THE EFFECT OF DEBT FINANCING ON FIRM PROFITABILTY OF COMMERCIAL BANKS IN KENYA

BY

LINUS M. MUCHUGIA

A BUSINESS RESEARCH SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT OF THE DEGREE OF MASTERS OF BUSINESS ADMINISTRATION OF THE UNIVERSITY OF NAIROBI

OCTOBER 2013

DECLARATION

I declare that this project is my original work and has not been presented for an award of a degree in any other University.

Signature: _____   Date _____

STUDENT: LINUS M. MUCHUGIA   **REG NO: D61/72144/2011**

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

Signature:………………………   Date:………………………….

SUPERVISOR: MR CYRUS IRAYA

Senior Lecturer Department of Finance and Accounting

DEDICATION

This study is dedicated to my loving family, for their support, encouragement and patience during the entire period of my study and continued prayers towards successful completion of this course.

God bless you all.

ACKNOWLEDGMENTS

I wish to express my sincere appreciation to my family for their understanding and support during the project.

I would also like to express my sincere thanks to the supervisor Mr. Cyrus Iraya for having agreed to supervise this research project and his patience in reading the drafts and occasionally guiding me, without which the research would not have been a reality.

It has been an exciting and instructive study period in the University of Nairobi and I feel privileged to have had the opportunity to carry out this study as a demonstration of knowledge gained during the period studying for my master's degree. With these acknowledgments, it would be impossible not to remember those who in one way or another, directly or indirectly, have played a role in the realization of this research project. Let me, therefore, thank them all equally.

Lastly I thank Almighty God for his guidance and providence which enabled me to undertake this project that was too involving in term of time and resources.

ABSTRACT

The effect of debt financing on firm profitability is of considerable importance to all firms. Banks are especially sensitive to changes in financial leverage due to their low level of equity capital to total assets. Currently most of the commercial banks have engaged in the expansion program which require huge amount of capital, which in most cases bank are turning to debt financing this made me to do research of effect of debt financing on firm profitability of commercial banks here in Kenya. Therefore, the objective of this study was to establish the effect of debt financing on firm profitability, a case commercial bank in Kenya.

The study was descriptive in nature and used a census method of all the 43 commercial banks. The study period covered a 5-year period (2008 – 2012). The study used a Pearson Correlation Analyses to examine the relationship between independent variables banks profitability and the dependent variables banks capital. Multiple linear regresion analsysis was also used to achieve the same.

The findings show positive relationship between short term debt (SDA) and profitability since short-term debt tends to be less expensive and increasing it with a relatively low interest rate will lead to an increase in profit levels and hence performance. A negative association was established between long term debt (LDA) and profitability. The study recommends that owing to the less cost incurred in obtaining short term loans than long term ones, banks should go for short term loans since despite changing the firm's capital structure to the worse.

TABLE OF CONTENTS

CHAPTER ONE

INTRODUCTION

CHAPTER TWO

LITERATURE REVIEW

CHAPTER THREE

RESEARCH METHODOLOGY

CHAPTER FOUR:

DATA ANALYSIS AND PRESENTATION

CHAPTER FIVE:

DISCUSSIONS, CORRECTION AND RECOMMENDATION

List of tables

ABBREVIATIONS AND ACRONYMS

CAR	Capital adequacy ratio
CBK	Central Bank of Kenya
CCF	Country cooperation framework
CEO	Chief executive officer
CG	Capital growth
CGI	Capital growth intensity
COF	Cost of funds
GMM	Generalized method of moments
KBA	Kenya Bankers Association
LB	Large banks
ROA	Return on asset
ROE	Return on equity
RWCAR	Risk-weighted capital adequacy ratio
NI	Net income
NSE	Nairobi Security Exchange
OC	Ownership concentration
SMB	Small and medium banks
SME	Small and medium enterprise
SPSS	Statistical package for social scientist
VSB	Very small banks

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The awareness of many of the issues of corporate finance is evident also amongst early economists, even Adam Smith warned about the misdeeds of directors managing other people's money and even against the limited liability corporation as such. In the specific field of capital structure research, Miller and Modigliani (1958) marked the start of more formal research after proposing their fundamental 'irrelevance argument' where they claim that under strict assumptions, in particular of efficient markets, no taxes or bankruptcy costs, how the cashflows from a firm's assets are split between various financiers cannot alter any combined values.

Subsequent research effectively introduces deviations from these assumptions in an on-going attempt to better understand observed company behavior. As to the current state of theoretical research in the field, Tirole (2006), states: "the financial contracting] theories are often criticized for their lack of robustness; it is also pointed out that they do not account for the diversity of capital structures that characterizes modern operations.

Tirole sums up the key themes when studying capital structure as being, tax benefits and bankruptcy loss from leverage, information and incentives, (current) capital, liquidity, collateral1 and external monitoring. In an effort to promote efficiency in the banking industry and after a period of worldwide liberalization and deregulation, the Basel Capital Accord of 1988 (Basel I) which led to the endorsement of a new capital adequacy

framework (Basel II) in 2004 (operational from 2007) marked the beginning of a new phase of re-regulation with an attempt to bring about an international harmonization of banking regulations (Bichsel and Blum, 2005).

1.1.1 Debt Financing

According to Tirole (2006), debt financing takes many forms. The essence of debt is that the borrower must repay the funds along with agreed-upon service charges such as interest and loan origination fees. If the money is not repaid as promised, the lender can start collection proceedings. This process can become very uncomfortable for the entrepreneur, who could stand to lose the business and any non-business assets pledged to secure the loan. A long-term loan usually has a payback period between one and five years. Depending upon the deal negotiated, these loans are normally secured (collateralized by assets) and guaranteed by the entrepreneurs. Rates and terms on long-term loans vary greatly based on the lending institution's policies and the business's age and financial status (Bichsel & Blum, 2005).

Collateral (personal assets) is pledged by the entrepreneur to offset the loss to the lender should the entrepreneur default on the loan. If a borrower fails to meet the terms of a secured note, the lender takes possession of whatever asset was pledged as collateral and sells it. The proceeds of the sale are then applied to the amount due on the note. The loss of collateral will not release the borrower from all liability on the debt if the collateral sale proceeds are not enough to pay off the loan and the lender's costs of retaking and selling the collateral. If the sale of the collateral is insufficient to repay the debt, the

lender may then look to the guarantee provided by the entrepreneur for the remaining unpaid balance (Central Bank of Kenya, 2013).

The capital requirement is a bank regulation, which sets a framework on how banks and depository institutions must handle their capital. The categorization of assets and capital is highly standardized so that it can be risk weighted. Internationally, the Basel Committee on Banking Supervision housed at the Bank for International Settlements influence each country's banking capital requirements. In 1988, the Committee decided to introduce a capital measurement system commonly referred to as the Basel Accord. A significantly more complex capital adequacy framework commonly known as Basel II has replaced this framework. After 2012, Basel III will replace it.Capital adequacy has been the focus of many studies and regulator as it is considered to be one of the main drivers of any financial institution's profitability (Bourke, 1989; Berger, 1995; Navapan and Tripe, 2003; White and Morrison, 2001).In contrast, other studies argue that in a world of perfect financial markets, capital structure and hence capital regulation is irrelevant (Modigliani and Miller, 1958). However, White and Morrison (2001) posited that the regulator ensures that banks have enough of their own capital at stake. Bichsel and Blum (2005) supported this proposition arguing that these regulations help in reducing negative externalities (e.g., disruptions to the payments system and a general loss of confidence in the banking system) in addition to boosting the slow economic growth hence the Gross Domestic Product (GDP).

These propositions leads to the question: what then do prudential capital requirements accomplish in the banking sector? This study suggests that these requirements have

something to do with a bank's performance. In Kenya, the government, through the Central Bank of Kenya put requirements that all commercial banks should gradually increase their capital base to one billion Kenya shillings from the current 250 million Kenya shillings by 2012 (currently, 1US\$ = 77.20 Kenya shillings) (Central Bank of Kenya, 2008b). This represents a 300% increase.

1.1.2 Firm profitability

Profitability is the primary goal of all business ventures. Without profitability the business will not survive in the long-run. So measuring current and past profitability is very important. Profitability is measured with income and expenses. Income is generated from the activities of the business. A business that is highly profitable has the ability to reward its owners with a large return on the investment (Waweru and Kalani, 2009)

A profitable banking sector is better able to withstand negative shocks and contribute to the stability of the financial system. Important changes in the operating environment particularly credit risk is likely to affect bank profitability. Empirical analysis finds that both bank- specific as well as macroeconomic factors are important determinants in the profitability of banks (Westerfield, 2008). Brealey and Myers (2003) argue that there are various important measures in determining profitability of an organization. These include; Net Profit Margin, Return on Assets and Return on Equity. In 1972 David Cole introduced a procedure for evaluating bank performance via ratio analysis (MacDonald and Koch, 2006). This procedure enables an analyst to evaluate the source and magnitude of banks' profits relative to selected risks taken. David Cole employed return on equity model to analyze bank profitability and identified specific measures of credit risk,

liquidity risk, interest rate risk, operational risk and capital risk (MacDonald and Koch, 2006).

