

**THE EFFECT OF CAPITAL STRUCTURE ON PROFITABILITY OF FINANCIAL FIRMS
LISTED AT NAIROBI STOCK EXCHANGE**

BY

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**A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF BUSINESS IN
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DECLARATION

I hereby declare that this research project is my original work has never been presented either in whole or in part to any other examining body for the award of certificates, diploma or degree.

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DEDICATION

This research is dedicated to my family, lecturers, classmates and work colleagues, without their support, prayers, patience and understanding, the compilation of this work would not have been possible. I would also wish to dedicate it to all other academicians, researchers and other readers.

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ABSTRACT

Capital is the financing for a business and is made up of, primarily, owners' funding and funding from lenders. The combination of the sources of business funding is referred to, as the capital structure of that business. Capital structure is thus the mix of company's long term debt, specific short term debt, common equity and preferred equity; that is, how a firm finances its overall operations and growth using different sources of funding. This is composed of equity (rights issue) and debt financing (credit market through corporate bonds etc). This research sought to investigate the effect of capital structure on profitability of financial firms listed at Nairobi Stock Exchange during the period 2008-2012. The success of financial institutions in Kenya's dynamic business environment depend on their ability to effectively determine the optimum and appropriate capital mix that is necessary to ensure that the shareholders get returns. It is worth noting that financial institutions depend on their ability to identify, assess, monitor and manage risks in a sound and sophisticated way. In order to assess and manage risks, financial firms must have effective ways of determining the appropriate amount of capital that is necessary to absorb unexpected losses arising from their market, credit and operational risk exposures. The sector has recorded double-digit growth in profits for most of the past decade, when the economic growth has averaged at about five per cent. Factors such as amount of debt, the risks associated with indebtedness, interest rates and debt equity combination could affect the financial performance of firms. This research investigated the effect of capital structure on financial performance in relation to these factors. In respect of the above objectives of the study, data was collected by a review of documents, annual reports of the companies and the Nairobi Stock Exchange reports. Data collected was analysed using Statistical Packages for Social Sciences (SPSS) which gave descriptive analysis. The data was then be summarised and presented using tables. The study revealed that capital structure is inversely related to performance as revealed by the regression results of debt and return on equity. The results show that the mean values of debt/equity ratio and debt to total funds were 591.52% and 86.9% respectively. The mean value of debt/equity ratio suggests that debt is 5.915 times higher than equity capital. The debt/equity ratio is normally safe up to 2. It shows the fact that listed financial institutions in Kenya depend more on debt rather than equity capital. The mean value of debt to total funds ratio indicates 86.9% of the total capital of listed banks in Kenya is made up of debt. This has re-emphasized the fact that banks are highly levered institutions. The co-efficient values were found to be negative for the association between debt to equity and interest. This reveals that an increase in the level of debt finance increases the interest payments thus resulting in a decline in profitability. Arising from this observation it can be postulated that capital structure choice among listed financial firms support the pecking order theory that firms prefer raising capital, first from retained earnings, second from debt, and third from issuing new equity. The study noted that banks generally play a crucial role in the economic development of every country. One critical decision banks face is the debt-equity choice. Among others, this choice is necessary for the profit determination of firms. What this means is that banks that are able to make their financing decisions prudently would have a competitive advantage in the industry and make superior profits. However, it is essential to recognize that this decision can only be wisely taken if banks know how debt policy influences their profitability.

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CHAPTER ONE

1.0 INTRODUCTION

This chapter discusses the background of the study, giving an overview on the effect of capital structure on profitability of financial firms listed at Nairobi Stock Exchange. It further discusses the statement of the problem, objectives of the study, research questions, the significance of the study, scope of the proposed study and the limitations of the study.

1.1 Background of the Study

The capital structure decision is crucial for any business organization in any sector or economy. It is usually difficult for business firms to identify the right combination of debt and equity. The decision is important because of the need to maximize returns to various organizational constituencies. It is also important because of the impact such a decision has on a firm's ability to deal with its competitive environment. A firm can choose among many alternative capital structures. It can choose to either issue a large amount of debt or very little debt. It can arrange lease financing, use warrants, issue convertible bonds, sign forward contracts or trade bond swaps. It can issue many distinct securities in countless combinations, however, it attempts to find the particular combination that maximizes its overall market value.

Capital structure study attempts to explain the mix of securities and financing sources used by companies to finance investments (Myers,2001). Capital structure is the way in which a firm finances its operations which can either, be through debt or equity capital or a combination of both, Brigham, (2004). Most firms usually seek to increase the amount of debt finance in their capital structure, in anticipation of improving their performance. The principle of increasing risk indicates that, with increased debt the potential for a decrease in gain is higher than the potential for an increase in gain and yet some firms use more debt than others and still perform better. Previous research on the relationship between the capital structure and the performance of firms, which is mostly in reference to the developed countries in Europe and America, has produced mixed results. Some authors propose that there exists an optimum capital structure that maximizes shareholder wealth, as a result of the return on their investment and basing on the trade-off theories of capital structure. Other authors on the other hand argue that there is no optimum capital structure and that the performance of a firm is not related to the structure of its financing. Wagacha (2001) in a survey of enterprise attitudes 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.

Financial performance of a firm is a subjective measure of how well a firm can use its' assets to generate revenues. Erasmus (2008) noted that financial performance measures like profitability and liquidity among others provided a valuable tool to stakeholders to evaluate the past financial performance and the current position of a firm. Brigham and Gapenski (1996) argued that in theory, the Modigliani and Miller model was valid however in practice, bankruptcy costs did exist and that these costs were directly proportional to the debt levels in a firm. This conclusion implied a direct relationship between capital structure and financial performance of a firm.

1.2 Statement of the Problem

The success of financial institutions in Kenya's dynamic business environment depend on them being able to effectively determine the optimum and appropriate capital mix that is necessary to ensure that the shareholders get good returns. Financial institutions depend on their ability to identify, assess, monitor and manage risks in a sound and sophisticated way. In order to assess and manage risks, banks must have effective ways of determining the appropriate amount of capital that is necessary to absorb unexpected losses arising from their market, credit and operational risk exposures. The continued good performance of the banking sector against a backdrop of an economy that is not performing well has raised more questions than answers. The banking sector has recorded growth in profits for most of the past decade, when the economic growth has not been performing well.

Previous research work done in Kenya on capital structure include Rutto (2008) who studied the effect of capital structure change on share prices for firms quoted at Nairobi Stock exchange. Musyoka (2009) examined the relationship between capital structure and corporate governance of the firms listed at the Nairobi Stock Exchange. Etyang', (2012) studied the determinants of capital structure of private hospitals in Nairobi.

Arising from the findings of Berger (2006), the capital structure employed by firms could be a reason influencing their financial performance trends, an issue that has not been given serious attention by previous researchers. It is on this basis that the researcher decided to investigate the effect of capital structure on financial performance of listed financial firms in Nairobi Stock Exchange.

1.3 Objectives of the Study

1.3.1 General Objective

To investigate the effect of capital structure on financial performance of financial firms listed at Nairobi Stock Exchange

1.3.2 Specific Objectives

- i) To ascertain the relationship between debt and performance of financial firms listed at Nairobi Stock Exchange (NSE).
- ii) To determine the leverage risk of financial firms listed at Nairobi Stock Exchange (NSE).
- iii) To scrutinize the effect of interest rates on capital structure of financial firms listed at Nairobi Stock Exchange (NSE).
- iv) To determine the effect of debt-equity combinations on performance of financial firms listed at Nairobi Stock Exchange (NSE).

1.4 Research Questions

- i) What is the relationship between debt and performance of financial firms listed on Nairobi Stock Exchange (NSE)?
- ii) What are the risks facing firms using more debt finance than equity finance?
- iii) What is the relationship between capital structure, interest rates and performance of financial firms listed on Nairobi Stock Exchange (NSE)?
- iv) What is the ideal debt-equity combination that enhances the performance of financial firms listed on Nairobi Stock Exchange (NSE)?

1.5 Significance of Study

This study sought to establish the effect of capital structure on financial performance of financial firms listed at Nairobi stock exchange. Its output will be significant in the following ways.

