Mussa & Kihongo, 2011).

In a recession, the CBK will lower interest rates and increase the money supply. In an overheated expansion, it (CBK) will raise interest rates and decrease the money supply.
According to (CBK, 2012) there are three major tools it uses to implement Monetary Policies in Kenya, namely; Open Market Operations, Discount window operations and Reserve Requirements. Through Open Market Operations, the Bank buys or sells securities in the secondary market in order to achieve a desired level of Bank reserves. Alternatively, the Bank injects money into the economy through buying securities in exchange for money stock. As the law of supply and demand takes effect to determine the cost of borrowing (interest rates) in the money market, money stock adjusts itself to the desired level.

1.1.4 Nairobi Securities Exchange

The Nairobi Securities Exchange is licensed and regulated by the Capital Markets Authority. It has the mandate of providing a trading platform for listed securities and overseeing its Member Firms. The member firms of the Nairobi Securities Exchange are licensed to buy and sell securities listed on The Nairobi Securities Exchange after fulfilling general licensing requirements as required by the Capital Markets Act, Cap. 485A of the Laws of Kenya (including the Regulations and Guidelines issued there under), and the articles of association of Nairobi Securities exchange shall apply to these rules.

In Kenya corporate governance has been gaining roots in response to initiatives by some stakeholders such as the Private Sector Corporate Governance Trust (PSCGT), in collaboration with the Commonwealth Association of Corporate Governance, to address corporate governance in Kenya. The Trust acts as the Interim Secretariat to the Pan
African Consultative Forum for Corporate Governance. The Trust works to help build appropriate institutions and national capacity to support the implementation, compliance and enforcement of good corporate governance practices and evaluation mechanisms in Kenya.

Notwithstanding the above developments, it must be indicated that more formal corporate governance structures and institutions are relatively not widespread though a number of laws provide for governance structures for companies in Kenya. These laws include: The Companies Act, Cap 486, which provides for governance of all companies incorporated in Kenya; Capital Markets Act, Cap. 485A of the Laws of Kenya (including the Regulations and Guidelines issued there under), and the articles of association of Nairobi Securities exchange shall apply to these rules, which provides among other things for governance of stock exchanges, investment advisors, securities dealers, and collective investment schemes licensed by the Nairobi Securities Exchange (NSE).

1.2 Research Problem

The Kenya’s Vision 2030 is anchored on three pillars namely; social political and economic pillars. The economic pillars lays emphasis on the private sector led growth. Long-term finance, from the capital market, is crucial in financing infrastructure projects as well as for corporate growth. A domestic capital market is mainly composed of the commercial banks, the equity market, the non-banks financial institutions and the bonds market (Bose & Coondoo, 2003). The equity market is more developed than the bonds market in Kenya. Equity financing and long term debt have been more common with
firms in Kenya. Various studies indicate that bond market in Kenya is thin and underdeveloped. The corporate Bond market has always had a lower trading activity than Treasury bond market (Ngugi & Agoti, 2007).

However, as stated by Ndung’u (2013), though Kenya’s bond market is well diversified, it needs to be developed further. Demand for bonds and bank loans triggers the flow of capital in the market. By the end of 2014, ratio of corporate bond market capitalization to GDP stood at 2% and ratio of corporate bond market turnover to total bond market capitalization stood at 0.1%. This is contrasted by the ratio of equity market capitalization to GDP which stood at 50% in the same period (CMA, 2014). Without a demand for bonds and functioning bond market firms lack a clear measure of the opportunity cost of funds. They rely on commercial banks for debt financing and the same constraint that prevents the development of bond markets also leads banks to prefer short term credit which implies higher risks for business (Ndung’u, 2011).

Though a few studies have been done on corporate bonds in Kenya, its uptake and demand, the studies findings have been parsimonious, spurious and inadequate to holistically bring out the factors determining the determinants of corporate bonds. Ringui (2012) for instance did a study of the factors determining development of corporate bonds market in Kenya. The factors established by the study were political environment, investor base, and regulatory framework, size of the banking sector and cumbersome nature of issuance process. Ngugi (2011) did a study on the effect of regulation on infrastructure bonds uptake in Kenya. The regulatory factors negating the bond uptake
were: regulations regarding the minimum initial subscription amount, tenure period, Skepticism regarding bond uptake. Bii, (2009) looked at the underlying impediments to issuance of corporate bonds through NSE, but failed to address the whole issue of factors determining development of corporate bonds market. Thus, these studies failed to bring o the fore the factors affecting corporate bonds uptake leaving a wide knowledge gap which this study seeks to fill-in. The study will, thus, answer the following research questions: what is the current uptake of corporate bonds in Kenya? What are the determinants corporate bond demands by firms listed in NSE? What are the challenges encountered by firms listed in NSE in corporate bond issuance?

1.3 Research Objectives
The main objective of this study is to investigate the determinants of corporate bonds issuance by listed firms in the Nairobi Securities Exchange, Kenya.

1.4 Value of the Study
The findings of this study will be a cornerstone for selection of funding alternative in the capital markets. The choice will be based on informed criteria, as lessons will be drawn from the successes or failure of those companies that have issued CB. The study’s findings may provide useful basis upon which further studies on the demand and supply for CB could be conducted. It will also add to the existing body of knowledge in the finance discipline.

The will come in handy as the government/ regulators and policy makers as they endeavors to facilitate the development of capital markets products and services. It will
be an insight on the challenges companies go through in the process of raising long term finance. The study will promote investors education and public awareness on corporate bonds and long term financing by companies.
CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

This chapter presents a review of literature. It discusses theoretical review on bonds. It also discusses the empirical literature that has been done on the topic (corporate bond), demand and supply conditions in the bonds market and the chapter summary.

2.1 Theoretical review

This section reviews theories pertinent to the research problem. In particular, the agency and restitution theories are hereby reviewed.