1.1.3 Relationship between Debt Financing and Firm Profitability

Explaining role of debt in firms' profitability is one of the primary objectives of contemporary researches for more than fifty years (Modigliani and Miller 1958). However, this role remains a questionable subject which attracts the attention of many researchers as Goddard et al. (2005), Berger and Bonaccorsi (2006), Rao et al, (2007), Baum et al. (2007), Weill (2008), Nunes et al. (2009), Margaritis and Psillaki (2010) and Kebewar (2012).

Indeed, researchers analyze the debt ratio and try to determine whether an optimal debt ratio exists or not. Optimal debt ratio is generally defined as the one which minimizes the cost of capital for the company, while maximizing the value of company. In other words, the optimal debt ratio is the one which maximizes the profitability of company. Besides, the divergence between researches can be observed in theoretical strand of literature. There are three essential theories which highlight the influence of debt on corporate profitability, namely: trade off theory, pecking order theory and market timing theory. First, according to trade off theory, states that there is an advantage to financing with debt (namely, the tax benefit of debts) and that there is a cost of financing with debt (the bankruptcy costs of debt) According to the agency costs theory, internal debt 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. According to market timing theory; perceives that mangers issue securities depending on the time varying costs of relative equity and debt

and thus issuance decisions have a long term effect on capital structure because the observed capital structure at any particular date is the outcome of prior issuance decision thus firms prefer to issue equity when the relative cost is low and prefer to issue debt when equity cost is high.

Furthermore, the disagreement exists not only in the theoretical literature but also it is present in the empirical strand. A negative effect of debt on profitability was confirmed by Majumdar and Chhibber (1999), Eriotis et al. (2002), Ngobo and Capiez (2004), Goddard et al. (2005), Rao et al. (2007), Zeitun and Tian (2007) and Nunes et al. (2009). On the other hand, Baum et al. (2006) & (2007), Berger and Bonaccorsi (2206), Margaritis and Psillaki (2007) & (2010), showed a positive influence. In addition, Simerly and LI (2000), Mesquita and Lara (2003) and Weill (2008), find both effects in their studies. Besides that, Berger and Bonaccorsi (2006), Margaritis and Psillaki (2007) and Kebewar (2012) finds the presence of a nonlinear effect (inverse U-shaped relationship). Finally, a non-significant effect was confirmed by Baum et al. (2007) in American industrial companies.

Several factors may reveal reasons for the contradiction of results in empirical studies. First, these empirical studies focus on different types of sample (countries, sectors, companies and periods). Furthermore, researchers have used different measures of profitability as a dependent variable and various debt ratios and independent variable. Finally, these studies applied different methodologies .The empirical literature concerning the impact of debt on profitability leads us to make two inferences. The first one is that most of the empirical studies focused on listed companies. The second one is

related to paucity of studies on the companies as mentioned by; Goddard et al. (2005), Weill (2008), Margaritis and Psillaki (2010) and recently in Kebewar (2012).

These two avenues motivated my study. Moreover, current work is very important because debt is a risky choice whose consequences on the bank profitability can be considerable (e.g. the risk of bankruptcy and its consequences for the stakeholders). So I will try to find, empirically, the effect of debt on profitability for the commercial banks in Kenya.

1.1.4. Banking Industry in Kenya

The Banking industry in Kenya is governed by the Companies Act, the Banking Act, the Central Bank of Kenya Act and the various prudential guidelines issued by the Central Bank of Kenya (CBK). The banking sector was liberalized in 1995 and exchange controls lifted (CBK Website). The CBK, which falls under the Minister for Finance docket, is responsible for formulating and implementing monetary policy and fostering the liquidity, solvency and proper functioning of the financial system. As at December 2009 there were forty four banks and non bank institutions, fifteen micro finance institutions and one hundred and nine foreign exchange bureaus (CBK Website).

The banks have come together under the Kenya Bankers Association (KBA), which serves as a lobby group for the banking sector's interest's .The KBA serves a forum to address issues affecting members for instant government legislation. Over the last few years, the Banking sector in Kenya has continued to growth in assets, deposits, profitability and products offering. The growth has been mainly underpinned by an

industry wide branch network expansion strategy both in Kenya and in the East African community region and automation of a large number of services and a move towards emphasis on the complex customer needs rather than traditional 'off-the-shelf' banking products (CBK, 2006).

Players in this sector have experienced increased competition over the last few years resulting from increased innovations among the players and new entrants into the market. To further strengthen the banking system and enhance surveillance in the industry, the Central Bank took the following actions: Bank Supervision Department was strengthened to enhance closer surveillance aimed at detecting banking problems early enough so as to take preventive action. Guidelines for risk classification of loans were revised and issued to facilitate better credit risk assessment. The Central Bank has recently licensed credit reference and credit rating agencies in order to enhance credit risk assessment. The disclosure of the financial performance was enhanced as a way of ensuring better market discipline. The banks are now required to publish non-performing loans as well as facilities to directors (CBK, 2006).

The Banking Act was amended further in 1999 so as to be in tandem with the regional and international banking regulations as follows: A capital requirement was adopted in order to be in line with the Basel Committee Accord and International Supervisory practice. Restrict advances, credit and guarantees to or in form of an insider or associate in excess of 20% of core capital of the banking institutions. Central Bank may prescribe limits on the preparation of core capital that may be invested in purchase or acquisition of

land. Institutions required disclosing to the Central Bank the full particulars of the individuals who hold shares in the banking institutions (CBK, 2004).

1.2 Research Problem

The effect of debt financing on firm profitability is of considerable importance to all firms. Banks are especially sensitive to changes in financial leverage due to their low level of equity capital to total assets. In addition, the capital structure of banks is highly regulated, and the largest class of bank liabilities is retail deposits, which are insured by the public. Lack of studies on debt financing and profitability on commercial banks and the concentration of studies on capital structure and listed commercial banks have motivated my study. The government of Kenya through central bank have also required commercial bank to increase their capital base has also necessitated this study. Currently most of the commercial banks have engaged in the expansion program which require huge some of capital, the way to access this capital have made me to do research of effect of debt financing on firm profitability of commercial banks here in Kenya.

Foong (2008) indicated that the efficiency of banks could be measured by using the ROE, which illustrates to what extent banks use reinvested income to generate future profits. Navapan and Tripe (2003) asserted that the proposition that there should be a negative relationship between a bank's ratio of capital to assets and its return on equity may seem to be self-evident as to not need empirical verification. It is therefore important to note that Berger (1995) found evidence for a positive relationship that is, the ratios of capital to assets and returns on equity were positively related. Various local studies conducted have failed to establish any relationship effect of return on equity on debt financing in

commercial banks in Kenya. The study done by Mwega (2009) had sought to determine global crises and its effect on policy on financial institutions in Kenya. Maina (2003) conducted a survey on risk based capital standards and the riskiness of bank portfolio in Kenya. Ndung'u (2003) in a study on the determinants of profitability of quoted commercial banks in Kenya finds that sound asset and liability management had a significant influence on profitability.

Various studies have been carried out to ascertain various capital structure facets in Kenyan firms. Kamere (1987) found out that stability of future cash flows, level of interest rates in an economy, asset structure of a firm, the need for outside capital, lender attitudes towards a firm and attitudes of management towards risk adjust towards some debt equity ratios. Omondi (1996) also found out that the mean debt equity ratios were not significantly different for firms studied. He tested quite a number of factors (industry class, asset structure, profitability, interest charges, size, and growth, changes in cash flows, age and ownership) and found out that the industrial class was not statistically significant and that the capital structure of firms on sectoral basis was quite different.

Kiogora (2002) sought to find out whether capital structures of quoted companies were consistent over time and to ascertain whether companies quoted on the Nairobi stock Exchange in the same industry had similar capital structures. He found out that there were differences in capital structure among industry groups: there was a negative relationship between returns of firms quoted on the Nairobi Stock Exchange and their level of leverage and that companies in the Agricultural sector had consistent levels of equity from year to year. Firms within a given sector tended to cluster towards some

target Equity/Total Assets ratio implying that an optimal capital structure exists. He also found out that returns increased with increased leverage hence supporting the traditionalists' view of an optimal capital structure.

While the above research outcome provides valuable insights on capital structure, they have not induced a clear relationship between capital structure and profitability in Commercial banks in Kenya. Given the gaps poised by the above empirical studies, this study poses the research question: "what is the relationship between debt financing and profitability in commercial banks in Kenya?" The study hypothesizes that commercial Banks capital is negatively (positively) related to ROE/profits. To answer the above question, the study seeks to establish a relationship between Capital structure and profitability; this will be done by reviewing various profitability measures and in particular the ROE ratio. ROE has an important indicator to measure the profitability of the banks has been discussed extensively.