- i) Managers of firms listed at the NSE have the sole obligation of maximizing shareholders wealth and may be able to use the output of this research to predict the possible outcomes of the changes the firm undertakes on capital structure
- ii) The output of this study might help firms' management be aware of the invisible cost of capital borne by their shareholders as a consequence of their capital financing decisions.
- iii) The study may be of help to scholars and academicians who may wish to use its findings as a basis for further research on capital structure at NSE.

1.6 Scope of the study

There are sixty one (61) listed companies in Nairobi Stock Exchange distributed among ten (10) different sectors i.e Agricultural, Automobile & Accessories, Commercial & Services, Banking, Energy & Petroleum, Construction, Insurance, Investment, Manufacturing and Telecommunication & Technology. This study concentrated on the banking sector which has eleven companies.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This section draws related material from different studies carried out in the past and in different areas. It comprises of the introduction, conceptual literature, empirical literature and conclusion sections. Conceptual literature focuses on the main theories and principles of capital structure. The capital structure of a business entity is described and the various ways of its measurement discussed. The performance of businesses is discussed and the methods of its measurement are explained. The empirical literature section will focus on the various relevant empirical studies undertaken on capital structure of firms. Finally the conclusion will provide a discussion of the theoretical and conceptual framework.

2.2 Capital Structure Defined

A firm's capital structure is the mix of its' financial resources available for carrying on the business and is a major determinant on how the business operates. As financial capital is an uncertain but critical resource for all firms, suppliers of the finance are able to exert control over firms. the two major classes of financing for a business are debt and equity. While debt holders exert lesser control over the company, and do not determine how the business is run, they earn a fixed rate of return and are protected by contractual obligations. The contractual obligations dictate what return is to be paid for the finance and when it is due. Equity holders are the residual claimants of all the business' returns, bearing most of the risk and having greater control over decisions, Kochhar (1997).

The capital structure of a firm is described as the components of its sources of financing, broadly categorized as equity and debt finance, Brockington (1990).

Equity finance is finance provided by owners of the business and it is the risk bearing finance. The holders of this finance own a portion of the firm denominated in shares and they are entitled dividends. However, it is not mandatory to pay a dividend all the time as the company may retain the profits for financing expansion of its operations. Equity owners also share in the risks of the business and are the last to benefit when a business is wound up after debt holders have been paid.

Debt finance is finance generated through borrowing from external sources such as banks or from issues of bonds, all of which attract a fixed return. Debt may be short term, (repayable over periods shorter than one year) or long term, (repayable over periods longer than one year). The lender does not gain a control of the business, but is paid interest for the use of his funds. The borrower has a contractual obligation to pay the interest and to repay the principal when due, inspite of the performance or profitability of the business.

Brealey and Myers (2003) defined capital structure as the firm's mix of different securities. The firm may issue dozens of different securities, but it attempts to find a combination that maximizes its overall market value by minimising the cost of capital. When the firm is financed entirely by common stock, all its resultant cash flows will go to the stock holders. When it issues debt alongside the equity, the cash flows are shared between the common stockholders and the debt holders, with the debt holders getting a fixed amount, while the common stockholders get the residual amount depending on the overall performance of the business.

2.3 Theories of Capital Structure

2.3.1 Modigliani Miller Irrelevance Theory

Modigliani - Miller (1958) theorem is considered the greatest breakthrough in theory of optimal capital structure. The theorem specifies the financial decisions by firms that are irrelevant to the firm's value. Modigliani- It has four prepositions which are;

- i) The value of a firm is the same regardless of whether it finances itself with debt or equity. The weighted average cost of capital is constant. The assumptions of Modigliani- Miller theorem are; Perfect and frictionless markets, no transaction costs, no default risk, no taxation, both firms and investors can borrow at the same interest rate; there is homogeneous expectation homogeneous risk and equal access to all relevant information.
- ii) The rate of return on equity grows linearly with the debt ratio implying that the higher the debt equity ratio the higher the expected return on equity.
- iii) The distribution of dividends does not change the firm's market value it only changes the mix of Equity and Debt in the financing of the firm.

- iv) In order to decide an investment, a firm should expect a rate of return at least equal to cost of capital no matter where the finance would come from. Hence the marginal cost of capital should be equal to the average cost of capital. The constant cost of capital is sometimes called the “hurdle rate” (the rate required for capital investment).

In summary the theory states that the value of a firm is invariant with respect to its leverage policy in an arbitrage-free market when there is no corporate income tax and no bankruptcy cost: whether firm is financed through debt or equity, its value remains the same.

2.3.1.1 Criticisms and Improvements of the theory

Baxter (1976) advanced the theory by introducing the issue of bankruptcy costs and their effect on the value of the indebted firm. These costs include liquidation fees, legal fees and reorganization costs, which would result from the firm going bankrupt. Hence a firm with a higher debt would incur higher bankruptcy costs than one with less debt

Berens and Cuny (1995) criticised the theorem proposition with corporate tax on the grounds that if firm value is an increasing function of indebtedness, due to tax deductibility of the interest payments on debt, then it implies that the more debt a firm employs the less tax it would pay, indicating that the value-maximising (optimal) capital structure should be all debt, since the tax benefits are maximised. This implication is not supported by empirical observations of firm behaviour.

Shuetrim, Lowe and Morling (1998) noted flaws in the first proposition of the theorem and stated that the cash flows of the firm are divided between debt holders, equity holders and the government, and that the capital structure of the firm that maximizes its value will be the one that minimizes the portion of cash flows that go to the government in the form of taxes.

2.3.2 Pecking order theory

Pecking order theory of capital structure states that firms have a preferred hierarchy for financing decisions. Firms will borrow instead of issuing equity when internal cash flow is not sufficient to fund capital expenditure. The highest preference is to use internal

financing before resorting to any form of external funds. Internal funds incur no flotation costs and require no additional disclosure of financial information that may lead to a possible loss of competitive advantage. If a firm must use external funds, the preference is to follow a certain order of financing sources: debt, convertible securities, preferred stock, and common stock, Myers (1984). This order reflects the motivations of the financial manager to retain control of the firm, reduce the agency costs of equity, and avoid negative market reaction to an announcement of a new equity issue. The amount of debt will reflect the firms' cumulative need for external funds.

The theory has two key assumptions about financial managers. The first of these is the likelihood that a firm's managers know more about the company's current earnings and future growth opportunities than outside investors. There is a strong desire to keep such information proprietary. The use of internal funds prevents managers from having to make public disclosures about the company's investment opportunities and potential profits to be realized from investing in them. The second assumption is that managers will act in the best interests of the company's existing shareholders. The managers may even forgo a positive-NPV project if it would require the issue of new equity, since this would give much of the project's value to new shareholders at the expense of the old, Myers & Majluf (1984).

However the theory has some limitations since it does not explain the influence of taxes, financial distress, security issuance costs, agency costs, or the set of investment opportunities available to a firm upon that firm's actual capital structure. It ignores the problems that can arise when a firm's managers accumulate so much financial slack that they become immune to market discipline. As such the theory is offered as a complement to, rather than a substitution for, the traditional trade-off model.

2.3.3 Trade Off Theory

In this theory, the firm is viewed as setting a target debt-equity ratio and gradually moving towards it. The firms seek debt levels that balance the tax advantages of additional debt against the costs of possible financial distress. In particular, capital structure moves towards targets that reflect tax rates, assets type, business risk, profitability and bankruptcy costs. The firm is balancing the costs and benefits of borrowings, holding its assets and

investment plans constant Myers, (1984). The firm's optimal capital structure will involve the trade-off between the tax advantage of debt and various leverage-related costs.

Due to the distinctions in firm-specific characteristics, target leverage ratios will vary from firm to firm. Institutional differences, such as different financial systems, tax rate and bankruptcy law etc, will also lead the target ratio to differ across countries. The theory predicts that firms with more tangible assets and more taxable income to shield should have high debt ratios. Firms with more intangible assets, whose value will disappear in case of liquidation, should rely more on equity financing. In terms of profitability, trade-off theory predicts that more profitable firms should mean more debt-serving capacity and more taxable income to shield, thus a higher debt ratio will be anticipated. Under trade-off theory, the firms with high growth opportunities should borrow less because they are more likely to lose value in financial distress.