2.2.1 Trade Off Theory

In trade-off theory, a decision maker running a firm evaluates the various costs and benefits of alternative leverage plans. Often it is assumed that an interior solution is obtained so that marginal costs and marginal benefits are balanced. The original version of the trade-off theory grew out of the debate over the Modigliani-Miller theorem. When corporate income tax was added to the original irrelevance proposition this created a benefit for debt in that it served to shield earnings from taxes (Modigliani & Miller, 1963). Since the firm’s objective function is linear, and there is no offsetting cost of debt, this implied 100% debt financing. To avoid this extreme prediction, an offsetting cost of debt is needed; the obvious candidate is bankruptcy.

Kraus and Litzenberger (1973) provide a classic statement of the theory that optimal leverage reflects a trade-off between the tax benefits of debt and the deadweight costs of
bankruptcy. According to Myers (1984), a firm that follows the trade-off theory sets a target debt-to-value ratio and then gradually moves towards the target. The target is determined by balancing debt tax shields against costs of bankruptcy.

An important purpose of the theory is to explain the fact that corporations usually are financed partly with debt and partly with equity. It states that there is an advantage to financing with debt, the tax benefits of debt and there is a cost of financing with debt, the costs of financial distress including bankruptcy costs of debt and non-bankruptcy costs (e.g. staff leaving, suppliers demanding disadvantageous payment terms, bondholder/stockholder infighting, etc.). The marginal benefit of further increases in debt declines as debt increases, while the marginal cost increases, so that a firm that is optimizing its overall value will focus on this trade-off when choosing how much debt and equity to use for financing (Brealey, Myers & Allen, 2008).

Tarde-off theory explains the mix of debt and equity companies use to finance their operations. The basic suggestion of trade-off theory is that corporations issue bonds due to their tax benefits, but when their debt load gets too high, they switch to stocks to minimize bankruptcy costs. In terms of bond trade-off, the interest payments on bonds that a company must make to bondholders are called coupon payments. In some countries, the company that issues bonds can write off the payments on its taxes. However, issuing bonds increases a company's risk of bankruptcy. Thus, the company must offer a higher interest rate on the bonds as it issues more bonds. However, due to these downsides, trade-off theory states that after issuing a sufficient amount of debt, the
company can switch over to issuing stock. The company might reach a level of debt beyond which the increased bankruptcy risks are too high to compensate for the tax benefits. At this level, the company begins financing itself through stock sales. Nevertheless, the trade-off level differs for every company based on its risk tolerance (Frank & Goyal, 2005).

2.2.2 Pecking Order Theory

Pecking order theory (pecking order model) postulates that the cost of financing increases with asymmetric information. Financing comes from three sources, internal funds, debt and new equity. Companies prioritize their sources of financing, first preferring internal financing, and then debt, lastly raising equity as a “last resort” (Myers & Majluf, 1984). Hence: internal financing is used first; when that is depleted, then debt is issued; and when it is no longer sensible to issue any more debt, equity is issued. This theory maintains that businesses adhere to a hierarchy of financing sources and prefer internal financing when available, and debt is preferred over equity if external financing is required (equity would mean issuing shares which meant 'bringing external ownership' into the company). Thus, the form of debt a firm chooses can act as a signal of its need for external finance (Brealey, Myers & Allen, 2008).

The pecking order theory is popularized by Myers and Majluf (1984) when they argue that equity is a less preferred means to raise capital because when managers (who are assumed to know better about true condition of the firm than investors) issue new equity, investors believe that managers think that the firm is overvalued and managers are taking
advantage of this over-valuation. As a result, investors will place a lower value to the new equity issuance.

Pecking order theory starts with asymmetric information as managers know more about their companies prospects, risks and value than outside investors. Asymmetric information affects the choice between internal and external financing and between the issue of debt or equity. There therefore exists a pecking order for the financing of new projects (Matemilola & Bany-Ariffin, 2011).

Asymmetric information favours the issue of debt over equity as the issue of debt signals the board’s confidence that an investment is profitable and that the current stock price is undervalued (were stock price over-valued, the issue of equity would be favoured). The issue of equity would signal a lack of confidence in the board and that they feel the share price is over-valued. An issue of equity would therefore lead to a drop in share price. This does not however apply to high-tech industries where the issue of equity is preferable due to the high cost of debt issue as assets are intangible (Brealey, Myers & Allen, 2008).

Tests of the pecking order theory have not been able to show that it is of first-order importance in determining a firm's capital structure. However, several authors have found that there are instances where it is a good approximation of reality. On the one hand, Fama & French (2002), also Shyam-Sunder and Myers (1999) find that some features of the data are better explained by the Pecking Order than by the trade-off theory. Goyal, Lehn & Racic (2002) show, among other things, that Pecking Order theory fails where it
should hold, namely for small firms where information asymmetry is presumably an important problem.

2.2.3 Liquidity Preference Theory

This theory explains the difference of interest rates for short term and long term bonds in terms of liquidity preferences. Concerned with risk-aversion investment behaviors, it asserts that lenders anticipate the potential need to liquidate an investment earlier than expected. This is a combination of hypothesis theory and preferred habitat theory. Liquidity preference theory says that the shorter the maturity the lesser the volatility of interest rates and less risky. Because of less involved risk, short term bonds are more liquid compared to long-term bonds (Keynes 1936).

Since for a given change in interest rates, the price volatility of a short-term investment is lower than the price volatility of a long-term investment, investors prefer to lend short term. Therefore, they must be offered a risk premium to induce them to lend long-term. Borrowers, on the other hand, often prefer long-term bonds because they eliminate the risk of having to refinance at higher interest rates in future periods. Furthermore, the fixed costs of frequent refinancing can be quite high. Therefore, borrowers are willing to pay the premium necessary to attract long-term financing (Van Deventer & Imai, 1996).