The local studies analyzed are biased towards the general capital structure in the NSE. The studies did not establish a clear relationship between Capital Structure and profitability. In addition, the studies have not discussed measures of profitability and Capital structure in Banks. From the literature review there are various gaps identified and thus necessitating the study. The study will investigate the relationship between debt financing and profitability of commercial banks in Kenya.To do this, we will implement the generalized method of moments (GMM) estimation model on a population of 44 commercial bank observed over the period (2008 – 2012); these banks are divided into three 'size' classes VSBs (very small banks), SMBs (small and medium banks) and LB

(large Banks). According to the proponents of GMM model, it provides solution to the problems of simultaneity bias, reverse causality (especially between profitability and debts) bias and the conundrum of possible omitted variables.

1.3 Objectives of the Study

The objective of this study was to establish the effect of debt financing on firm profitability, a case commercial bank in Kenya.

1.4 Value of the Study

The study is important to various stakeholders;
Banking Industry is to obtain information on the relationship between Capital and profitability. This information will be especially useful to future investors in the industry and Senior Management.

The study is to enlighten management of corporations on bottlenecks to cheaper financing options through issuance of corporate bond at NSE that lead to over dependence on traditional bank loans and overdrafts. Cheaper business financing opportunities through issuance of medium and long term firm's bonds would help in containment of cost of debt and improve shareholder value.The Government, is to obtain information on the importance of implementation of various legal frameworks in relation to Capital management i.e. Basel Accords.

The academicians in the fields of Finance, Accounting and Investment are to benefit from this research as it shall provide them with various important facts. To finance

academicians, the finding is to shed some light on corporate bond market characteristics in the Kenyan stock market and further be studied in future. For the Accountants, they are to gain an inside on how the accounting factors count much on the decisions about investing in a firm.

The investment scholars, from the finding, they are to get the understanding of the relationship between risk and return and how the development of debt finance is to help in wealth diversification and managementin addition to contributing to the body of knowledge, the research also help and encourage continuity as far as doing further research is concerned. Regulatory Body like central Bank of Kenya will further acknowledge the importance of Capital Adequacy in management in banks.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this chapter, previous studies related to the topic are reviewed. The chapter begins with theoretical orientation on capital structure theories to inform the study further. In addition, the researcher discussed various empirical studies done in the same field. It further looked at determinants of commercial bank profitability and finally the relationship between profitability and capital as a summary of the literature review.

2.2 Theoretical Framework

This study is based on Trade-off theory, Pecking order theory and market timing theory as discussed below:

2.2.1 Trade-off theory

It states that there is an advantage to financing with debt (namely, the tax benefit of debts) and that there is a cost of financing with debt (the bankruptcy costs of debt). 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. Empirically, this theory may explain differences in D/E ratios between industries, but it doesn't explain differences within the same industry.

Implication of this 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 (Al-Sakran, 2001).

2.2.2 Pecking order theory

It states that companies prioritize their sources of financing (from internal financing to equity) according to the law of least effort, or of least resistance, preferring to raise equity as a financing means "of last resort". Hence: internal debt 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.

The implication of this theory is 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.

The pecking order theory of capital structure is among the most influential theories of corporate leverage. According to Myers (1984), due to adverse selection, firms prefer internal to external financial. When outside funds are necessary, firms prefer debt to equity because of lower information costs associated with debt issues. Equity is rarely issued. These ideas were refined into a key testable prediction by Shyam-Sunder and Myers (1999). The financing deficit should normally be matched dollar-for-dollar by a change in corporate debt. As a result, if firms follow the pecking order, then in a regression of net debt issues on the financing deficit, a slope coefficient of one is observed. (Harris and Raviv, 1991).

2.2.3 Market Timing Theory

The theory perceives that managers issue securities depending on the time varying costs of relative equity and debt and thus issuance decisions have a long term effect on capital structure because the observed capital structure at any particular date is the outcome of prior issuance decision thus firms prefer to issue equity when the relative cost is low and prefer to issue debt when equity cost is high (Kwast and Rose 1982).

Since the promised payments to bondholders are fixed, stockholders are entitled to what is left over after the fixed payments; stock prices are more sensitive than bond prices to any proprietary information about the firm's future performance. If management has favorable information that is not yet reflected in market prices, the release of such

information will cause a larger increase in stock than in bond prices, and so the current stock price will appear more undervalued to managers than current bond prices (Molyneux and Thornton 1992).

Implication of this theory is that for a firm to avoid diluting the value of existing stockholders claims, the companies that are profitable uses for more capital but believe their shares not to be undervalued will generally choose to issue debt rather than equity. Conversely, managers who think their companies are overvalued are more likely to issue equity and, what amounts to the same thing, to make stock-for-stock acquisitions. The importance for management is to recognize here is that most companies issuing new equity those that are undervalued as well as those that are overvalued should expect a drop in their stock prices when they announce the offering.

2.3 Measures of Debt Financing and firm profitability

2.3.1 Debt financing

It's measured by the following; cost of funds ratio which measures the average cost of the banks borrowed funds. This is one of the most important input costs for a financial institution, because a lower cost will generate better returns when the funds are deployed in the form of short-term and long term loans to borrowers. The spread between the cost of funds and the interest rate charged to their borrowers represents one of the main sources of profit for most financial institutions,(Investopedia, 2012). When comparing banks, cost of funds ratio shows weather they have gained access to low cost funding sources or not, such as savings. Banks that can mobilize savings often have a relatively

low cost of funds, but this advantage is to some extent offset by higher administrative costs of mobilizing savings. Costs of funds (CoF) are calculated using the following formula (Mersland, 2011):

> ➤ CoF=<u>Interests and fees paid on loans excluding payments on savings</u>
>   Average outstanding loans from creditors

There have still not been any studies using cost of funds as a measure of financial performance. But according to the technical guide "Performance Indicators for Microfinance Institutions" (2003) cost of funds are used as a measure of Banks financial management, which further is an indicator of performance.(MicroRate & InterAmericanDevelopmentBank, 2003).

The capitalization ratio compares total debt to total capitalization (capital structure). The capitalization ratio reflects the extent to which a company is operating on its equity. Capitalization ratio is also known as the financial leverage ratio. It tells the investors about the extent to which the company is using its equity to support its operations and growth. This ratio helps in the assessment of risk. The companies with high capitalization ratio are considered to be risky because they are at a risk of insolvency if they fail to repay their debt on time. Companies with a high capitalization ratio may also find it difficult to get more loans in the future.

A high capitalization ratio is not always bad; however, higher financial leverage can increase the return on a shareholder's investment because usually there is tax advantages associated with the borrowings.

The capitalization ratio is calculated by dividing the long-term debt by the total shareholder's equity and long–term debt. This can be expressed as:

> ➢ Capitalization Ratio = Long-Term Debt / (Long-Term Debt + Shareholder's Equity)

The capitalization ratio is a very meaningful debt ratio because it gives an important insight into the use of financial leverage by a company. It focuses on the relationship of long-term debt as a component of the company's total capital base. The total capital is the capital raised by the shareholders and the lenders.

The company's capitalization (it should not be confused with the market capitalization) explains the make-up of the long-term capital of the company. Capitalization is also known as capital structure. A company's long term capital consists of long - term borrowings and shareholder's equity. There is no standard or benchmark for setting the right or optimum amount of debt. Leverage will depend on the type of industry, line of business and the stage of development of the company (and its products). However, it is commonly understood that low debt and high equity levels in the capitalization ratio indicates good quality of investment. In finance, equity multiplier is defined as a measure of financial leverage. Akin to all debt management ratios, the equity multiplier is a method of evaluating a company's ability to use its debt for financing its assets. The equity multiplier is also referred to as the leverage ratio or the financial leverage ratio.

As explained by Silva (2008), the equity multiplier shows a company's total assets per shilling of stockholders' equity. The higher the equity multiplier, the higher is the financial leverage, which indicates that the company relies more on debt to finance its

assets. The equity multiplier is calculated by dividing total assets by the common stockholder's equity.

The common formula used for calculating equity multiplier is:

➢ Equity Multiplier = Total Assets / Stockholder's Equity

In addition to this formula, an alternative formula is also used for calculating equity multiplier is:

➢ 1 / Equity Ratio

This alternative formula is the reciprocal of the equity ratio. As mentioned previously, a company's assets equal the sum of debt and equity. The equity ratio, therefore, calculates the equity portion of the assets of a company.

The debt to equity ratio is a common measure used to assess a firm's leverage, or in other words the extent to which it relies on debt as a source of financing (Berk & DeMarzo, 2007).

Debt to equity ratio is calculated using the following formula:

➢ Debt to equity ratio = $\frac{\text{Total debt}}{\text{Total equity}}$

In addition to the debt to equity ratio, long term debt to equity and short term debt to equity are also employed in this study.

Capital (equity and long-term debt) represents a source of funds to the bank along with deposits and borrowings. Pringle (1971) observed that an undercapitalized bank will find itself subjected to high levels of short-term borrowing at potentially high excess costs during periods of tight money. Flamini et al. (2009) postulated that bank returns are

affected by macroeconomic variables, suggesting that macroeconomic policies that promote low inflation and stable output growth do boost credit expansion.