2.3.4 Agency Costs Theory

The theory posits that firm's capital structure is determined by agency costs, which includes the costs for both debt and equity issue. The costs related to equity issue may include: the monitoring expenses of the principal (the equity holders), the bonding expenses of the agent (the manager), reduced welfare for principal due to the divergence of agent's decisions from those which maximize the welfare of the principal.

Besides, debt issue increases the owner-manager's incentive to invest in high-risk projects that yield high returns to the owner-manager but increase the likelihood of failure that the debt holders have to share if it is realized. If debt holders anticipate this, a higher premium will be required which in turns increase the costs of debt. The agency costs of debt include the opportunity costs caused by the impact of debt on the investment decisions of the firm; the monitoring and bond expenditures by both the bondholders and the owner-manager; and the costs associated with bankruptcy and reorganization Hunsaker (1999). Since both equity and debt incur agency costs, the optimal debt-equity ratio involves a trade-off between the two types of cost.

Agency costs arise due to the conflicts of interest between firm's owners and managers. Jensen and Meckling (1976) introduce two types of conflicts:

i) Shareholders-managers conflicts

This kind of conflict stems from the separation of ownership and control. If managers do not completely own the firm, they can only capture a fraction of the gain earned from their value enhancement activities but they need to bear the entire costs of these activities.

Jensen (1986) argues that, instead of working under shareholders interests to maximize firm's value, managers prefer to increase firm's size to enjoy the benefit of control. Managers have incentives to cause their firm to grow beyond the optimal size and accept negative net present value (NPV) projects. The overinvestment problem can be made worse by more free cash flow and less growth opportunities. Issuing debt helps to mitigate agency problems since debt commits firm to pay out cash so prevents managers from investing in negative NPV projects. Jensen refers to the non-discretionary nature of debt as the disciplining role of debt.

ii) Shareholder-bondholder conflicts

The shareholders or their representatives make decisions transferring wealth from bondholders to shareholders. The bondholders are aware of the situations in which this wealth expropriation may occur and will demand a higher return on their bonds or debts to guard against this. The conflicts may be minimized by firms with high growth opportunities having a lower leverage and using a greater amount of long-term debt than firms in more mature industries. The issue of convertible debt or debt with warrants can serve as another way of mitigating the conflicts as shown by Jensen and Meckling (1976) because the convertible debt will have lower agency costs than plain debt.

2.3.5 Information Signaling Theory

This theory contends that the choice of firm's capital structure signals to outside investors the information of insiders. It further notes that the problem of asymmetric or incomplete information in firms makes it difficult for lenders to accurately assess the level of risk. Managers are motivated to communicate insider information about a firm's value to the public stock market and their willingness or undertake costly capital structure reorganization change programs act as validated signal of this information. Ross (1977) argues that a firm signals an increase in the firm's asset value by increasing its leverage (debt) while Leland and Pyle (1977) however posits that a firm signals the increase in firm's

value by reducing its leverage (debt). Arising from the two signaling hypotheses above, an increase in debt will lead to increases in price based on the Ross (1977) model while based on Leland and Pyle (1977) an increase in debt will lead to reduced prices.

2.3.6 Free Cash Flow Theory

Free cash flow is the amount of cash that a company has left over after it has paid all of its expenses, including investments. It is important because it allows a company to pursue opportunities that enhance shareholder value. This theory expresses that mitigation of free cash flow by paying interest on debt and dividends prevents a manager from abusing the company's income for personal purposes. Due to law requirements, paying the principal and interest on debt is preferred to paying dividends to diminish the level of free cash flow. Jensen (1986).

2.3.7 Life Cycle Theory

The theory contends that firms use different types of financing for different stages of growth. Disiboshi (1989) proposed corporate life cycle theory which proposes that organizations get conceived, grow into adulthood and die. Upstarts look for the benefits of debt, most upstarts make losses. Entrepreneurs use personal guarantors since no one is keen to lend to them. There is no separation between ownership and the management, they are intertwined. At this stage decision flexibility is very valuable since future prospects are unknown, there are no assets to act as collateral. Growth stage has similar characteristics to the upstart. Fast growing firms hardly want to borrow significantly as this would affect flexibility to take up projects. At old stage, borrowing is significant and affordable. Firms have grown a substantial asset base. As firms become mature and grow there is separation between management and ownership. Management discipline becomes critical hence need to borrow significantly. The firm's investment needs are predictable. In old ages firms do not have investment needs and tend to retire most of their debt.

2.3.8 Contemporary Capital Structure Theories

Graham and Harvey (2001) advance the observation that Corporate Finance Officers (CFOs) consider the most important factor as maintaining financial flexibility, keeping debt low in order to be ready for unforeseen opportunities. CFOs tend to be very wary of taking

on debt. Kumaret et al (1999) in Buringuriza and Hyltenstam (2002) affirm that industries dependent on external finance tend to have smaller firms on average, indicating low growth and low performance, as do countries with low levels of financial development. They also state that equity financed industries tend to grow more slowly in countries that are more financially developed and tend to undertake less research and development. In contrast to what happens in the developed countries, bank dependent industries in countries with low GDP grow faster as the banking system develops.

2.4 Debt Financing

Business enterprises use debt in their businesses, because it offers them potential to increase the volume of their operations and increase the average return on their equity funds. The use of debt will have this effect only if the rate of return on the investment is greater than the rate of return on the debt, Watkins (2002). The borrowing firm takes a chance to use debt in the hope that it will elevate the firm to a more valuable level, by increasing the turnover and therefore increase the profits. The financial leverage chance will arise if the rate of interest charged to the firm is lower than the internal rate of return (IRR) for the company, in which case the firm will be making enough to pay the interest charged and the principal repayment and retain the surplus for the shareholders. On the other hand the firm may experience a financial leverage risk that the returns of the business are not enough to cover the interest charged. This occurs when the rate of interest exceeds the internal rate of return of the company. To avoid liquidation, the firm will have to use part of the shareholders' funds to repay the interest and principal. This could eventually lead to erosion of the equity and the collapse of the business.

The simplest way to assess whether borrowing has increased the return on equity is to contrast the return on the investment with the loan interest rate. When the return is higher than the loan interest rate, there is positive leverage (that is the return on equity increases as more is borrowed, Rowland (2002).

2.4.1 Measurement of Indebtedness

Bierman (1999) defines *financial leverage* as the use of debt in the capital structure and enumerates four ways of measuring it.

The static measure of indebtedness using *book values* is the proportion of debt to the total capital or debt to the sum of debt and common stock, given as:

$$I_1 = \frac{D}{D + E}$$

Where D represents the book value of debt and E is the book value of equity (or shareholders' funds).

A second measure of indebtedness is the static measure of indebtedness using market values and is defined as the proportion of debt to total capital or the sum of debt and common stock, with the debt and equity taken at market value. It is expressed mathematically in the same way as the first measure above.

The third measure is the flows measure of indebtedness which uses interest and income and is expressed as the ratio of the earnings before interest and tax (EBIT) to the interest for the period. It is represented by:

$$I_2 = \frac{\text{EBIT}}{\text{Interest}}$$

This ratio measures the firm's debt servicing capacity and shows the number of times the interest charges for the period are covered by funds that are ordinarily available for the interest payment.

A fourth measure is the flows measure of leverage, using cash flows and employs the ratio of cash inflows (income including depreciation and other non-cash expenses) and cash outflows (in terms of payment of debt). It is a measure of the ability of the firm to finance its debt obligations of paying the interest and the principle debt as they fall due.

Nivorozhkin (2000) expresses a primary concern with the use of book values versus market value data, in the measurement of indebtedness and prefers to use market values, as they provide a more accurate description of future cash flows and their risks. This however, introduces the problem that market prices are frequently fluctuating. He concludes that the final and perhaps best measure of leverage is the ratio of total debt to the sum of total debt and shareholders' equity, using the book values.

2.4.2 Debt and Shareholders' Returns

Watkins (2002) illustrates the effect of leverage on the shareholder's risk by describing, mathematically the rate of return on equity in terms of the rate of return on the debt and the

rate of return on the asset that the debt is financing. Thus;

$$Req = ra + L (ra - rd) \quad (2.1)$$

Where req is the return on equity, ra is return on asset, rd is return on debt and L is the leverage (debt/equity ratio).