Perraudin and Taylor (2003) examine the difference in spreads between liquid and illiquid corporate bonds and estimate that relative illiquidity accounts for between 10bp and 40bp of spread. They conclude that for high credit quality debt liquidity spreads are
as large (or larger) than risk premiums and much larger than expected losses. De Jong and Driessen (2005) find that lower-rated and longer-maturity corporate bonds have greater exposure to liquidity with an estimated liquidity premium for long-maturity investment grade bonds is around 45 bps. Houweling et al. (2005) look at various possible proxies for assessing the liquidity of corporate bonds and reject the hypothesis that liquidity risk is not priced in a sample set of Euro corporate bonds. Krishnamurthi (2002) studies the yield difference between on-the-run and off-the run 30 year bond yields and concludes that the yield difference results from a demand for liquid assets. These findings are consistent with the theory mooted by Duffie et al. (2002) and Vayanos and Weill (2005). Longstaff (2004) finds that the yield differential between zero-coupon Treasury and Resolution Funding Corporation (a government agency) bond yields range from 10 to 16bps. The liquidity premium is larger for long-term bonds, representing around 10%-15% the value of Treasury bond.

In Kenya, in a survey of enterprise attitudes, Wagacha (2001) found that firms seemed to increase their borrowing after listing. For large listed firms the debt to equity ratios seemed to rise, while for the small firms they fell, indicating that market development favoured large listed firms. Kenya has had a similar trend of events to Uganda in the financial sector over the last decade. The financial sector reform started in January 1988 and the policy and institutional measures employed, included interest rate liberalization, development of money and capital markets, improvement of efficiency of financial intermediation, development of more flexible monetary policy instruments, removal of
credit ceilings and reduction of both governments excessive reliance on domestic borrowing and reduction of its budget deficit.

The institutional reforms were aimed at setting up a regulatory policy and ensuring prudential regulation and supervision of the financial system. Furthermore, there was emphasis on the need to restructure the troubled financial institutions, including privatization and improvement of technical expertise at the Central Bank of Kenya.

It is the uncertainty regarding the efficiency of securities markets in developing countries that motivates this study. In contrast to existing evidence and conclusions of markets studies in developing countries do exploitable inefficiencies exist in emerging stock markets?

The study is targeted on the Nairobi Stock Exchange (NSE) in Kenya, a developing country. Parkinson (1984), found evidence which cast doubt on the Efficient Market Hypothesis (EMH) as a reasonable description of the operations of the NSE: this study aims to seek further evidence on weak-form efficiency in this market.

Other studies reveal that the causality between financial development and economic growth in Kenya is sensitive to the choice of measurement for financial development Odhiambo (2008).

2.3 Chapter Summary

From the empirical literature reviewed, a research gap is evident. The literature largely focuses on liquidity premium, in which the vast majority of the literature focuses on a
variety of models used to extract the liquidity component from corporate bond yields. These include: direct approach, structural models, and regression-based techniques. There is limited focus on the determinants of corporate bonds demand. The literature reviewed also largely focuses on the bond markets in well-developed capital markets of the largest economies. On the contrary, there is limited Kenyan literature on the same.
CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methods that were used in collecting and analyzing data which enabled the study to achieve its objectives. The chapter was set to address the research design, population of the study, sample design, data collection, presentation and analysis.

3.2 Research Design

Research design is the plan and structure of investigation so conceived as to obtain answers to the research questions (Schinder and Cooper, 2003). It expresses both the structure of the research problem and plan of investigations used to obtain empirical evidence on relations of the problem (Kerlinger, 1986). The study used both descriptive and quantitative research designs. Descriptive design is one that describes facts without manipulation. This design was used because it is formal and structured. Quantitative design helped in quantifying relationships between variables.

3.3 Population of the Study

A population is a group of items that a sample was drawn from (Diamantopoulos, 2004). The population of the study was made up of all the eleven companies which have issued Corporate Bonds in Kenya from 2001 to 2013.
3.4 Sample

A sample is a set of individuals/companies selected from a target population as a result of constraints that makes hard to cover the entire research population (Leeds and Ormords, 2005).

From the population of all eleven companies that issued CB during the period under the study, only those listed on the Nairobi Securities Exchange were selected this was due to the availability of data and other information as they were required by the Companies Act to publish their annual report.

3.5 Data Collection

The study employed the use of secondary data, from which data was largely quantitative in nature was extracted from audited annual reports and financial statements of individual sampled companies sourced from CMA, NSE and CBK.

3.6 Data Analysis

Multiple regression analysis was used to determine how factors identified above relate to the Corporate Bond amount issued as presented in the previous chapter. Descriptive statistics like frequencies, ranking and mean were used. This was done using SPSS Statistical computer package and advanced MS Excel. The multiple linear regression models were:

Thus, Let-
\[ Y = f(X_1, X_2, X_3, X_4) \]

\[ Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 \]

Where \( Y \) is the dependent variable and \( X_1 \) to \( X_4 \) are the independent variables while alpha, \( \alpha \) represents Corporate Bond demand that is independent of the above factors-

\( Y = \) the number of Corporate Bond issued.

\( X = \) Determinants of Corporate Bonds issued

\( X_1 = \) Price of corporate bonds

\( X_2 = \) Government policy- Treasury Bonds Rate issued by the government

\( X_3 = \) Price of substitute- in this case Long Term Bank Loan Rate

\( X_4 = \) the Wealth of the company issuing bond-assumed Company’s to be the Cash Flow position at time of issuing bond.
CHAPTER FOUR: DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter presents the findings on the determinants of the demand for corporate bonds by listed firms in the Nairobi Securities Exchange. The study assessed 15 companies that had issued corporate bonds between 2001 and 2013 in Kenya. The data comprised of this comprised of 26 corporate issues. The variables assessed include issue value of the bond, coupon rate (price of corporate bonds), treasury bonds rate, long term bank loan rate, cash flow position, bonds’ tenure.

4.2 Descriptive Statistics

Table 4.1 presents the descriptive statistics and the distribution of the variables. The descriptive statistic considered were minimum, maximum, mean, standard deviation, skewness and kurtosis. Mean was used to establish the average value of the data, standard deviation gave the dispersion in the data, whereas skewness measured of negative or positive symmetry of the distribution around its mean (left or right skewed), and kurtosis is the peakedness of the distribution.