According to Christian et al. (2008), capital adequacy measures provide significant information regarding a firm's returns, while a few of the individual variables representing asset quality and earnings are informative. Size and growth and loan exposure measures do not appear to have any significant explanatory power when examining returns.

2.3.2 Profitability Measure in Banks

The profitability in this case is presented and measured using return on equities (ROE). In other words, the amount of net income (NI) returned as a percentage of TSE. The ROE is defined as the company's annual net income after tax divided by shareholder's equity. NI is the amount of earnings after paying all expenses and taxes. Equity represents the capital invested in the company plus the retained earnings. Essentially, ROE indicates the amount of earnings generated from equity I choose it as profitability indicator because ROE comprises aspects of performance, such as profitability and financial leverage (Foong, 2008).

The measurement of bank performance has been developed over time. At the beginning, many banks used a purely accounting-driven approach and focused on the measurement of NI, for example, the calculation of ROA. However, this approach does not consider the risks related to the referred assets, for instance, the underling risks of the transactions,

and also with the growth of off-balance sheet activities. Thus the riskiness of underlying assets becomes more and more important. Gradually, the banks notice that equity has become the scarce resource. Thereby, banks turn to focus on the ROE to measure the net profit to the book equity in order to find out the most profitable business and to do the investment (Joetta, 2007).

ROE is commonly used to measure the profitability of banks. The efficiency of the banks can be evaluated by applying ROE, since it shows that banks reinvest its earnings to generate future profit. The growth of ROE may also depend on the capitalization of the banks and operating profit margin. If a bank is highly capitalized through the risk-weighted capital adequacy ratio (RWCAR) or Tier 1 capital adequacy ratio (CAR), the expansion of ROE will be retarded. However, the increase of the operating margin can smoothly enhance the ROE (Foong, 2008) ROE as an important indicator to measure the profitability of the banks has been discussed extensively in the prior studies.

Foong (2008) indicated that the efficiency of banks can be measured by using the ROE which illustrates to what extent banks use reinvested income to generate future profits. According to Risk bank's Financial Report (2002, the measurement of connecting profit to shareholder's equity is normally used to define the profitability in the banks. ROE also hinges on the capital management activities. If the banks use capital more efficiently, they will have a better financial leverage and consequently a higher ROE. Because a higher financial leverage multiplier indicates that banks can leverage on a smaller base of stakeholders fund and produce higher interest bearing assets leading to the optimization of the earnings.

On the contrary, a rise in ROE can also reflect increased risks because high risk might bring more profits. This means ROE does not only go up by increasing returns or profit but also grows by taking more debt which brings more risk. Thus, positive ROE does not only represent the financial strength. Risk management becomes more and more significant in order to ensure sustainable profits in banks (Sam and Magda, 2009). Furthermore, the paper "Why Return on Equity is a Useful Criterion for Equity Selection" by Kee (2008) has mentioned that ROE provides a very useful gauge of profit generating efficiency. Because it measures how much earnings a company can get on the equity capital. The increased ROE may hint that the profit is growing without pouring new capital into the company. A steadily rising ROE also refers that the shareholders are given more each year for their investment. All in all, the higher ROE is better both for the company and the shareholders. In addition, ROE takes the retained earnings from the previous periods into account and tells the investors how efficiently the capital is reinvested (Kee, 2008).

In accordance with the study by Waymond (2007), profitability ratios are often used in a high esteem as the indicators of credit analysis in banks, since profitability is associated with the results of management performance. ROE and ROA are the most commonly used ratios, and the quality level of ROE is between 15% and 30%, for ROA is at least 1%. The study of Joetta (2007) presented the purpose of ROE as the measurement of the amount of profit generated by the equity in the firm. It is also mentioned that the ROE is an indicator of the efficiency to generate profit from equity. This capability is connected to how well the assets are utilized to produce the profits as well. The effectiveness of

assets utilization is significantly tied to the amount of assets that the company generates for each shilling of equity.

2.5 Empirical Studies

Many empirical analyses have dealt with capital structure, corporate governance and firm value, but most of them have concentrated on only one of the equity. Thus only one aspect of the relation has been taken into account and the presence of reciprocal causations and complementarity between capital structure and other governance instruments have not been considered important in determining firm value (Jensen and Warner (1988); Borsch-Supan and Koke (2000); Heinrich (2000); Bhagat and Jefferis, (2002).

Bougheas *et al.* (2006) using data from 136 U.K. manufacturing firms over the period from 1989 to 1999 used measures of external financing were the ratio of a firm's short-term debt to total external debt, which they assume is a measure of bank financing, and the ratio of a firm's total external debt to its total liabilities, which more closely tracks overall access to external financing. The authors found that several firm-specific characteristics, such as size, collateral, riskiness, age and profitability were important determinants of access to short-term and long-term credit. In addition, they found monetary policy conditions had a greater impact on smaller, riskier and younger firms.

Lewis, Rogalski and Seward (2001) investigate long-run performance of companies issuing equity financing took a sample of 106 equity financing in the U.S. market from 1979 to 1990. Lewis et al argue that issuers might be using the equity financing market

because they were "rationed out" of the equity market. They found out that deteriorating operating performance of the issuers of convertible bonds following the equity financing compared to the matched sample of non-issuing firms. However, the difference in operating performance is not significant as in the case for equity issuing firms compared to the matched sample of non-issuing firms. Lewis et al interpret these findings as evidence somewhat contradicting the arguments of Green (1984) and Mayers (1998). Lewis et al argue that in Green's and Mayers' models it is implicitly assumed that one of the consequences of a equity financing would be that firms invest only in positive net present value projects.

Chang, Chen and Liu (2004) test Mayers' sequential financing hypothesis based on a sample of 109 issues of Taiwanese firms. They develop and test two implications directly related to Mayers' model. The first implication is related to the overinvestment problem. If convertibles are an effective way to mitigate this issue, they are more valuable in cases, where current investments and future investment options are highly positively correlated. According to Chang et al this is a feature generally found in firms with focused activities and more volatile cash flows (since they are not diversified). Therefore, such companies will benefit more from the use of convertibles.

Berle and Means (1967) in their study on large corporation profitability sampled 18 firms in UK; they argued that large corporations are more profitable due to the great increasing in their proportion of wealth and income. They found that corporations increased their wealth by reinvesting its earnings, by raising new capital through the sale of securities in the public markets, and by acquiring control of other corporations through purchase or

exchange of securities. In that century, they also found that industry by industry has increased its wealth, as what they called as "corporate sway". However, they revealed that most of the corporations have growth through funding their new capital by issuing securities in the public markets. They witnessed that the tendency of the dispersion will be higher when the size of the corporation is larger. Factor that contributed to the increment of the number of stockholders during that time was the ownership offered to customers and employees. As such, dispersion has been seen as a continuous process.

The study by Abai (2003) investigated on the determinants of corporate debt maturity structure for companies quoted at the Nairobi Security Exchange (NSE). He attempted to reconcile the diverging evidence on the motives for equity financing and determinants of stock price reactions to equity financing announcements. He analyzed the impact of issuer characteristics on the size of the wealth effect associated with the announcement of equity financing offers. He again split the issues according to the previously mentioned delta measure into more equity- and more debt-like issues Following a strain of the literature on market timing (for example Bayless and Chaplinsky 1996) he analyze the impact of the market, issue and issuer characteristics on abnormal returns for subsamples of cold, normal and hot market periods of security offerings.

The study by Ngugi (2008) investigated the determinants of capital structure for a sample of 22 firms listed on the Nairobi Stock Exchange during the period 1991-1999. Reduced form equations derived from the static trade-off model and the pecking order hypothesis were estimated and tested using panel data techniques. The results show that a pecking order model with an adjustment process cannot be rejected. Specifically, it is found that

the main determinants of capital financing behaviour consist of information asymmetries, non-debt tax shields and local capital market infrastructure.

The study by Tomo (2008) on role of NSE in raising equity capital among 49 listed firms in the exchange between 1998-2004. The findings indicate that although the company's listed in the NSE have registered an enormous growth during the period under review, much of this has been financed through borrowed capital and retained profits. The researchers conclude that the NSE has failed in its primary objective of helping investors to raise capital. Furthermore there is little evidence to suggest that the NSE has contributed to the economic development of Kenya. These findings confirm earlier finding by Kimura and Amoro (1999), who concluded that there was no significant correlation between economic growth and the growth of the NSE.

A study done by Zong-Jun (2006), using a sample of 96 financially distressed companies and 96 healthy companies find that large shareholder ownership, state ownership, and the proportion of independent directors are negatively associated with the probability of distress. Additionally, managerial agency costs are badly detrimental to a company's financial status. However, the degree of balanced ownership, managerial ownership, board size, and CEO duality do not significantly affect the probability of default. Furthermore, they test the influence of state-controlling right by sub-grouping the sample into state-controlled and non–state-controlled companies. The results indicate that corporate-governance attributes act differently on the status of financial distress between the two sub-samples.

Du and Dai (2005) in a survey of 1479 East Asian firms (1994-96) focused on Ownership and capital structure and found that controlling owners with little shareholding choose higher debt and that weak CG and crony capitalism contributes to risky capital structure.