This relationship is a major factor in the choice of funding for an asset, because when the return on debt (rd) exceeds the return on the asset (ra), the return on equity will be less than the return on the asset. It follows then that the asset cannot benefit the investor as the return on equity is reduced by the financing of the excess of return to debt over and above what the asset is generating, and the higher the leverage ratio, the more the negative effect on the return on equity.

Myers and Majluf (1984) argue that a theory of capital structure can be constructed by ranking securities, where investment is financed first with internal funds, then by issue of debt before the issue of new shares can be considered. Other scholars yet base their arguments on the Pecking Order Theory which states that businesses choose their source of finance in a hierarchical manner preferring internal financing, where available, and if external financing is required, preferring debt to external equity sources, because debt is considered less risky than external equity.

Mayer and Sussman (2002) advance the thought that the Pecking Order Theory denies the existence of an optimal capital structure. They argue that firms have a ranking of instruments to satisfy their financial needs without a tendency to revert to any particular capital structure. The capital structure therefore is a result of the supply of the preferred source(s) of funding.

2.4.3 Debt and Risk

Risk is the variability in the earnings of a company which increases the likelihood of bankruptcy and the cost of debt. Risk can be broken down into two components:

- i) Operating risk is the variability in earnings due to the environment in which the firm operates and is unavoidable risk

- ii) Financial risk is the variability in the earnings after interest and tax that is due to the use of financial leverage. Financial risk affects the shareholder's value in varying the Earnings Per Share (EPS) and rate of Return on Equity (ROE). This risk arises as a result of fixed payments related to debt, namely interest and principal payments, that have to be paid regardless of whether the business is making profits or not.

According to Brealey and Myers (2003), in most years in a business' life there is a gap between the cash that the company needs and the cash it can generate internally for its operations and this is called the financing gap. To make up this gap, companies must sell new equity or borrow.

They are faced with a decision on what proportion of the deficit must be financed by borrowing and how much by internal funds. This assumes that the borrowings at a fixed charge can be obtained at a cost lower than the firm's rate of return on its total assets, and the surplus of the return after paying off the interest will be distributed to the shareholders, then the earnings per share or the return on equity will rise. However, return on equity will fall if the company obtains the fixed charge funds at a cost higher than the rate of return on its total assets as the interest charged will erode the profits.

Reilly and Brown (2003) define financial risk as the uncertainty introduced by the method by which the firm finances its investments. If it employs only common stock to finance investments, it incurs only the business risk, the uncertainty arising from the nature of the business. If it borrows money to finance its investments, it must pay fixed financing charges prior to providing income to the shareholders, so the uncertainty of returns to equity holders increases by the risk introduced with the borrowing. If the profits are low, the business must still pay the lenders before the shareholders can be paid their return. This increases the variability of the return to them.

Taking and managing risk is part of what companies must do to create profits and shareholder value, Buehler and Pritsch (2003). Risk is defined here broadly to include any event that might push a company's financial performance below expectations. It comes in four main categories namely:

- i) Market risk (exposure to adverse market price movements),
- ii) Credit risk (exposure to the possibility that a borrower or client might fail to honor their contractual obligations),
- iii) Operational risk (the exposure to losses due to inadequate internal processes and systems)
- iv) Business-volume risk (exposure to revenue volatility arising from changes in demand and supply or competition).

A company must formulate a strategy that takes into account all these risks and plan their mitigation. One major aspect of the risk assessment and management involves decisions on the capital structure or the business financing of the company.

2.4.4 Debt and Dividends

A dividend is set by the firm's board of directors and it is announced at the annual general meeting of shareholders that the payment will be made to all shareholders who are registered on a particular date. The dividend declaration may be restricted by debt holders or lenders, who are concerned that the payments may not leave enough to cover their debts. Companies are legally not allowed to pay a dividend out of legal capital. Brealey and Myers (2003). Companies pursue a dividend policy that maximizes the shareholder's return so that the value of his investment is maximized. A dividend policy determines how much of the profit of a firm is distributed as dividends to the shareholders and how much is retained as reserves for financing the firm's growth. A high payout ratio policy implies less retained earnings resulting in slower growth and maybe lower market price per share. A low payout policy on the other hand may accelerate earnings and raise the share price and investors will realize most of their return through capital gain. The dividend per share may be low for such companies, but the market value to book value of the share will be high

Managers tend to have a target dividend pay-out rate but tend to smooth it out to keep dividends as predictable as possible, in order to have a stable market value. A fall in dividend can send bad signals to the market and cause the value to fall drastically. They have an option to buy back shares or issue bonus shares instead. Brealey and Myers (2003).

2.4.5 Debt and Share Value

The Mayer and Sussman (2002) report the development of a new approach to testing the capital structure theory. On performing tests and event studies on financing of specific projects, they found that around time of investment spikes, both the trade-off and the pecking order theories played an important role in the firms' financing decisions. Profitable and large firms have a clear preference for debt over equity and increased their debt in line with their financing requirements. However, small firms are forced to turn to equity markets to finance their investments.

2.4.6 Debt and Interest rates

Interest rates represent the cost of borrowing capital for a given period of time. According to Myers and Stewart (1984), prevailing interest rates are key to many firms, because of indexing of interest rates to inflation. Studies show that interest rates affect capital structure decisions. Jalilvand and Harris (1984) in a study of United States of America(USA) Corporation obtained results which suggested that financial decisions are interdependent and firm size, interest rate conditions and stock price levels affect speed of adjustments to capital structure implying that they do influence it. Singh (1993) notes that if the interest rate is high investment falls, a low rate of interest may lead to increase in investment activity. Increased investment may imply use of more debt. It can thereby be concluded that a relationship exists between investment and use of debt and level of interest rates

2.4.7 Debt and Agency Costs

Agency costs are the disputes that occur between interested parties in an organization due to their various competing interests. Conflict of interest between the debt/bondholders and the equity holders may arise due to under investments. Myers (1977) argues that investment decisions in a firm can be affected by the presence of long term debt in the firm's capital structure. Shareholders may under invest and pass up positive NPV projects if they perceive that the profits will be used to pay off existing debt holders. This cost can be most acute among the growing firms, Myers argues that the firms may want to limit the total debt or use short term debt in order to limit underinvestment costs. Froot and Stein (1993) propose that firms may want to hedge or otherwise maintain financial flexibility to avoid cost of underinvestment.

At high debt ratios, friction between management and lenders escalates. Lenders will want to introduce restrictive covenants to prevent their wealth from being distributed to shareholders. At high debt ratios investors will want to engage in risky investments because in case of best outcomes major beneficiaries are their shareholders because lenders have fixed interest irrespectively of the projects undertaken.

Asset substitution is where the shareholders are able to capture returns above those amounts required to service debt repayments and other liabilities and at the same time have a limited liability when the returns are insufficient to fully pay off the debts and the debt holders may have to write off the debts. Therefore shareholders will prefer high risk projects and the bondholders will prefer risk free projects that will guarantee repayments. Leland et al (1996) argue that the use of short term debt reduces agency conflict while Green (1986) argues that asset substitution can be avoided by use convertible debt so that if the shareholders insist on undertaking riskier project the bondholders can enjoy benefits of the project by converting their bonds to equity.

In making debt decision managers take into account how it affects their ability to take additional projects in the future In practice many firms that have a high substantial investment opportunities will preserve their borrowing capacity to enable them have flexibility. This explains why there is lower debt financing in new industries.

2.4.8 Factors Influencing Debt Financing

Safdar et al (2009) analysed the relationship between large external equity holder's ownership and financial leverage and realised that relationship between management ownership and leverage ratio is not significant in the presence of a large outside equity holders. An ownership structure with dispersed ownership, no single shareholder has a substantial controlling stake, hence no one is able to call on the management to account. In such cases managers will have substantial decision making ability and debt levels will be low. In concentrated ownership where there is only a handful shareholders who have significant stake and control they are able to call on management to account and shareholder power is immense hence debt ratio will be higher

2.4.8.1 Advantages of Debt Financing

Firms which experience high tax rates will have comparatively higher leverage ratios and likewise lower tax rate will lead to lower debt ratio. Mackie-Mason (1990) concluded that firms that have non debt tax shields are likely to borrow less than those that have no debt tax shield i.e. other shield like depreciation (Wear and Tear) or Accumulated losses.