Table 4.1: Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>Number of Corporate Bond</th>
<th>Price Of Corporate Bonds</th>
<th>Treasury Bonds Rate</th>
<th>Long Term Bank</th>
<th>Cash Flow Position</th>
<th>Tenure</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>26</td>
<td>26</td>
<td>26</td>
<td>26</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td>Mean</td>
<td>2,867,953,846.2</td>
<td>10.8</td>
<td>7.5</td>
<td>15.2</td>
<td>2,820,920.7</td>
<td>6.0</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>4,859,274,736.2</td>
<td>2.2</td>
<td>2.6</td>
<td>2.5</td>
<td>4,904,216.0</td>
<td>1.8</td>
</tr>
<tr>
<td>Skewness</td>
<td>4.089</td>
<td>-.254</td>
<td>-1.306</td>
<td>.955</td>
<td>2.627</td>
<td>-.161</td>
</tr>
<tr>
<td>Std. Error of Skewness</td>
<td>.456</td>
<td>.456</td>
<td>.456</td>
<td>.456</td>
<td>.456</td>
<td>.456</td>
</tr>
<tr>
<td>------------------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>18.575</td>
<td>-1.521</td>
<td>.452</td>
<td>-.516</td>
<td>6.532</td>
<td>-.288</td>
</tr>
<tr>
<td>Std. Error of Kurtosis</td>
<td>.887</td>
<td>.887</td>
<td>.887</td>
<td>.887</td>
<td>.887</td>
<td>.887</td>
</tr>
<tr>
<td>Minimum</td>
<td>95,200,000.00</td>
<td>7.50</td>
<td>2.11</td>
<td>12.19</td>
<td>190,015.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Maximum</td>
<td>25,000,000,000.00</td>
<td>13.75</td>
<td>10.44</td>
<td>20.15</td>
<td>19,945,160.00</td>
<td>10.00</td>
</tr>
<tr>
<td>1st Quartile</td>
<td>755,375,000.00</td>
<td>8.65</td>
<td>7.63</td>
<td>13.31</td>
<td>369,042.25</td>
<td>5.00</td>
</tr>
<tr>
<td>2nd Quartile</td>
<td>1,439,250,000.00</td>
<td>11.25</td>
<td>8.14</td>
<td>14.44</td>
<td>961,420.00</td>
<td>7.00</td>
</tr>
<tr>
<td>3rd Quartile</td>
<td>3,026,475,000.00</td>
<td>12.76</td>
<td>9.07</td>
<td>17.28</td>
<td>1,889,592.50</td>
<td>7.00</td>
</tr>
</tbody>
</table>

From the Table above, quantity of corporate bond had a mean of Ksh 2,867,953,846.2 with a standard deviation value of Ksh 4,859,274,736.2. However, the minimum and maximum values were 95,200,000 and 25,000,000,000 respectively. However, as depicted by the 3rd quartile, 75% of the corporate bond issues demanded/required, at most, Ksh 3,026,475,000. On the price of corporate bonds as depicted by the coupon rate, the mean was 10.8% with a standard deviation of 2.2%. This depicts that unlike the value of the corporate bonds issued; the coupon rate did not have high variability.

The study compared the coupon rate of the corporate bonds with the banks’ long-term loan interest rate and treasury bonds rate as bonds competitors in terms of corporations’ preference alternative borrowing from banks and investor preferences for stable treasury bonds respectively. On treasury bonds rate a mean value of 7.5% was established with a standard deviation of 2.6%. On long term bank loan rate a mean value of 15.2% was established with a standard deviation of 2.5%. This depicts that treasury bonds coupon rate were lower than corporate bonds’ make it relatively unattractive to investors, thus, preference for corporate bonds. On the other hand, long term bank loan rate was on average higher than corporate bond making it unattractive for prospective firms with need for external financial thus increasing the supply of corporate bonds.
On the cash flow position, a mean of Ksh 2,820,920,700 and Ksh 4,904,216,000. The average tenure was 6.0 years and standard deviation of 1.8 years. This shows that the average tenure of the corporate bonds was 6 years. However, some firms preferred a short term of 3.0 years while others issued bonds on long-term of 10.0 years.

4.3 Correlation Analysis

The study used correlation analysis to establish the effect of coupon rate (price of corporate bonds), treasury bonds rate, long term bank loan rate, cash flow position, bonds’ tenure on demand for corporate bonds as measured by issue value of the bond. Two-tailed Pearson correlation (R) was used to establish the same at 95% confidence level. From the results, the R-value between price of corporate bonds and corporate bond demand was 0.424 (p = .048). This signifies moderate but positive linear relationship between corporate bond demand and corporate coupon rate (price of corporate bonds).

The study established a significant, negative and moderate linear relationship between corporate bonds demand and its tenure; that is, the period of time it takes for the bond to fully mature given a R-value of 0.316 at p = .016. Thus, investors find corporate bonds that take longer period of time to fully mature attractive as it provides a steady income source over time. Therefore, the longer the corporate bonds are on offer, the higher the subscription rate. Treasury Bonds coupon rate had a correlation value of -0.330 at p = .028 with corporate bond demand. This depicts a moderate but negative linear relationship between corporate bond demand and Treasury bond coupon rate. That is, as the coupon rate of Treasury bond goes up, demand for corporate bond decreases; the
former being an investment alternative to the later. Besides, there was very good, significant and negative correlation between corporate bond demand and long-term bank loan rate given R-values of -0.442 at p = .033. This illustrates that increase in interest rate on long-term loans makes them unattractive for corporations who then prefer corporate bonds. The study found a good and positive linear relationship between firms cash flow position and corporate bond demand (R = .466, p = .011). This shows that favourable cash flow increases investors’ confidence on companies issuing corporate bond thus their demand for corporate bonds would increase since investors would be sure for repayments.