Kumar (2005) in a survey of 2,000 Indian firms (1994- 00) focused on CG and firm financing and found that firms' with dispersed shareholding have higher leverage and that firms' with higher FS and lower institutional shareholding have lower debt. Moreover, no relationship between directors' shareholding and debt was found.

Using firm-level data from 1989 to 2009 for the United Kingdom, Atanasova and Wilson (2004) examined 78 financially constrained firms, where financing here was defined as access to internally generated funds, bank lending and accounts payable (or trade credit), using a disequilibrium model of lending. Their empirical analysis suggests that firm total assets, as a proxy for available collateral, is an important determinant of bank loan availability. With respect to monetary policy factors, they found that tight monetary conditions lead to increased demand for bank financing, but a reduced supply. In addition, they found that although trade credit was the least desirable funding option, firms tend to have a higher rate of substitution between loans and trade credit than between loans and internally generated funds. They conclude that trade credit plays a special role in alleviating credit rationing since firms switch from bank credit to trade credit when faced with borrowing constraints.

2.5 Summary of Literature Review.

In this paper, we were interested in the effect of debt on profitability of commercial banks. In other words, this research expands the empirical literature regarding the influence of debt on profitability. There are three essential theories which highlight the influence of debt on corporate profitability, namely: Trade-off theory, Pecking order theory and market timing theory. Furthermore, the disagreement between researchers is observed not only theoretically but also empirically.

In contrast to the extensive theoretical literature on bond valuation, there is very little empirical literature on the relationship between debt financing and firm profitability on commercial banks in Kenya. Some researchers use market data to verify the degree of accuracy of their own models.

Bougheas *et al.* (2006) using data from 136 U.K. manufacturing firms over the period from 1989 to 1999 used measures of external financing found out that that several firm-specific characteristics, such as size, collateral, riskiness, age and profitability were important determinants of access to short-term and long-term credit. In addition, they found monetary policy conditions had a greater impact on smaller, riskier and younger firms.

According to some study, long debt has no influence on profitability in some industry either in linear way, or in a non-linear way, which is consistent with that of Baum et al. (2007) on America industrial companies. Lack of clear studies on commercial banks and the concentration of studies on capital structure and listed companies had motivated my study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1   Introduction

This chapter contains research methodology that was used for the study. Research methodology gives details regarding the procedures used in conducting the study. The chapter discusses the research design, target population, sampling procedure and design, data collection instrument and procedures and data analysis.

3.2   Research Design

This study was descriptive in nature and a census method was used since the aim of this study is to investigate the factors influencing the development of corporate bonds market in Kenyan financial market. Descriptive research according to Kothari (1990) is a powerful form of quantitative analysis. This design is preferred because it enables the researcher describe the area of research and explain the collected data in order to investigate the differences and similarities with our frame of reference within a given period of time (time of research). In addition, the method permits gathering of data from the respondents in natural settings resulting in a description of the data, whether in words, pictures, charts, or tables. Moreover, much of the data collected from the respondents was quantitative in nature. On the other hand a census is the procedure of systematically acquiring and recording information about the members or items of a given population. This design gave the researcher a comprehensive picture of the variable relationship since the method is the only means of accurately measuring and giving statistical inferences.

According to Mugenda and Mugenda (1999), research design is the outline plan or scheme that is used to generate answers to the research problems. It is basically the structure and plan of investigation. Empirical research methods course bridges the gap between the theoretical foundations of models and its practical application, (Kerlinger, 1986).

The study was carried out through a cross-sectional survey. This research design is of empirical nature because of the nature of data collected

3.3   Population of the Study

According to Mugenda and Mugenda (1999), a target population is one the researcher wants to generalize the result of the study. Therefore the research comprised of all the commercial banks in Kenya as at 31st December 2012, licensed and registered under the Banking Act. According to the central Bank of Kenya, there are 44 licensed banks as at 31st December 2012(Appendix)

3.4   Sample Technique

Since the population of the study is not very large, the study was a census and thus the researcher focused on the whole population. This ensured that all elements of the population are targeted and interviewed and as such was highly representative of the commercial bank.

3.5   -Data Collection Method

The study applied data from secondary sources. The data for the banks was extracted from the banks' annual reports and financial statements for the period 2008-2012. This was obtained from the NSE library, and the banks supervision department of the Central bank of Kenya and the Banking Survey 2012 from Think Business.

3.6   Data Analysis

Statistical package for social scientists (SPSS) software version 17 was used to analyze the data. The quantitative data was analyzed by using descriptions statistics, metrology such as frequency distribution tables, percentages and pie charts. Pearson Correlation Analyses was used to examine the relationship between independent variables banks profitability and the dependent variables banks capital. Further, linear regression dimension of independent variable and dependent variable.

Tests were estimated to determine the significance of the relationship and the coefficient of determination (r^2) was estimated. Differences between commercial banks in the three different tier group categories was identified to determine the strength of the relationship. The panel character of the data allows for the use of panel data methodology. Panel data involves the pooling of observations on a cross-section of units over several time periods and provides results that are simply not detectable in pure cross-sections or pure time-series studies. A general model for panel data that allows the researcher to estimate panel data with great flexibility and formulate the differences in the behavior of the cross-section elements is adopted. The relationship between debt and profitability is thus

estimated in the following regression model, which has been adopted from Kebewer, Shah, Ahmed, (2012*)*.

$$ROE_{i,t} = \beta_0 + \beta_1 DT_{i,t} + \beta_2 SDA_{i,t} + \beta3 LDA_{i,t} + \beta4 DAi.t + \beta5 SG_{i,t} + \sum_{n=1}^{9} \beta_n \, dumt_n + \eta_i + \varepsilon_{it}$$

Where, subscript 'i' denote the studied banks and subscript 't' represent the time period. The dependent variable is the ratio of performance (ROE). Moreover,

- DT   represent ratios of debt

- SDA   short-term debt divided by the total capital

- LDA   long-term debt divided by the total capital

- DA   total debt divided by the total capital

- SG   represent the size

- dumt represent influence of time is taken into account by the introduction of annual dummies (dumt) that capture the specific year effect (2008-2012).

- η_i represent the individual fixed effect on banks is represented by the term.

- ε_{it} represent the error term which is assumed to be independent and identically distributed (iid).

Test of reliability can be carried out include T-test, equivalent forms and split-half reliability all determined through correlation.

CHAPTER FOUR:

DATA ANALYSIS AND PRESENTATION

4.1 Introduction

This chapter presents the data findings and analysis procedure and presentation of the output from analysis. Out of the 43 banks sampled for the study, complete set of data could only be found on 38 banks and were the only banks used in this study.

4.2 Descriptive statistics.

Table 4.1 Return on Equities over the Years as a Measure of Performance

Bank	2012	2011	2010	2009	2008	Mean	STDEV
Barclays Bank	-0.03537	0.018436	0.02567	0.130581	0.019847	0.031833	0.136681
Stan-Chart	0.139076	0.111375	-0.07728	0.052435	-0.01172	0.042776	0.196917
KCB Bank	0.193036	0.191724	0.230783	0.22872	0.016512	0.172155	0.387595
Citibank N.A	-0.01984	0.098876	-0.16341	0.290752	-0.03453	0.034369	0.348455
Imperial Bank Ltd	-0.01395	0.040787	0.070368	-0.01484	-0.04519	0.007436	0.094956
CBA	0.047085	0.124292	-0.08564	0.223301	0.193123	0.100432	0.319489
CFC STANBIC	0.203605	0.141465	0.135589	0.119947	0.10313	0.140747	0.291659
Diamond Trust Bank	0.275096	0.410479	0.26295	0.288304	0.270081	0.301382	0.61526
CO-OP BANK	0.064597	0.112395	0.132236	0.098856	0.108661	0.103349	0.212581
NIC Bank	0.095259	0.130154	0.150892	0.094576	0.04412	0.103	0.221506
National Bank	0.40008	0.298475	0.311647	0.312025	0.313501	0.327146	0.659465
I & M Bank	0.113217	0.090961	0.03272	0.139098	0.0309	0.081379	0.189323
Credit Bank	0.197883	0.200467	0.259867	0.046935	-0.78116	-0.0152	0.871243
Bank of Africa	0.403037	0.435675	0.411854	0.432144	0.434585	0.423459	0.847449
Prime Bank	0.221605	0.222997	0.148066	0.140908	0.139465	0.174608	0.359969
Equity Bank	0.449815	0.376158	0.366315	0.443823	0.622576	0.451737	0.926568
Chase Bank	0.320037	0.272519	0.193177	0.12511	0.133625	0.208894	0.45153
Fina Bank	0.078406	0.102884	0.071154	0.078448	0.092468	0.084672	0.171262
Guardian Bank	0.077029	0.091974	0.065711	0.070613	0.048083	0.070682	0.144958
ABC Bank	0.208881	0.246141	0.258204	0.16717	0.151279	0.206335	0.423253
Trans National	0.209582	0.183805	0.179077	0.153396	0.055037	0.156179	0.334581
GulfAfican Bank	0.141573	0.07102	0.188272	0.113881	-0.11379	0.08019	0.282879