If taxes were to increase over time it is expected that industry debt ratio will go up with time. Country differences in taxes may explain country differences in debt ration i.e. with higher tax rates firms would tend to have higher debt ratios. Agreeing with this assertion Desai (1998) found that tax advantage is most important for large dividend paying corporations and companies that probably have a high corporate tax rate and therefore tax incentive to use debt. Firms also issue foreign debt in response to relative tax incentives.

Jansen (1986) brought the rationale that use of debt facilitates discipline in management. Managers tend to make wasteful decisions with free cash flows when given discretionary powers on how to use them. Free cash flow is the firm's cash that the management has discretionary powers and can be used to invest in new assets, pay dividends and finance management perks. Many companies with huge free cash flow and cash reserves and little or zero debt financing tend to have a huge cash cushion against mistakes and no incentive to be efficient. Debt payment obligations will generally force managers to make the most competitive investment decisions. Debt can also be valuable in monitoring the implementation of investment decisions, ensuring that there is efficiency. This is done by ensuring that the free cash flow available to management is extremely small or insignificant, forcing managers to meet debt serving obligations. Also, the lenders to the firm will always do their own monitoring hence managers may not borrow much.

2.4.8.2 Disadvantages of Debt Financing

At high level of debt financing a firm is exposed to possibly of default (Bankruptcy cost). Bankruptcy costs of debt are the increased costs of financing with debt instead of equity that result from a higher probability of defaulting on debt repayments. They can be categorized into two; direct bankruptcy cost which is less significant (4% of company asset value) and indirect cost which is more significant and includes loss of credit facilities from

suppliers leading to firms having to dip into their cash resources or set cash reserves in cases where credit terms are reduced. Firms in this situation have to invest in more liquid assets. Implicit bankruptcy costs can be the positive NPV projects the firm may have to forego due to its obligations to service debt repayments.

2.5 Factors affecting firms choice of capital structure

i) Tangibility

Tangible assets can be used as collateral in external borrowing, the presence of large tangible assets can help a firm get bank loans at a lower interest rate, it also helps to reduce the risk of the lender suffering from the agency cost of debt. Since the debts can be secured by the collateralization of tangible assets, the firm's opportunity to engage in asset substitution is reduced by the presence of a large fraction of secured debts. Johnson (1997) the costs of capital for firms with more intangible assets, are higher since monitoring is more difficult. Hence, a firm with a large fraction of tangible assets is expected to have more debt.

ii) Effective tax rate

Interest from loan is tax deductible, firms with higher taxable income ought to have more debt to benefit from tax-shield gain, Hauge and Senbet (1986). As a result, effective tax rate is expected to be positively associated with the level of debt. However, higher effective tax rate also reduces internal funds and increase the cost of capital. Therefore a negative relationship between effective tax rate and level of debt is expected.

iii) Size

Size is positively related to leverage, larger firms are usually more diversified and have more stable cash flow. The probability of bankruptcy is smaller for large firms compared with small ones. Many studies suggest that large firms prefer to issue long-term debt while small firms choose short-term debt to finance their projects. Large firms bear lower costs in issuing debt and equity compared with small firms, Michaelas et al. (1999) because of the advantage of economies of scale and bargaining power with creditors.

iv) Growth Opportunities

Studies generally suggest a negative relationship between growth opportunities and leverage. In underinvestment situation, firms with high growth opportunities may forgo positive NPV projects because of existence of outstanding debt, Myers(1977). Since the

returns from such investment will be transferred to debt holders rather than shareholders. If management pursues growth objectives, management and shareholder interests tend to coincide for firms with strong investment opportunities. In overinvestment, debt limits the agency costs of managerial discretion. Hence firms with high growth opportunity may not issue debt in the first place and an inverse relationship between growth opportunities and leverage is expected to hold

v) Volatility of earnings

Firms with high volatility in earnings face a higher risk of earnings level dropping below the debt service commitment. This may force firms to arrange funds at high cost to pay the debt. However, if financed by equity, firms can choose to forgo dividends payments during the period of financial distress. This indicates that firms with high earnings volatility will borrow least and prefer equity to debt when facing external financing choices.

vi) Liquidity

Pecking-order theory suggests that firms prefer internal financing to external financing, firms are likely to create liquid reserves from retained earnings. If liquid assets are sufficient to finance the investments, firms will have no need to raise external funds. Thus, liquidity is expected to be negatively related to leverage.

2.6 Firm Performance and its Measurement

A firm's financial performance, in the view of the shareholder, is measured by how better off the shareholder is at the end of a period, than he was at the beginning and this can be determined using ratios derived from financial statements; mainly the balance sheet and income statement, or using data on stock market prices, Berger and Patti (2002). These ratios give an indication of whether the firm is achieving the owners' objectives of making them wealthier, and can be used to compare a firm's ratios with other firms or to find trends of performance over time.

Charreaux (1997) states that an adequate performance measure ought to give an account of all the consequences of investments, on the wealth of shareholders. The main objective of shareholders in investing in a business is to increase their wealth. The measurement of performance must give an indication of how wealthier the shareholder has become as a result of the investment over a specific time.

The ratio of profits of the company over shareholder capital employed measures the use of the owners' funds in producing the overall profit of the firm and is given as:

$$\text{Return on Equity (ROE)} = \frac{\text{Net Profit after Tax}}{\text{Equity}}$$

Where equity is the shareholder's funds at the end of the same period.

Other ratios employed to measure the performance of a firm in relation to shareholders' interests are the dividend rate, which measures the cash return to the shareholder from his investment in the share of the firm, and the market value of the company compared to its book value, which measures the change in shareholders' value of investment. Brockington (1990) gives the dividend payout rate as:

$$\text{Dividend Payout Rate} = \frac{\text{Dividend} \times 100}{\text{Share price}}$$

Where the dividend is the amount of dividend per share and the share price is the nominal price.

The ratio of market value (MV) to book value (BV) of the share denotes how the share has appreciated from the nominal value to the market price, and is expressed as:

$$\text{MV: BV} = \frac{\text{Market value per share}}{\text{Book value per share}}$$

2.7 Empirical Literature

Abor (2005) investigated the relationship between the capital structure and profitability of listed firms on Ghana Stock Exchange (GSE). Data taken for this between 1998 and 2002, twenty-five listed firms qualified for this study. Regression analysis methodology used in the assessment of functions involving the return on equity (ROE) with measure of capital structure. Result of the research is that capital structure is related to the marketing, because different firms issue different securities in many different combinations, which maximize the market value. Huge return and profitable firms always use more short-term debt, short term is important part of total debt, and usually firms use 85% of short-term loan against long-term debt. Long-term debt and return on equity have negative relationship; total debt

and return on equity are positively related.

Chen et al (2009) studied the insurance industry Taiwan, to know the relationship among capital structure, operational risk, and profitability. Factor analysis and path analysis methodologies were used to examine correlation among the capital structure, operational risk, and profitability sample of listed insurance companies in America was also taken. Result of research was firms values is not related with capital structure, a close relationship was shown among operational risk, profitability, capital structure. Capital structure is negatively related with profitability if equity ratio increases or reserve-to-liability ratio decreases which result in higher profits.

Ebaid (2009) studied the relationship between the different debt-equity combinations with company's performance. Multiple regression technique was used to find out the impact of debt policy on company's performance. Findings of the study reveal that both short-term debt and total debt are negatively related by return on assets. Capital structure including total debt (TTD) in not significantly related with Return on Equity and Gross profit margin (ROE and ROA). Findings of the study reveal that ROA and firm performance are negatively related.

Hung et al,(2002), investigated the inter-relationship between profitability cost of capital and capital structure. Regression analysis was applied on data to find out the results. The results show that capital is positively related with assets and have negative relationship with profitability.