Table 4.2: Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>Price Of Corporate Bonds</th>
<th>Treasury Bonds Rate</th>
<th>Long Term Bank Loan Rate</th>
<th>Tenure</th>
<th>Cash Flow Position</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Correlation</strong></td>
<td>Pearson Correlation</td>
<td>-.330*</td>
<td>-.442*</td>
<td>.316*</td>
<td>.466*</td>
</tr>
<tr>
<td><strong>Value</strong></td>
<td></td>
<td>.573</td>
<td>.508</td>
<td>-.109</td>
<td>-.337</td>
</tr>
<tr>
<td><strong>Sig. (2-tailed)</strong></td>
<td></td>
<td>.028</td>
<td>.033</td>
<td>.016</td>
<td>.011</td>
</tr>
</tbody>
</table>

4.4 Multicollinearity

The study conducted a multicollinearity tests to determine if two or more predictor (independent) variables in the multiple regression model are highly correlated. Tolerance indicates the percent of variance in the independent variable that cannot be accounted for
by the other independent variable while variance inflation factor (VIF) is the inverse of tolerance. Table 4.7 shows that tolerance values ranged between 0.391 and 0.960 with corresponding VIF values ranging between 1.042 and 2.560. Since tolerance values were above 0.1 and VIF below 10, there was no multicollinearity in the model.

Table 4.3: Collinearity Statistics

<table>
<thead>
<tr>
<th></th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price Of Corporate Bonds</td>
<td>.391</td>
<td>2.560</td>
</tr>
<tr>
<td>Treasury Bonds Rate</td>
<td>.559</td>
<td>1.790</td>
</tr>
<tr>
<td>Long Term Bank Loan Rate</td>
<td>.609</td>
<td>1.643</td>
</tr>
<tr>
<td>Cash Flow Position</td>
<td>.861</td>
<td>1.162</td>
</tr>
<tr>
<td>Tenure</td>
<td>.960</td>
<td>1.042</td>
</tr>
</tbody>
</table>

4.5 Regression Analysis

The study conducted multiple regression analysis of:

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon \]

\( \beta_0 \) is the regression model constant; \( \beta_1 - \beta_4 \) are the regression coefficients. \( Y \) is the corporate bond demand depicted by the ratio amount of corporate bonds issued and subscribed to. \( X_1 \) is price of corporate bonds; \( X_2 \) is treasury bonds rate; \( X_3 \) is long term bank loan rate; \( X_4 \) is firms cash flow position; \( X_5 \) is corporate bond tenure as measured by the time taken by the corporate bonds to full maturity (in years); and \( \varepsilon \) is the error term obtained from the F-significance from ANOVA.
Table 4.4: Model Goodness of Fit

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>.694a</td>
<td>.482</td>
<td>.352</td>
<td>.97815</td>
<td>2.013</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Tenure, Long Term Bank Loan Rate, treasury bonds rate, cash flow position, price of corporate bonds
b. Dependent Variable: quantity of corporate bond

Table 4.4 above presents the regression model goodness of fit to establish if regression analysis is suited for the data. Pearson Correlation value of 0.694 was established depicting that the independent variables (tenure, long term bank loan rate, treasury bonds rate, cash flow position, price of corporate bonds) had a very good linear relationship with the dependent variable (corporate bond demand). An R-square value of 0.482 was established depicting that this relationship was good. Thus, tenure, long term bank loan rate, treasury bonds rate, cash flow position, price of corporate bonds influences 48.2% of the investors’ and firms’ decision to invest in corporate bonds. A Durbin Watson test for autocorrelation value of 2.013 was established depicting no (serial) autocorrelation within the regression model residuals. Thus, the random (non-stationary) data was used in the regression analysis.
Table 4.5: Analysis of Variance (ANOVA)

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>17.787</td>
<td>5</td>
<td>3.557</td>
<td>3.718</td>
<td>.015b</td>
</tr>
<tr>
<td>Residual</td>
<td>19.136</td>
<td>20</td>
<td>.957</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>36.923</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Tenure, Long Term Bank Loan Rate, treasury bonds rate, cash flow position, price of corporate bonds  
b. Dependent Variable: quantity of corporate bond

ANOVA analysis was conducted to determine the significance of the regression model. An F-value of 3.718 at p = .015 was established depicting that the regression model had low margin of error (p>0.05) showing that the model is significant at 95% confidence level.

Table 4.6: Regression Coefficients

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>9.531</td>
<td>3.030</td>
<td>1.146</td>
<td>.075</td>
</tr>
<tr>
<td>Price Of Corporate Bonds</td>
<td>.243</td>
<td>.145</td>
<td>.431</td>
<td>3.172</td>
</tr>
<tr>
<td>Treasury Bonds Rate</td>
<td>-.137</td>
<td>.101</td>
<td>-.293</td>
<td>-3.061</td>
</tr>
<tr>
<td>Long Term Bank Loan Rate</td>
<td>.079</td>
<td>.099</td>
<td>.165</td>
<td>2.898</td>
</tr>
<tr>
<td>Cash Flow Position</td>
<td>.553</td>
<td>.166</td>
<td>.577</td>
<td>3.328</td>
</tr>
<tr>
<td>Tenure</td>
<td>.175</td>
<td>.111</td>
<td>.259</td>
<td>3.004</td>
</tr>
</tbody>
</table>

a. Dependent Variable: quantity of corporate bond

The study established the following regression model:
Y = 9.531 + 0.243X₁ – 0.137X₂ + 0.079X₃ + 0.553X₄ + 0.175X₅

Demand of Corporate Bond = 9.531 + 0.243*Price of Corporate Bonds - 0.137*Treasury Bonds Rate + 0.079*Long Term Bank Loan Rate + 0.553*Cash Flow Position + 0.175*Bond Tenure

The study established that when the tenure, long term bank loan rate, treasury bonds rate, cash flow position and price of corporate bonds are zero, the corporate bond demand would be 9.531 depicting that demand for corporate bond would be positive.

The study also established that holding other factors (tenure, long term bank loan rate, treasury bonds rate and cash flow position) constant, a unit increase in price of corporate bonds would lead to a 0.243 (p = .010) increase in corporate bond demand. A unit increase in treasury bonds rate while holding other factors (tenure, long term bank loan rate, cash flow position and price of corporate bonds) would yield a 0.137 (p = .018) decrease in corporate bond demand.

Furthermore, holding tenure, treasury bonds rate, cash flow position and price of corporate bonds constant, a unit increase in long term bank loan rate would result in a 0.079 (p = .034) increase in corporate bond demand: when tenure, long term bank loan rate, treasury bonds rate and price of corporate bonds, a unit increase in cash flow position would yield a 0.553 increase in corporate bond demand. Holding other factors (long term bank loan rate, treasury bonds rate, cash flow position and price of corporate bonds) constant, a unit increase in tenure would yield a 0.175 increase in corporate bond
demand. This depicts that, jointly, while treasury bonds rate negate the demand for corporate bonds, tenure, long term bank loan rate, cash flow position and price of corporate bonds would foster corporate bond demand.