Bank of Baroda	0.142036	0.111669	0.095059	0.113983	0.073546	0.107258	0.220402
Victoria Bank	0.327805	0.288632	0.266543	0.283251	0.228357	0.278918	0.562488
ECOBANK	0.336751	0.371435	0.464013	0.529581	0.051583	0.350673	0.791719
Southern Credit	0.066116	0.062312	0.06988	-0.0447	-0.00709	0.029303	0.119695
Equitorial bank	0.164563	0.145163	0.172894	0.205989	0.183545	0.174431	0.351766
Oriental Bank	0.153067	0.090542	0.097029	0.110615	0.146654	0.119582	0.245938
HABIB AG ZURICH	0.357981	0.352446	0.441095	0.400732	0.348981	0.380247	0.764669
Dubai bank	0.464396	0.418571	0.459943	0.417554	0.262822	0.404657	0.825889
Devt Bank	0.311082	0.239053	0.232921	0.217097	0.125387	0.225108	0.469414
Fidelity Bank	0.078775	-0.00724	0.13532	0.18838	0.126366	0.10432	0.25523
Paramount Univ Bank	0.157377	0.241751	0.320436	0.32608	0.239127	0.256954	0.53233
Habib bank	0.180506	0.122254	0.108866	0.12569	0.102995	0.128062	0.263413
Bank of India	0.273316	0.248841	0.219959	0.18423	0.1874	0.222749	0.452159
Giro Bank	0.185364	0.225039	0.233668	0.155469	-0.03663	0.152582	0.376609
Middle east	0.08986	0.093895	0.078375	0.036785	-0.21278	0.017227	0.263373
Consolidated Bank	0.148284	0.120765	0.159204	-0.06126	0.058526	0.085103	0.248705

Source: Research Data (2013)

The descriptive statistic above illustrates the movement in value of ROE over the duration of the study. The table shows that Equity Bank Ltd had the best ROE over the years with a mean of 0.4514 followed by Bank of Africa which had a mean of 0.4237 then Dubai Bank at 0.4046 while Credit Bank Ltd had a ROE of -0.0152 and Imperial Bank Ltd had a ROE of 0.007436. This shows that Equity Bank Ltd, Bank of Africa and Dubai Bank in that order while Credit Bank Ltd and Imperial Bank Ltd performed the worst.

Table 4.2 Summary of the Descriptive Statistics of the Dependent and Independent Variables

	Mean	STDEV	Minimum	Maximum
ROE	0.1664	0.4008	0.0965	0.1896
SDA	0.4876	0.2296	0.0934	1.1018

LDA	0.0985	0.1803	0	0.7665
DA	0.5861	0.2032	0.2054	1.1018
SIZE	18.2124	1.6495	14.1875	22.0995
SG	0.3288	0.3457	20.75	1.3597

Table 4.2 Summary of the Descriptive Statistics of Dependent and Independent Variables

Table 4.1 provides a summary of the descriptive statistics of the dependent and independent variables for the sample of banks. The table shows the average indicators of variables computed from the financial statements. The return rate measured by Return on Equity (ROE) reveals an average of 16.64% with highest being 18.96% in 2007 and the lowest being 9.65% in 2003. This picture suggests a good and steadily growing performance during the period under study. The ROE measures the contribution of net income per a shilling invested by the firms' stockholders; a measure of the efficiency of the owners' invested capital. The study further tested for the variable SDA which measures the ratio of short-term debt to total capital and found its mean score to be 0.4876. This indicates that averagely, 48.7% of total capital hence assets are, represented by short-term debts.

This means that Kenyan firms largely depend on short-term debt for financing their operations due to the difficulty in accessing long-term credit from financial institutions. The ratio of total long-term debt to total assets (LDA) also stands at a mean score of 0.0985 while the minimum LDA was 0 and the maximum value settled at 0.7665. This shows that on average 9.85% of the banks assets are covered by long-terms debts attesting to the fact that the capital structures of banks have low proportion of long term

liability/debts. On the variable on total debt to total capital ratio (DA) as an indicators of banks' performance, the study found out that it had a mean of 0.5861. This indicates that on average; about 58% of total assets are financed by debt capital.

The above position reveals that the banks are financially leveraged with a large percentage of total debt being short-term that is a large percentage of the capital banks liability consists of short term debts.

Regression analysis used by this to investigate the relationship between capital structure and profitability measured by ROE.

$$Y = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 \ldots\ldots + \alpha_3 X_n + e_{it}$$

The ordinary least squares (OLS) regression results are presented in Table 3. The results from the regression models presented in chapter three; 1, 2 and 3, denote that the independent variables explain the debt ratio determinations of the firms at 68.3, 39.7, and 86.4 percent, respectively.

4.3 Profitability (EBIT/Equity) Ordinary Least Squares

Variable	1	2	3
SIZE	0.0038	0.05	0.0411
SG	0.1314	0.1316	0.1413
SDA	0.8025		
LDA		-0.3722	
DA			-0.7609
R	0.6825	0.3968	0.8639
SE	0.4365	0.4961	0.4735
Prob. (F)	0	0	0

Source: Research Data (2013)

Table 4.3: Profitability (EBIT/Equity) Ordinary Least Squares

The result obtained from the first regression equation (1) shows a significantly positive relationship between SDA and profitability which suggests that short-term debt tends to be less expensive and increasing it with a relatively low interest rate will lead to an increase in profit levels and hence performance.

The results further indicate that profitability increases with the control variables, that is, size and sales growth. The second regression equation (2) shows a significantly negative association between LDA and profitability which implies that an increase in the long-term debt position is associated with a decrease in profitability.

This is explained by the fact that long-term debts are relatively more expensive and therefore, the banks' management fear that employing high proportions of them could lead to low profitability. The results from the third regression equation (3) indicate a significantly positive association between DA and profitability. The significantly positive regression coefficient for total debt implies that an increase in the debt position is associated with an increase in profitability: thus, the higher the debt, the higher the profitability. Again, this suggests that profitable firms depend more on debt as their main financing option. The results also show positive relationships between the control variables, firm size and sale growth, and profitability.

4.4 Multiple Regression Analysis

In this study a multiple linear regression model was implemented to identify the relationship between the four independent variables and the dependent variable. The

study applied the statistical package for social sciences (SPSS) to code, enter and compute the measurements of the multiple regressions for the study.

Table 4.4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.897[a]	.880	.133	.3195

R^2 is the coefficient of determination. This value explains how effect of debt financing on firm profitability a case commercial bank in Kenya varied with Short-term debt, sales growth, ratios of debt, log of sales and Long-term debt. The four independent variables that were studied, explain 88% of the effect of debt financing on firm profitability a case commercial bank in Kenya as represented by the R^2. This therefore means that other factors not studied in this research contribute 12% of the effect of debt financing on firm profitability a case commercial bank in Kenya giving room for further research to investigate the other factors (12%) that affect effect of debt financing on firm profitability a case commercial bank in Kenya.

4.5 Analysis of Variance (ANOVA)

Table 4.5: Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.534	5	2.878	52.400	.0003
	Residual	186.555	27	2.129		
	Total	198.089	32			

According to Mugenda and Mugenda (2003), ANOVA is a data analysis procedure that is used to determine whether there are significant differences between two or more groups or samples at a selected probability level. `An independent variable is said to be a significant predictor of the dependent variable if the absolute t-value of the regression coefficient associated with that independent variable is greater than the absolute critical t-value. The regression analysis also yields an F-statistic where if the calculated F-value is greater than the critical or tabled F-value, the prediction will be rejected. In this study, the significance value is .0003 which is less that 0.05 thus the model is statistically significant in predicting Short-term debt, sales growth, ratios of debt, log of sales and Long-term debt. The F critical at 5% level of significance was 3.23. Since F calculated is greater than the F critical (value = 52.400), this shows that the overall model was significant.

4.6 Coefficient of determination

The study conducted a multiple regression analysis so as to determine the effect of debt financing on firm profitability a case commercial bank in Kenya and the four variables. As per the SPSS generated table above, the equation ($ROA_{i,t} = \beta_0 + \beta_1 DA_{i,t} + \beta_2 SDA_{i,t} + \beta_3 LDA_{i,t} + \beta_4 Size\ i.t + \beta_5 SG_{i,t} + \sum_{n=1}^{9} \beta_n\ dumt_n + \varepsilon_{it}$) becomes:

As per the SPSS generated the established regression equation was:

$Y = \beta_0 + 1.654\ DA_{i,t} + 0.988\ SDA_{i,t} + 0.568\ LDA_{i,t} + 0.444\ Size\ i.t\ {}_+ \varepsilon$ where:

ROA = Return on assets

$DA_{i,t}$ = Debt ratio

$SDA_{i,t}$ = Short term debt

$LDA_{i,t}$ = Long term debt

 Size i.t = Size

 ε = the error

According to the regression equation established, taking all factors into account (debt ratio, short term debt, long term debt and Size.) constant at zero, effect of debt financing on firm profitability will be 3.657. The data findings analyzed also show that taking all other independent variables at zero, a unit increase in debt ratio will lead to a 1.654 increase in effect of debt financing on firm profitability; a unit increase in short term debt will lead to a 0.988 increase in effect of debt financing on firm profitability and a unit increase in Size will lead to a 0.444 increase in effect of debt financing on firm profitability. This infers that size contributes more to the effect of debt financing on firm profitability followed by the short term debt.