Abor (2007) investigated the effect of capital structure on the financial performance of small and medium-Sized enterprises (SMEs). The observed finding of the study reveals that long-term debt and gross profit margin (GPM) are positively related; whereas short-term debt has significant and negative relationship with gross profit margin (GPM), with both South African and Ghanaian perspective. It is also observed that the total debt ratio is also significantly and negatively related with (GPM); whereas trade credit and gross profit margin (GPM) is also significantly negatively related with each other in case of both countries such as South Africa and Ghana. In Ghanaian perspective; return on assets has significant and negative relationship with all the measures of capital structure; whereas

return on assets has significant and positive relationship with both trade credit and short-term in South African case. The findings of the study reveal significant negative relationship between long-term debt and total debt with the return on assets. It further reveals that there is a significant and positive relationship between the performance of the SMEs and capital structure in the existence of the managed variables, where as SMEs performance is particularly negatively affected by total debt and long-term debt.

Madan (2007) investigated the relationship between the capital structure and in the overall performance of Indian firms and also assessed the capital structure. Study further assessed how different debt-equity combinations play an important part in firm's overall performance and expansion. The findings revealed that both lower and higher gearing ratios are not enviable for the firms. Companies which operate at break-even point also use debt in capital structure to insure the profits. Indian firms use 30/70 or 40/60 percent of debt and equity combination, other need is fulfilled through the reserves and capital and surplus.

Eriotis et al (2000) investigated the relationship between debt-equity ratio and firm's profitability. In the study, the level of the firm in investment and its degree of market power was observed. The facts and figures of various industries of 1995-96 were taken into study. It was observed through the study that the financial structure plays a key role in a firm's profitability. A firm's profitability depends on debt-to-equity ratio. The debt -to-equity ratio varies from firm to firm. It is the selection of debt- to- equity ratio which makes successful financial strategy for this purpose some firms choose a high rate equity ratio and the others depend on lower rate equity ratio. It was observed from the study of various industries that debt-to-equity ratio has a negative impact on a firm's profitability. The study further revealed that the firms that finance their investment on their equity entertain much profit in comparison to the firms that finance their activities through borrowed capital.

Ager (2009) carried out an empirical analysis of capital structure rebalancing by firms listed at Nairobi Stock Exchange to establish whether firms actively try to rebalance their capital structure when optimality is thrown off balance. The study findings showed that in some instances there were attempts at capital structure rebalancing but the evidence was

weak and this can be attributed to inertia in capital adjustment by the listed firms. This concurs with Myers (1984) assertion that the cost of such adjustment outweighs the benefits.

Gill, et al., (2011) sought to extend Abor's (2005) findings regarding the effect of capital structure on profitability by examining the effect of capital structure on profitability of the American service and manufacturing firms. A sample of 272 American firms listed on New York Stock Exchange for a period of 3 years from 2005 – 2007 was selected. The findings of this paper show also a positive relationship between short-term debt to total assets and profitability, long-term debt to total assets and profitability, and between total debt to total assets and profitability in the manufacturing industry.

Serrasqueiro and Marcia (2009) conducted a study to analyze the company capital structure. In the study the result of Portuguese companies is examined which shows a negative and statistically significant relationship between the profitability of listed Portuguese companies and their level of debt. The results of the study further show that there is great influence of tangibility of assets, size and profitability on the structure of Portuguese companies. Findings of the study suggest that most firms rely on internal source of financing or bank debt to fulfil their financing needs in less developed capital markets.

2.8 Conclusion from Literature Review

The conceptual literature review has detailed several theories that explain capital structure and the relation to the value of the firm and consequently a number of theories can be used to predict the possible effects of capital structures changes on performance. The empirical literature section cites the various relevant empirical studies done on capital structure changes, the outcomes of the studies and finally an explanation of the outcome.

2.9 Conceptual framework

The conceptual framework below identifies the identified independent variables that affect the dependent variable which profitability.

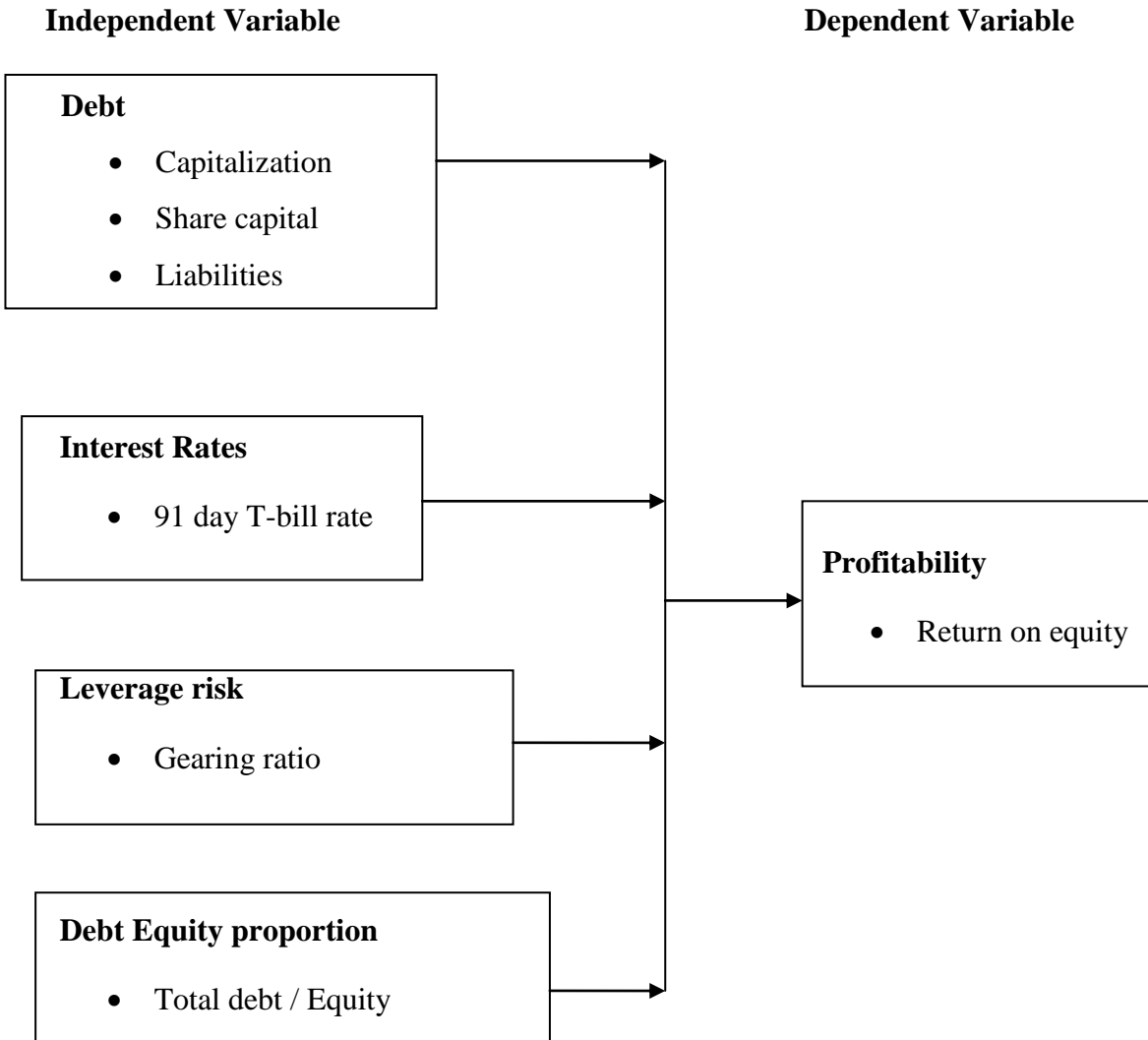


Fig 1: Conceptual Framework (Source: Author, 2013)

The sources of funding for a business are divided into two main categories, owners' funding (equity) and borrowed funding (debt). The objective of the business owners is to increase their wealth and the performance of firms. In relation to this objective the increase in the performance is measured by the increase in return on the shareholders' funds.

The independent variable in this study was capital structure and the dependent variable was financial performance. The concept illustrated above assumes that increasing the level of

the debt in the capital structure will increase the turnover of the business and hence its profit, resulting in an increase in returns to the business owners. An increase in interest rate is expected to result in reduced borrowing, increased interest expenses and thus reduced returns to business owners.

CHAPTER THREE

3.0 METHODOLOGY

3.1 Introduction

This chapter discusses the research methodology that will be used in the study. The chapter includes the research design, target population and research instruments. The chapter also presents how the validity and reliability of the instruments will be ensured.