The study conducted a normal P-P plot of regression standardized residual to determine if the normality of the model’s residuals. Figure 4.1 indicates that the dependent variable was normally distributed and that the probability of outliers was minimal. The findings imply that the responses were lying close to the line of normality. Furthermore, it implied that the data was ideal for all type of analysis, including parametric and regression analysis.

![Normal P-P Plot of Regression Standardized Residual](image)

**Figure 4.1: P-P Plots for Normality of Residuals**
4.4 Discussion of Findings

Supply and demand are the basic determinants of prices for bonds and other financial assets. Bond demand rise when supply and demand alternative sources of external financing such as long-term loans fall or become unattractive (Buigut, 2010). A bond's yield, which is the ratio of annual interest payments to market price, rises when its price falls and falls when the price rises. The factors affecting the demand dynamic of bonds include the direction of interest rates, financial health of bond issuers and fiscal policy (Dick-Nielsen, Feldhütter and Lando, 2009).

Treasury through CBK sets short-term interest rates on instruments such as T-bill and bonds as part of its monetary policy mandate to maintain economic growth and price stability. Changes in monetary policy affect other short- and long-term interest rates. Bond demand rises when rates fall because demand rises for older bonds sold at a higher coupon rate, which is a bond's stated interest rate. Conversely, bond prices fall when rates rise because demand falls for older bonds sold at a lower coupon rate. Bond markets usually anticipate changes in interest rates several months in advance of CBK action. Longer-term bonds are usually more sensitive to interest rates, because there is more time for changes in monetary policy before maturity. There is always demand for Treasury bonds because they are considered risk-free investments. However, when their coupon rate is lower than that of the corporate bonds, investors prefer the later as it provide them with higher yields or returns (Blanco, Brennan and Marsh, 2005).
The credit quality of an issuer as depicted by its cash flow position affects investor demand for its bonds. Corporate bonds and even bonds issued by some state and local governments are riskier because the issuers could face financial difficulties and default on its obligations. Rating agencies assign grades to each bond based on their independent assessment of each bond issuer's credit quality. Low-rated bonds have to pay higher interest rates to compensate investors for taking on the additional risk (Matemilola and Bany-Ariffin, 2011).
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the study findings and makes conclusion based on the results. Limitations of the study and areas for further research are also presented.

5.2 Summary of the Findings

The study found that regulations regarding the minimum initial subscription amount of the corporate bonds was constant at Ksh 100,000 with the subsequent units being subscription at Ksh50,000 (par value). Most of the corporate bonds had tenure of 12 years though the minimum tenure that the bond had ever been offered was 8 years. The highest coupon rate of the bonds was 12.5% although the minimum amount was 6% in 2010.

The highest redemption structure was initiated by KENGEN whereby investors redeemed the principal amount every half a year after the second and half year bring about 16 redemption periods. However, most bonds had 3 redemption periods. However, all the corporate bonds issued were oversubscribed with exception of 2011 issued which was heavily undersubscribed (0.6648 subscription to offer ratio). Regression equation established was:

Demand of Corporate Bond = 9.531 + 0.243*Price of Corporate Bonds - 0.137*Treasury Bonds Rate + 0.079*Long Term Bank Loan Rate + 0.553*Cash Flow Position + 0.175*Bond Tenure
This depicts that without the regulations governing the tenure period, period of sale, coupon rate and redemption structure or with all these information being undisclosed, the corporate bonds issues would still be oversubscribed. It was also established that tenure period and redemption structure negatively affects issue subscription. Although period of sales and interest rate would positively influence investors’ decision to subscribe to the corporate bonds.

5.3 Conclusions
The study concludes that tenure period of corporate bonds affects their demand. Investors being rational are skeptical about postponing consumption of money for longer period of time and would rather invest in ‘short-term’ periods. Thus, thus are hesitant to invest in bonds that take longer time to mature. The study also conclude that the higher the frequency of redemption of the principle reduces the return of the bonds as it affect interest generating ability of the bonds, thus investors don’t prefer higher short redemption periods.

It is conclude that long subscription period of corporate bonds affect investments in the same. This follows that some investors take longer to decide on whether to invest in the bond and/or others look to financial resources for the same thus short period cut them off. Interest rate is the major revenue centre for corporate bonds, thus, the higher the interest, the higher the return. Thus, investors prefer higher interest generating bonds.
5.4 Recommendations

The study recommends that in order to increase bond subscription, the issuers should address the regulations governing the particular issue. Of more importance are the regulations on the tenure period which should be short and principle redemption structure to be reduced as this increases the interest generating ability of the bonds making it more attractive.

5.5 Limitations of the Study

There have been only 6 corporate bond issues; thus, the study could be limited by the low number of cases or observations with regards to corporate bonds. This could have affected the outcome of the analysis. Corporate bond issuance could have been affected by other factors other than those studied such as inflation, GDP performance, exchange rate and other macro-economic aggregates that were hard to isolate from the study.