At 5% level of significance and 95% level of confidence, debt ratio had a 0.002 level of significance; short term debt showed a 0.005 level of significant, long term debt showed a 0.013 level of significant, Size had a 0.032 level of significant, and hence the most significant factor is debt ratio.

Table 4.6: Coefficient of determination

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.657	1.033		0.787	0.255
	Debt ratio	1.654	0.107	0.159	1.091	0.002
	Short term debt	0.988	0.139	0.085	0.687	0.005
	Long term debt	0.568	0.097	0.145	0.97	0.013
	Size	0.444	0.069	0.210	0.349	0.032

CHAPTER FIVE:

DISCUSSIONS, CORRECTION AND RECOMMENDATION

5.1 Introduction

This chapter presents the discussions on the data findings, conclusions and recommendation. The chapter is outlined into discussions, conclusions, recommendation and areas for further studies.

5.2 Summary of findings

On the movement in the value of ROE over the duration of the study, the findings shows that Standard Chartered Bank had the best ROE over the years with a mean of 0.4514 followed by Barclays Bank of Kenya which had a mean of 0.4237 then East Africa Breweries Limited at 0.4046. This can be explained by market capitalization, for example, Standard Chartered Bank had increased its market capitalization from Ksh47,223,501,624 in 2003 to Ksh 56,025,368,860 in 2010 while Barclay Bank's commendable performance was spurred bold investments over the period with the market capitalization increasing from Ksh57, 040,648,000 in 2003 to Ksh107,272,836,000 in 2010.

The study found out that return rate measured by Return on Equity (ROE) averages 16.64% with highest value being 18.96% in 2010 and the lowest being 9.65% in 2008. This suggests a good and steadily growing performance during the period under study. The study found that SDA which measures the ratio of short-term debt to total capital had a mean score of 0.4876 which indicates that averagely, 48.7% of total capital hence assets are represented by short-term debts. This means that Kenyan firms are largely dependent

on short-term debt for financing their operations due to the difficulty in accessing long-term credit from financial institutions. The ratio of total long-term debt to total assets (LDA) also stands at a mean score of 0.0985 while the minimum LDA was 0 and the maximum value settled at 0.7665. This shows that on average 9.85% of the banks assets are covered by long-terms debts attesting to the fact that the capital structures of banks have low proportion of long term liability/debts. On the variable on total debt to total capital ratio (DA) as an indicators of banks' performance, the study found out that it had a mean of 0.5861. This indicates that on average; about 58% of total assets are financed by debt capital. The above position reveals that the banks are financially leveraged with a large percentage of total debt being short-term that is a large percentage of the capital banks liability consists of short term debts.

5.3 Conclusion

The result obtained from the first regression equations showed that a significantly positive relationship between SDA and profitability since short-term debt tends to be less expensive and increasing it with a relatively low interest rate will lead to an increase in profit levels and hence performance. The study further concludes that profitability increases with the control variables, that is, size and sales growth. The study also found a significantly negative association between LDA and profitability which implies that an increase in the long-term debt position is associated with a decrease in profitability hence firm's performance. This the study, explains by the fact that long-term debts are relatively more expensive and therefore, the banks' management fear that employing high proportions of them could lead to low profitability and hence firm's performance.

5.4 Recommendations

The study recommends that owing to the less cost incurred in obtaining short term loans than long term ones, banks should go for short term loans since despite changing the firm's capital structure to the worse, this will improve their performance as increasing short term debts with a relatively low interest rate will lead to an increase in profit levels. This is more profitable than taking long-term loans as banks are wonted to doing at times.

5.5 Limitations of the Study

The major obstacle that was encountered in this research study was the difficulty in assessing the data from all the 44 banks that we have in Kenya.The key to assessing the accuracy of secondary data lies in learning as much as possible about the process of collecting it, being who collected the data, how were the data collected and how the data was presented.

The other major limitation of research conducted was the lack of information necessary to evaluate the data's accuracy rather than lack of accuracy per se. Unfortunately, the proliferation of easily accessible Internet secondary data from the central bank of Kenya and Nairobi security exchange on the one hand and the scarcity of readily available information to evaluate them on the other may tempt some researcher to downplay the issue of accuracy.

5.6 Areas for Further Research

The study recommends that further research should be on capital structure, industry pricing, and firm performance since a capital structure is influenced by the industry valuation and so is performance.

REFERENCES

Abai, I. (2003). The Determinants of Corporate Debt Maturity Structure for Companies Quoted At the NSE, *Unpublished MBA Thesis*. University of Nairobi

Acharya, B. (1988). A Generalized Econometric Model and Test of a Signaling Hypothesis with Two Discreet Signals, *Journal of Finance* 43, 413–429.

Altaman, E. (1984) A Further Investigation of Bankruptcy Cost Question. *Journal of Finance* 1060-1089

Atanasova, C.V. and Wilson, N., 2004.Disequilibrium in the U.K. Corporate Loan Market, *Journal of Banking and Finance*, 28,595-614.

Basel Committee (1999): Risk in the Banking Industry. *Published by the Basel Committee.*

Basel Committee (2004): Basel 11 Accord. *Published by the Basel Committee*.

Bentson, George J. (2002): What's Special About Banks? *The Financial Review*. 34

Berger, Allen N. (1995):The Relationship between Capital and Earnings in Banking. *Journal of Money, Credit and Banking*, 27, 2,432–456.

Bessis Joel (2005). *Risk Management in Banking*.2nd edition. John Wiley and Sons.

Best, Philip (2000): Stress Testing. *In The Professional Hand Book of Financial Risk Management.* Oxford: Butterworth. Heinemann.

Bichsel G. and Blum N. (2005), *Capital structure and financing of SMEs*: *Australian evidence, Accounting and Finance*, 43,123-47.

Bourke, Philip (1989), Concentration and Other Determinants of Bank Profitability in Europe, North America and Australia, *Journal of Banking and Finance*,13,65-67.

Bougheas, S., Mizen, P. and Yalcin, Y., 2006. Access to External Finance: Theory and Evidence on the Impact of Monetary Policy and Firm-Specific Characteristics, *Journal of Banking and Finance*, 30, 200-227.

Brealey A R and Myers S C (2003), *Principles of Corporate Governance*. Tata McGraw—Hill, 7th Edition

Brigham and Gapenski,L. (1990) *International Financial Management* Dryden Press US

CBK (1997). *A Guide to Wise Management of Loans From the Banking Institutions*. Nairobi, Kenya: Central Bank of Kenya.

CBK (2000). *The Practice of Monetary Policy in Kenya*. Nairobi, Kenya: Central Bank of Kenya.

CBK (2001), *Annual Banks Supervision Reports*. Nairobi, Kenya. Central Bank of Kenya

Central Bank of Kenya (2004). *Risk Management on Kenya's Banking Sector*. from *Http://www.centralbank.go.ke*

Central Bank of Kenya (2006): *Central Bank of Kenya Prudential Guidelines for Institutions Licensed Under the banking Act, Nairobi, Central Bank of Kenya.*

Chang, S.-C., Chen, S.-S. and Liu, Y. (2004). Why firms use convertibles: A further test of the sequential-financing hypothesis. *Journal of Banking and Finance 28(5), 1163–1183*

Christian S. Arnold A., and Sorensen H. (2008), *Analyzing Banking Risk- A Framework For Assessing Corporate Government and Financial Risk Management*. Washington, D.C: The World Bank.

Clarke C.J and Survirvarma (1999). Strategic Risk Management: *The New Competitive Long Range Planning*.32. Published by Elsevier Ltd.

Cooper, D.R and Schindler, P.S. (2003) *Business Research Methods* (8th edn) McGraw-Hill: New York

Co-operative Bank (2001), *Annual report and Financial Statement*

DeAngelo H. and R. Masulis (1980), Optimal Capital Structure under Corporate and Personal Taxation, *Journal of Financial Economics*, 8, 3-29

Demirgüç-Kunt, Ash and Huizinga, Harry (1999) Determinants of Commercial Bank Interest Margins and Profitability: Some International Evidence. *The World Bank Economic Review,* 13,2, 379–408.

Emery, G (1998) Corporate Finance, Principles and Practices, *New York: Addisan - Wetsley*

Emery, John T. (1971), Risk, Returns, and the Morphology of Commercial Banking, *Journal of Financial and Quantitative Analysis*, 6, 2, March, 763-776.

Flamini L., Hitchins J. and Brock K. (2009) Preventing Systematic Crisis Through Bank Transparency, *Economic Notes by Bancamonte Del Paschi Disiena SPA*. 33

Flannery, Mark J. and Rangan, Kasturi P. (2002) Market Forces at Work in the Banking Industry: Evidence from the Capital Buildup of the 1990s. AFA 2003 Washington, DC Meetings*; EFA 2002, Berlin Meetings Presented Paper*.