3.2 Research Design

The study will be carried out using a longitudinal research design, employing secondary quantitative data. Cooper and Schindler (2003) describe longitudinal study as one that is carried out repeatedly over an extended period of time. The study will rely purely on accounting data of financial firms listed at Nairobi stock exchange for the period of 2008 to 2012. The required data on the debt-equity ratio will be extracted from annual reports of financial firms.

3.3 Target Population

The study population comprises of financial firms listed on the Nairobi Stock Exchange for the period between January 2008 and December 2012, a period of 5 years. This period is considered sufficient enough given time constraint over which the study will be conducted. Abor (2005) in his effect of capital structure on profitability: an empirical analysis of listed firms in Ghana used a 5 year period using data from Ghana Stock Exchange between 1998 and 2002. The firms to be analysed are Barclays Bank Ltd, CFC Stanbic Holdings Ltd, I&M Holdings Ltd, Diamond Trust Bank Housing Finance Co Ltd, Kenya Commercial Bank, National Bank of Kenya, NIC Bank, Standard Chartered Bank, Equity Bank Ltd and The Co-operative Bank of Kenya.

3.4 Data Sources and instruments

The study will make use of secondary data. All the data will be collected by review of documents, annual reports of the companies and the Nairobi Stock Exchange reports.

3.5 Measurement of Variables

The capital structure will be measured using the indebtedness ratio and the firm performance measured using the return on equity.

3.5.1 Indebtedness

The value of debt will be arrived at by expressing the total liabilities (both long term and short term) as a proportion of the total funding. This will be computed as shown below.

$$I = \frac{D}{(D + E)}$$

Where D is total liabilities, comprising of non-current and current liabilities and E is the shareholders' funding, comprising of the retained profits and all the revenue reserves.

3.5.2 Firm Performance

The performance of a company is considered as the return to shareholders' funding. The benefit or return to the shareholder is expressed as the ratio of the net profit after taxes to the shareholders' funds. The net profit after tax will be arrived at after deducting all obligatory expenses of the business including interest and taxes. The shareholder's funds include share capital, retained profits and other reserves. This ratio expresses the return in shillings for each shilling of the shareholder's funding. This is expressed mathematically by

$$ROE = \frac{\text{Profits after tax}}{\text{Shareholders' funds (book value)}}$$

3.6 Data Processing and Analysis

Descriptive statistics will be used to depict the characteristics of the population. The mean and the variance will be calculated using SPSS.

This study will use multiple linear regressions where return on equity will be regressed against debt, interest rate and debt equity proportion. The model can be mathematically represented as follows:

$$ROE_t = \alpha + \beta_1 DR_t + \beta_2 INT_t + \beta_3 GR_t + e_t$$

Where:

ROE_t = Return on Equity Ratio over 5 year period

α = Coefficient of regression.

β_s = are the unknown parameters (constant of regression).

DR_t = Debt ratio

INT_t = Represents the interest rate as a proxy of 91 day Treasury bill rate

GR_t = Gearing ratio

e_t = is the error term

CHAPTER FOUR

4.0 DATA FINDINGS AND ANALYSIS

4.1 Introduction

This chapter presents the results of the data analysis and the findings from the study in relation to the research objectives and in consistence with the literature reviewed in chapter two. The analyses are based on secondary data obtained from reports of the Nairobi Stock Exchange and from the financial reports of the companies under review. The relationship between the variables was ascertained by correlation and multiple regression analysis. The findings were interpreted in relation to the research objectives

4.2 Descriptive Statistics

4.2.1 Debt ratio

Bank	2008	2009	2010	2011	2012
Barclays bank	0.8780	0.8530	0.8180	0.8250	0.7460
CFC Stanbic	0.8270	0.8410	0.8230	0.8710	0.8100
I&M	0.8585	1.0000	0.8406	0.8597	0.8658
Diamond Trust bank	1.1180	1.1170	1.1200	1.1210	1.1390
HFCK	0.7445	0.7767	0.8546	0.8520	0.8746
KCB	0.8897	0.8841	0.8443	0.8401	0.8260
NBK	0.8550	0.8500	0.8350	0.8480	0.8440
NIC	0.8690	0.8570	0.8580	0.8670	0.8570
Stanchart	0.8840	0.8870	0.8580	0.8740	0.8430
Equity bank	0.7451	0.7610	0.7886	0.8019	0.8023
Max	1.1180	1.1170	1.1200	1.1210	1.1390
Min	0.7450	0.7610	0.7890	0.8020	0.7460
Mean	0.8640	0.8800	0.8650	0.8760	0.8600
STDEV	0.0982	0.0999	0.0878	0.0843	0.0993

Table 4.1

The data findings presented in table 4.2.1 above were arrived at by expressing the total liabilities (both long term and short term) as a proportion of the total funding. According to the table findings, year 2009 had the highest mean of 0.88 or 88% and a standard deviation of 0.0999 while 2012 had the lowest mean of 0.860 or 86% and a STDEV of 0.0993. This shows that in the year 2009, 88% of the total firm assets were financed by debts. A ratio of less than one implies that most of the firm's assets are financed through equity, while a ratio greater than one shows that most of the firm's assets are financed through debt. This

attests to the fact that Kenyan firms largely depend on debt for financing their operations due to the difficulty generating the finance from within companies. However, the minimum value of total debt ratio in the same year (2009) was 0.761 or 76.1% revealing that in some companies some of the assets were financed through equity.

4.2.2 Gearing ratio

Bank	2008	2009	2010	2011	2012
Barclays bank	7.220	5.810	4.480	4.716	5.247
CFC Stanbic	4.774	5.277	4.656	6.769	4.257
I&M	6.066	0.000	5.273	6.125	6.454
Diamond Trust bank	8.507	8.528	8.352	8.295	7.199
HFCK	2.914	3.478	5.877	5.756	6.972
KCB	8.068	7.630	5.424	5.255	4.746
NBK	6.878	6.501	6.045	6.567	6.426
NIC	7.657	7.002	7.065	7.506	6.999
Stanchart	7.611	7.846	6.021	6.927	5.352
Equity bank	2.924	3.185	3.730	4.048	4.058
Max	8.507	8.528	8.352	8.295	7.199
Min	2.914	0.000	3.730	4.048	4.058
Mean	6.159	5.550	5.799	6.291	5.777
STDEV	1.978	2.498	1.308	1.265	1.123

Table 4.2

The ratios above indicate what proportion of equity and debt the company is using to finance its assets. A high debt/equity ratio implies that a firm has a higher portion of debt and generally such firms are thought to be more risky because they have more liabilities and less equity.

Analysis of the table shows that the year 2011 had the highest mean of 6.291 while the year 2009 had the lowest mean of 5.550. The findings show that in 2011 when the debt equity ratio was high, every Ksh 1 of equity was matched by Ksh 6.291 of debt. Likewise in the year 2009 a slight drop was noted in that every Ksh 1 of equity was matched by Ksh 5.555 of debt. The analysis further supports the view that debt is a key component in financing operations of Kenyan firms.

4.2.3 Return on Equity

Bank	2008	2009	2010	2011	2012
Barclays bank	0.2700	0.2500	0.3400	0.3000	0.3000
CFC Stanbic	0.0416	0.0722	0.0722	0.0951	0.1105
I&M	0.3991	0.1823	0.1823	0.2290	0.2122
Diamond Trust bank	0.1870	0.2870	0.2870	0.2590	0.2580
HFCK	0.0373	0.0891	0.0891	0.1319	0.1447
KCB	0.2000	0.1800	0.1800	0.2475	0.2290
NBK	0.1998	0.1850	0.2036	0.1479	0.0698
NIC	0.2918	0.3426	0.3123	0.2248	0.2667
Stanchart	0.3000	0.3300	0.3000	0.3900	0.3200
Equity bank	0.1909	0.1985	0.2850	0.2789	0.2577
Co-operative bank	0.2400	0.2000	0.2500	0.2600	0.3100
Mean	0.2143	0.1763	0.2274	0.2331	0.2253
Min	0.0373	0.0722	0.0722	0.0951	0.0698
Max	0.3991	0.3426	0.3400	0.3900	0.3200
STDEV	0.1068	0.1157	0.0897	0.0833	0.0834

Table 4.3

Return on equity (ROE) measures the contribution of net income per shilling invested by the firms' stockholders; a measure of the efficiency of the owners' invested capital. It reveals how much profit a company earned in comparison to the total amount of shareholder's equity.