5.6 Suggestions for Further Research

The study recommends that further studies can be done on the effect of inflations and exchange rate on the corporate bond demand/investment. Further studies can also be on the factors influencing corporate bond investment decisions.
REFERENCES


John Keynes. The General Theory of Employment, Interest and Money


Wagacha, Mbui (2001); A Survey of Enterprise Attitudes towards Kenya’s Capital Market, IPAR Discussion Paper No. 028
## Appendix I: CB ISSUED BETWEEN THE YEAR 2001 TO 31/12/2011

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>YEAR OF ISSUE</th>
<th>KSHS (MILLIONS)</th>
<th>MATURITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAFARICOM</td>
<td>2001</td>
<td>4,000</td>
<td>2005</td>
</tr>
<tr>
<td>EAST AFRICAN DEVELOPMENT BANK</td>
<td>2004</td>
<td>1,500</td>
<td>2011</td>
</tr>
<tr>
<td>MABATI ROLLING MILLS</td>
<td>2002</td>
<td>1,000</td>
<td>2007</td>
</tr>
<tr>
<td>FAULU KENYA</td>
<td>2005</td>
<td>500</td>
<td>2010</td>
</tr>
<tr>
<td>PTA BANK</td>
<td>2005</td>
<td>1,600</td>
<td>2012</td>
</tr>
<tr>
<td>ATHIRIVER MINING</td>
<td>2005</td>
<td>800</td>
<td>2012</td>
</tr>
<tr>
<td>SHELTER AFRIQUE</td>
<td>2005</td>
<td>500</td>
<td>2009</td>
</tr>
<tr>
<td>PTA BANK (2 ISSUES)</td>
<td>2005 &amp; 2007</td>
<td>2,600</td>
<td>2012 &amp; 2014</td>
</tr>
<tr>
<td>BARCLAYS BANK LTD (2 ISSUES)</td>
<td>2007 &amp; 2008</td>
<td>2,200</td>
<td>2014 &amp; 2013</td>
</tr>
<tr>
<td>MABATI ROLLING MILL</td>
<td>2008</td>
<td>2,000</td>
<td>2016</td>
</tr>
<tr>
<td>SHELTER AFRIQUE</td>
<td>2010</td>
<td>1,000</td>
<td>2012</td>
</tr>
<tr>
<td>CFC-STANBIC (2 ISSUES)</td>
<td>2009 &amp; 2010</td>
<td>5,000</td>
<td>2016 &amp; 2014</td>
</tr>
<tr>
<td>SAFARICOM (2 ISSUES)</td>
<td>2009 &amp; 2010</td>
<td>12,013</td>
<td>2014 &amp; 2015</td>
</tr>
<tr>
<td>HOUSING FINANCE</td>
<td>2010</td>
<td>7,000</td>
<td>2017</td>
</tr>
<tr>
<td>KENGEN</td>
<td>2010</td>
<td>25,000</td>
<td>2019</td>
</tr>
<tr>
<td>SHELTER AFRIQUE</td>
<td>2011</td>
<td>2,500</td>
<td>2014</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>69,213</strong></td>
<td></td>
</tr>
</tbody>
</table>
Appendix II: SOURCE CMA

### EQUITY IPOS W.E.F 2001-2011

<table>
<thead>
<tr>
<th>Company</th>
<th>No. of Shares</th>
<th>Ord.</th>
<th>Year of Issue</th>
<th>Issue Price</th>
<th>Sum Raised (Kshs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mumias</td>
<td>300,000,000</td>
<td>0</td>
<td>Nov-01</td>
<td>6.25</td>
<td>1,125,000,000</td>
</tr>
<tr>
<td>Kengen</td>
<td>658,900,000</td>
<td>0</td>
<td>Apr-06</td>
<td>11.9</td>
<td>7,840,910,000</td>
</tr>
<tr>
<td>Scan Group</td>
<td>69,000,000</td>
<td>0</td>
<td>Jun-06</td>
<td>10.45</td>
<td>721,050,000</td>
</tr>
<tr>
<td>Eveready</td>
<td>63,000,000</td>
<td>0</td>
<td>Aug-06</td>
<td>9.5</td>
<td>598,500,000</td>
</tr>
<tr>
<td>Access Kenya</td>
<td>80,000,000</td>
<td>0</td>
<td>Mar-07</td>
<td>10</td>
<td>800,000,000</td>
</tr>
<tr>
<td>Kenya Re</td>
<td>240,000,000</td>
<td>0</td>
<td>Jul-07</td>
<td>9.5</td>
<td>2,280,000,000</td>
</tr>
<tr>
<td>Safaricom</td>
<td>10,000,000,000</td>
<td>0</td>
<td>Jun-08</td>
<td>5</td>
<td>50,000,000,000</td>
</tr>
<tr>
<td>Co-op Bank</td>
<td>701,000,000</td>
<td>0</td>
<td>Oct-08</td>
<td>9.5</td>
<td>5,400,000,000</td>
</tr>
</tbody>
</table>