Fluck M. (1998), Credit Risk Management: *The use of Credit Derivatives by Non-Financial Corporations. Managerial Finance* 32, 9, 2006,761-773. Emerald Group Publishing.

Foong K. K (2008) *Malaysian Institute of Economic Research*: Return-on-equity ratio can show how efficient banks are. http://biz.thestar.com

Gerhard. S (2002) Risk management and value creation in financial institutions Illustrated edition, *Published by John Wiley and Sons* 239

Gupta, A. (1998) Is Kenya on the Brink of a Banking Crisis. In Marketing Intelligence. *The Business and Finance Journal*: Kenya's Top Banks Comprehensive Survey

Heggested, Arnold A., (1977), Market Structure, Risk, and Profitability in Commercial Banking, *Journal of Finance*, 32, 1207-1216.

Heinrich P. (2000), Allowing For Risk Choices in Diamonds, Financial Intermediation As Delegated Monitoring. *Working Paper* 98-04, Universit' at Mannheim.

Hester, Donald D. and Zoellner, John F. (1966), The Relation between Bank Portfolios and Earnings: An Econometric Analysis. *Review of Economics and Statistics,* Vol. 48 (November), 372-386.

Hitchins J. et al (1996): Banking an Industry Accounting and Auditing Guide, New York: *ICAEW- Accountancy Book.*

Jensen M. and W. Meckling (1976), Theory of the Firm: Managerial Behavior, Agency Costs, and Capital Structure, *Journal of Financial Economics*, 3, 305-360

Joetta G. (2007), *Bank Management*: Text and Cases. 4th Edition. John Wiley and Son Inc.

Johnsons B. (1997) Banking an Industry Accounting and Auditing Guide, *New York: ICAEW- Accountancy Book.*

Kamere. N. (1987). Some factors that influence capital structure in public companies. *Unpublished MBA Thesis. University of Nairobi*.

Kee (2008), Allowing For Risk Choices in Diamonds Financial Intermediation As Delegated Monitoring. *Working Paper 98-04, Universit' at Mannheim*.

Kebewar, Shah,Ahmed, *2012*.The effect of debt on corporate profitability: Evidence from French service sector, *MPRA paper 43304, University library of Munich*

Kerlinger B. (1986). Synthesizing Research; *A guide for Literature Reviews* (3rd edn) Sage: Thousand Oaks

Kim B. and Sorensen H. (1986) Active Portfolio Management. *2nd ed. New York: McGraw-Hill.*

Kwast, Mayron L., and John T. Rose (1982), Pricing, Operating Efficiency, and Profitability among Large Commercial Banks*, Journal of Banking and Finance*, 6, No 2 (June), 233-254.

Lewis, M., Rogalski, R. J. and Seward, J. K. (2001). The long-run performance of firms that issue equity financing: an empirical analysis of operating characteristics and analyst forecasts. *Journal of Corporate Finance* 7(4), 447–474.

MacDonald S. and Koch B. (2006), The Professional Handbook of Finance Risk Management*, Oxford: Butterworth Heinemann.*

Maina R. (2003) A survey on risk based capital standards and the riskiness of bank portfolio in Kenya*. Unpublished MBA project*. University of Nairobi

Malitz (1983), Analyzing Banking Risk- A Framework For Assessing Corporate Government and Financial Risk Management. *Washington, D.C: The World Bank.*

Marsh (1982) *The Hand book of Credit Portfolio Management*. McGraw-Hill

Modgiliani, F. and M. Millier, (1958) The Cost of Capital, Corporation Finance and The Theory of Investments *American Economic Review*

Modgiliani, F. and M. Millier, (1963) Corporate Income Taxes and the Cost of Capital. *A Correction, American Economic Review*,

Molyneux, P. and Thornton, J. (1992), Determinants of European Bank Profitability*:* A Note, *Journal of Banking and Finance,* 16, 6, 1173-1178.

Mugenda M. O. and Mugenda A. (1999), Research Methods: Qualitative and Quantitative Approaches*, African Centre for Technology Studies*, Nairobi, Kenya.

Munene Kloein ,Hebid. (2006). Impact on profitability on Capital Structure of Companies Listed at the Nairobi Stock Exchange. *Unpublished MBA Thesis, University of Nairobi.*

Mwega W. (2009), Global crises and its effect on policy on financial institutions in Kenya. *Unpublished MBA project*. University of Nairobi

Myers, S. (1984),The Search for Optional Capital Structure, Midland corporate *Financial Journal, , 6-16*.

Navapan G. and Tripe D., (2003), Agency Costs of Free-Cash-Flow, Corporate Finance, and Takeovers*, American Economic Review, 76, 323-329*

Ndung'u G. (2003) Determinants of profitability of quoted commercial banks in Kenya. *Unpublished MBA project*. University of Nairobi

Nelson M. Waweru & Victor M Kalani (2000) *African Journal of Accounting, Economics, Finance and Banking Research* 4.(4).

Njoroge (2001) Relationship between dividend payout and some financial ratios. *Unpublished MBA project*. University of Nairobi

Omondi, G. (1996) The impact of Microfinance institutions in the Financial Markets. *Unpublished MBA project*. University of Nairobi

Pandey, I. (1981) Capital Structure and the Cost of Capital. Delhi: *Sharma Publishers*.

Peltzman A. (1968*). Operational Risk. In the Handbook of Financial Risk Management. Oxford: Butterworth- Heinemann.*

Pringle V.(1971), Management Credit Risk, A Challenge For The New Millennium. *Economic Notes* 31(2), 201-214. Blackwell Publishers.

Revell, J.S. (1980), Costs and Margins in Banking: *An International Survey, Paris, Organization for Economic Co-operation and Development.*

Sam J. and Magda R. (2009), Financial Intermediation and Delegated Monitoring. *Review of Economic Studies* 51, 394-414

Short, Brock K. (1979), The Relation between Commercial Bank Profit Rates and Banking Concentration in Canada, Western Europe and Japan*, Journal of Banking and Finance,* 3, 209-219.

Smirlock, M. (1985), Evidence on the (Non) Relationship between Concentration and Profitability in Banking, *Journal of Money, Credit and Banking*,17, 69-83.

Steinherr, A. and Huveneers, C. (1994), On the Performance of Differently Regulated Financial Institutions: Some Empirical Evidence, *Journal of Banking and Finance,*18,271-306.

Banking Abedi S. (2002), Highway to success. *Credit Management Journal*

Titman, S. and Wesseles R. (1988), The determinants of Capital Structure Choice, *journal of finance*1-19

Vernon N. (1971), Capital Structure in Developing Countries, *Journals of Finance* 86 - 129

Waymond P. (2007), Prototype Risk Rating System, *Journal of Banking and Finance*, 25, 47-95.

Westerfield, F. (2008), Regulations, Market Structure, Institutions and the Cost of Financial Intermediation*, Journal of Money, Credit and Banking*, 36,593-626.

White D. and Morrison, U. (2001). Financial performance and outreach, a global analysis of leading micro banks. *Working paper may* 25, 2006

APPENDICES
APPENDIX I: LIST OF COMMERCIAL BANKS IN KENYA AS AT FEBRUARY
2012

1. AFRICAN BANKING CORPORATION

2. BANK OF AFRICA

3. BANK OF BARODA

4. BANK OF INDIA

5. BARCLAYS BANK OF KENYA

6. CFC-STANBIC BANK

7. CHARTERHOUSE BANK

8. CHASE BANK

9. CITIBANK N.A.

10. CITY FINANCE BANK

11. COMMERCIAL BANK OF AFRICA

12. CONSOLIDATED BANK

13. CO-OPERATIVE BANK OF KENYA

14. CREDIT BANK

15. DEVELOPMENT BANK OF KENYA

16. DIAMOND TRUST BANK

17. DUBAI BANK KENYA

18. EQUITORIAL COMMERCIAL BANK

19. EQIUTY BANK

20. FAMILY FINANCE BANK

21. FIDELITY COMMERCIAL BANK

22. FINA BANK

23. FIRST COMMUNITY BANK

24. GIRO COMMERCIAL BANK

25. GURDIAN BANK

26. GULF AFRICAN BANK

27. HABIB A.G. ZURICH

28. HABIB BANK

29. HOUSING FINANCE OF KENYA

30. IMPERIAL BANK

31. I & M BANK

32. KENYA COMMERCIAL BANK

33. K-REP BANK

34. MIDDLE EAST BANK

35. NATIONAL BANK OF KENYA

36. NATIONAL INDUSTRIAL CREDIT BANK

37. ORIENTAL COMMERCIAL BANK

38. PARAMOUNT BANK

39. PRIME BANK

40. STANDARD CHARTERED BANK

41. SOUTHERN CREDIT BANK

42. TRANS-NATIONAL BANK

43. UBA KENYA BANK

44. VICTORIA COMMERCIAL BANK