According to the findings in the table, year 2011 had the highest mean of 23.31% and a standard deviation of 0.0833 while 2009 had the lowest mean of 17.63% and a standard deviation of 0.1157. This picture suggests a good performance during the period under study. This means that in 2011, each shilling invested by the shareholders earned 23.31% this is in contrast to 2009 when the firms earned 17.63% for each shilling invested.

4.2.4: Interest rates

Year	Interest rate (%) Treasury bill rate
2008	8.59
2009	6.82
2010	3.61
2011	8.67
2012	12.82
Mean	8.10
Min	3.61
Max	12.82
STDEV	3.340

Table 4.4

The analysis of interest rates as measured by the prevailing 91 day Treasury bill rate show that the year 2012 had the highest rate of 12.82% while 2010 had the lowest rate of 3.61%. The mean interest rate was 8.10% while the standard deviation was 3.34.

4.2.5 Variables Analysis

The above variables can be tabulated in one table as shown below for further analysis

Year	Return on Equity	Debt ratio	Gearing ratio	Interest rates
2008	0.2143	0.864	6.159	0.0859
2009	0.1763	0.880	5.550	0.0682
2010	0.2274	0.865	5.799	0.0361
2011	0.2331	0.876	6.291	0.0867
2012	0.2253	0.860	5.777	0.1282
Mean	0.2153	0.869	5.915	0.0810
Min	0.1763	0.860	5.550	0.0361
Max	0.2331	0.880	6.291	0.1282
STDEV	0.0228	0.0085	0.3027	0.0334

Table 4.5

The table shows that in 2009 when the return on equity was lowest at 17.63%, the debt ratio of the listed financial firms was highest at 88%. However, the gearing ratio was the lowest at 5.55.

4.2.6 Regression model

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	1.204	1.419		0.849	0.552	-16.82	19.228
Debt level	-1.448	1.584	-0.542	-0.914	0.528	-21.58	18.683
Debt Equity proportion	0.0466	0.043	0.618	1.087	0.474	-0.498	0.592
Interest rates	-0.0728	0.409	-0.106	-0.178	0.888	-5.274	5.128

Table 4.6

Table 4.6 presents the data findings on the return on equity regression model. According to the table the findings indicated that the intercept was 1.204, that is, when all the factors are equated to zero the return on equity will be 1.204, while the coefficients for debt proportion

will be -0.448, debt equity proportion 0.0466 while interest rate coefficient will be - 0.0728.

$$ROE_t = 1.204 + 0.0466Deq_t - 1.448Debt_t - 0.0728INT_t + e_t$$

According to the model above, a unitary increase in the level of debt brings about a 1.448 decrease in return on equity implying that an increase in the debt position is associated with decrease in profitability. This can be explained by the fact that debts are relatively expensive and thus employing high proportions of them could lead to low profitability. An increase in the debt equity combination on the other hand leads to an increase of 0.0466 in return on equity. The model further shows that an increase in interest rates brings about a decrease of 0.0728 in return on equity. This depicts that increase in interest rates influence return on equity thus profitability negatively.

The value of R is 0.918 which means that there is a strong positive correlation between the observed and predicted value of the dependent variable and further that the regression model has explained 85.6% of the variations in the dependent variable.

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.918	0.856	-0.256	0.0255917

CHAPTER FIVE

5.0 SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the summary of the findings in chapter four. Conclusion and recommendations drawn from these findings are discussed in relation to the objectives of the study which was to establish the effect of capital structure on profitability of financial firms listed at Nairobi stock exchange

5.2 Summary of Findings

This study examined the effect of capital structure on financial performance of listed financial institutions in Nairobi stock exchange. It was restricted only to the 11 listed banks over the period of 2008 to 2012 in the Banking sector in Nairobi stock exchange. It was conducted based on the secondary data collection.

The study revealed that capital structure is inversely related to performance as revealed by the regression results of debt and return on equity. The results show that the mean values of debt/equity ratio and debt to total funds were 591.52% and 86.9% respectively. The mean value of debt/equity ratio suggests that debt is 5.915 times higher than equity capital. The debt/equity ratio is normally safe up to 2. It shows the fact that listed financial institutions in Kenya depends more on debt rather than equity capital. The mean value of debt to total funds ratio indicates 86.9% of the total capital of listed banks in Kenya is made up of debt. This has re-emphasized the fact that banks are highly levered institutions.

The co-efficient values were found to be negative for the association between debt to equity and interest rates consisting values of -1.448 and -0.0728 respectively. This reveals that an increase in the level of debt finance increases the interest payments thus resulting in a decline in profitability.

This significant negative relationship between debt and ROE conforms to the findings of Ebaid (2009) and Onaolapo and Kajola (2010).

Arising from this observation it can be postulated that capital structure choice among listed financial firms support the pecking order theory that firms prefer raising capital, first from retained earnings, second from debt, and third from issuing new equity.

5.3 Conclusion

The study has examined the relationship between capital structure and profitability of listed financial firms in Kenya in period 2008 to 2012. The main aim being to provide empirical insights on the financing behaviour of listed banks in the Banking sector in Nairobi stock exchange. The study established a significant negative relationship between capital structure and financial performance.

The research has compiled a database of listed bank's accounting data that demonstrate what can be done even with the limitations of currently available data. There is clearly enormous scope for more research that can inform an understanding of how the capital is structured, how it connects with the profitability and what elements of capital structure make

5.4 Recommendations

Banks generally play a crucial role in the economic development of every country. One critical decision banks face is the debt-equity choice. Among others, this choice is necessary for the profit determination of firms. What this means is that banks that are able to make their financing decisions prudently would have a competitive advantage in the industry and make superior profits. However, it is essential to recognize that this decision can only be wisely taken if banks know how debt policy influences their profitability. Therefore banks should take into view the following matters in order to increase their profitability;

- i) An appropriate mix of capital structure should be adopted in order to increase the profitability of banks. Findings revealed that debt is negatively correlated to profitability (-1.448) of listed banks in Kenya. As such in the case of higher debt, profitability will tend to decline. The reason behind this may be due to the high interest bearing securities engaged in debt. In addition to this an increase in the level of debt also increases the riskiness of banks. Therefore, banks should depend a lot on internal sources of financing in order to increase their profitability.
- ii) Top management of every banking firm should make prudent financing decision in order to remain profitable and competitive.

- iii) It is important that listed Banks intensify their efforts to rely on internally generated funds to finance their operational activities. Even where external debt would be used, the banks should search for low interest-bearing loans so that the tax shield benefit of the loan will exceed the financial distress associated with it.
- iv) Kenyan banks must not be only interested in mobilizing deposits but must also be concerned with utilizing these deposits effectively and efficiently. To achieve this, banks must set competitive lending rates that would not deter customers from accessing loans.

5.5 Areas for Further Studies

There are currently 61 companies listed in the Nairobi stock exchange under 12 sectors. The study covered only the listed Kenyan banks from the Banking sector. Therefore, additional investigation is required to examine firms in the different sectors to ascertain their different capital structure patterns.

Further research can also be done to examine the impact the effect of capital structure on profitability of non listed financial institutions since the research only dealt on listed financial institutions.

There are some other factors found which also affect the banks' profitability which are not focused in this study. Key among the factors is the regulations and restrictions from the Central Bank of Kenya. Other factors are size of the bank, ownership status, operating expense, cost decisions of banks' management, privatizations of banks and composition of bank's assets and liabilities. There is need for further investigation to determine their effect and ascertain their influences on profitability.

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APPENDICES

Appendix 1: Budget

	Unit cost	Sub Total	Total
Personnel			
Research assistant X 1	500	1500	
Data analysis	1500	4500	
Total Personnel:			6,000
Equipments:			
YU broadband		5000	
Printer		5000	
Total			10,000
Stationary			
Printing Papers		4000	
Cartridge		2000	
Binding materials		1000	
Binding Expenses		2000	
Total			9,000
Miscellaneous Expenses			
Phone airtime		2000	
Publication and photocopying costs		2000	
Total			4,000
<i>TOTAL</i>			<i>29,000</i>