Total Sum Raised: 68,765,460,000
Appendix III: Corporate Bond Data

<table>
<thead>
<tr>
<th>Company</th>
<th>Quantity Of Corporate Bond (000)</th>
<th>Price Of Corporate Bonds</th>
<th>Treasury Bonds Rate</th>
<th>Long Term Bank Loan Rate</th>
<th>Cash Flow Position (000)</th>
<th>Tenure</th>
<th>Issue Date</th>
<th>Maturity Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centum</td>
<td>3,198,900</td>
<td>13.5</td>
<td>9.351</td>
<td>19.73</td>
<td>1,366,675</td>
<td>5</td>
<td>10-Sep-12</td>
<td>10-Sep-17</td>
</tr>
<tr>
<td>Consolidated Bank of Kenya Ltd</td>
<td>1,700,000</td>
<td>13.25</td>
<td>9.906</td>
<td>20.15</td>
<td>701,201</td>
<td>7</td>
<td>31-Jul-12</td>
<td>23-Jul-19</td>
</tr>
<tr>
<td>Shelter Afrique</td>
<td>500,000</td>
<td>12.75</td>
<td>9.046</td>
<td>18.15</td>
<td>947,045</td>
<td>3</td>
<td>17-Dec-12</td>
<td>14-Dec-15</td>
</tr>
<tr>
<td>Shelter Afrique</td>
<td>95,200</td>
<td>11</td>
<td>8.121</td>
<td>14.74</td>
<td>190,015</td>
<td>3</td>
<td>24-Aug-09</td>
<td>31-Aug-12</td>
</tr>
<tr>
<td>Shelter Afrique</td>
<td>904,800</td>
<td>13.75</td>
<td>8.121</td>
<td>14.74</td>
<td>190,015</td>
<td>3</td>
<td>24-Aug-09</td>
<td>31-Aug-12</td>
</tr>
<tr>
<td>Barclays Bank</td>
<td>1,500,000</td>
<td>7.76</td>
<td>8.056</td>
<td>13.39</td>
<td>8,016,000</td>
<td>7</td>
<td>19-Nov-07</td>
<td>19-Nov-14</td>
</tr>
<tr>
<td>Barclays Bank</td>
<td>2,000,000</td>
<td>8.7</td>
<td>9.144</td>
<td>13.29</td>
<td>9,002,000</td>
<td>7</td>
<td>14-Jul-08</td>
<td>14-Jul-15</td>
</tr>
<tr>
<td>Mabati Rolling Mills</td>
<td>1,378,500</td>
<td>10.19</td>
<td>8.440</td>
<td>14.12</td>
<td>277,781</td>
<td>8</td>
<td>27-Oct-08</td>
<td>3-Jan-17</td>
</tr>
<tr>
<td>Mabati Rolling Mills</td>
<td>621,500</td>
<td>13</td>
<td>8.440</td>
<td>14.12</td>
<td>277,781</td>
<td>8</td>
<td>27-Oct-08</td>
<td>3-Jan-17</td>
</tr>
<tr>
<td>CFC Stanbic Bank</td>
<td>97,906.58</td>
<td>9.91</td>
<td>8.153</td>
<td>14.79</td>
<td>1,105,656</td>
<td>7</td>
<td>16-Jul-09</td>
<td>14-Jul-16</td>
</tr>
<tr>
<td>CFC Stanbic Bank</td>
<td>2,402,093.42</td>
<td>12.5</td>
<td>8.155</td>
<td>14.79</td>
<td>1,105,656</td>
<td>7</td>
<td>16-Jul-09</td>
<td>14-Jul-16</td>
</tr>
<tr>
<td>CFC Stanbic Bank</td>
<td>2,500,000</td>
<td>7.5</td>
<td>2.548</td>
<td>13.87</td>
<td>2,005,967</td>
<td>4</td>
<td>17-Dec-10</td>
<td>17-Dec-14</td>
</tr>
<tr>
<td>Kengen Ltd</td>
<td>12.5</td>
<td>8.061</td>
<td>14.85</td>
<td>3,078,765</td>
<td>10</td>
<td>3-Nov-09</td>
<td>1-Nov-19</td>
<td></td>
</tr>
<tr>
<td>Company</td>
<td>Shares</td>
<td>P/E</td>
<td>Price</td>
<td>Dividend</td>
<td>ROE</td>
<td>Duration 1</td>
<td>Duration 2</td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------</td>
<td>-------</td>
<td>-------</td>
<td>----------</td>
<td>------</td>
<td>------------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td>Housing Finance</td>
<td>1,166,500</td>
<td>11.5</td>
<td>2.113</td>
<td>19.73</td>
<td>351,118</td>
<td>7</td>
<td>20-Sep-10</td>
<td>3-Oct-17</td>
</tr>
<tr>
<td>Housing Finance</td>
<td>5,864,400</td>
<td>8.5</td>
<td>2.113</td>
<td>19.73</td>
<td>351,118</td>
<td>7</td>
<td>20-Sep-10</td>
<td>3-Oct-17</td>
</tr>
<tr>
<td>Housing Finance</td>
<td>2,969,000</td>
<td>13</td>
<td>10.307</td>
<td>19.04</td>
<td>975,795</td>
<td>7</td>
<td>22-Oct-12</td>
<td>14-Oct-19</td>
</tr>
<tr>
<td>Safaricom Ltd</td>
<td>7,513,000</td>
<td>12.25</td>
<td>7.969</td>
<td>14.78</td>
<td>19,945,160</td>
<td>5</td>
<td>2-Oct-09</td>
<td>3-Nov-14</td>
</tr>
<tr>
<td>Safaricom Ltd</td>
<td>4,500,000</td>
<td>7.75</td>
<td>2.256</td>
<td>13.95</td>
<td>15,304,027</td>
<td>5</td>
<td>30-Nov-10</td>
<td>30-Nov-15</td>
</tr>
<tr>
<td>PTA Bank Ltd</td>
<td>800,000</td>
<td>8.82</td>
<td>7.115</td>
<td>12.31</td>
<td>1,484,174</td>
<td>7</td>
<td>4-Jul-05</td>
<td>5-Jul-12</td>
</tr>
<tr>
<td>PTA Bank Ltd</td>
<td>1,000,000</td>
<td>9.44</td>
<td>7.805</td>
<td>13.24</td>
<td>1,526,793</td>
<td>7</td>
<td>15-Oct-07</td>
<td>31-Oct-14</td>
</tr>
<tr>
<td>Sasini</td>
<td>600,000</td>
<td>11.75</td>
<td>7.858</td>
<td>13.32</td>
<td>759,722</td>
<td>5</td>
<td>4-Dec-07</td>
<td>27-Nov-12</td>
</tr>
<tr>
<td>Athi River Mining Ltd</td>
<td>800,000</td>
<td>10.14</td>
<td>8.531</td>
<td>12.97</td>
<td>705,450</td>
<td>5</td>
<td>27-Oct-05</td>
<td>27-Oct-10</td>
</tr>
<tr>
<td>Faulu Kenya LTD</td>
<td>500,000</td>
<td>8.2</td>
<td>8.973</td>
<td>13.12</td>
<td>375,017</td>
<td>5</td>
<td>4-Apr-05</td>
<td>29-Mar-10</td>
</tr>
<tr>
<td>EADB Ltd</td>
<td>800,000</td>
<td>7.5</td>
<td>3.674</td>
<td>12.19</td>
<td>1,850,801</td>
<td>7</td>
<td>9-Aug-04</td>
<td>1-Aug-11</td>
</tr>
</tbody>
</table>
Appendix IV: Issuers of Corporate Bonds

1. Athi River Mining Ltd
2. Barclays Bank
3. Centum
4. CFC Stanbic Bank
5. Consolidated Bank of Kenya Ltd
6. EADB Ltd
7. Faulu Kenya LTD
8. Housing Finance
9. I&M Bank
10. Kengen Ltd
11. Mabati Rolling Mills
12. PTA Bank Ltd
13. Safaricom Ltd
14. Sasini
15. Shelter Afrique