

**THE EFFECT OF CAPITAL STRUCTURE ON THE
PROFITABILITY OF THE REAL ESTATE FIRMS IN KENYA**

BY

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DECLARATION

This research project is my original work and has not been presented elsewhere for any academic award.

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DEDICATION

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LIST OF ABBREVIATIONS

CBA	Central Bank of Kenya
CBD	Central Business District
KNBS	Kenya National Bureau of Statistics
KPDA	Kenya Property Development Association
KRA	Kenya Revenue Authority
MM	Modigliani and Miller
NSE	Nairobi Securities Exchange
ROA	Return on Assets
ROE	Return on Equity
SME's	Small and Medium Enterprises
SPSS	Statistical Software for Social Sciences
UK	United Kingdom
USA	United States of America

ABSTRACT

Capital structure is one of the major decisions that the management of any firm is tasked with. There are two types of financing, debt and equity, for management to choose between or decide on a mixture in any financing decision. The choice between the two is not free but rather governed by a number of factors. In today's world firms have to remain competitive for them to survive the very stiff competition in the market. One of the major ways of remaining competitive is by remaining profitable so as to have the resources to pursue any of the competitive strategies. Debt financing has been associated with tax benefit to the firm. The real estate industry in Kenya has been experiencing tremendous growth in the recent past to be ranked as the 4th highest contributor to the economy. The objective of this study was to determine the effect of capital structure on the profitability of real estate firms in Kenya. The study targeted the 78 real estate firms in Kenya covering a period of 7 years, 2008 – 2014. The study adopted a descriptive research design and used regression model to determine the nature and extend of relationship. Secondary data was collected using data collection templates. Profitability was measured using ROA, ratio of net profit before tax to total assets while capital structure was measured using, debt to equity ratio, short term debt to total term debt, long term debt to total debt. Using an SPSS software, data was analyzed and results for the regression model obtained. The results of the study revealed that although capital structure does affect the profitability of real estate firms, this relationship is weak and statistically insignificant. The ratio of short term debt to total debt revealed the most effect on profitability while the overall debt revealed the weakest. Thus there are other major factors affecting profitability of the real estate firms other than capital structure. The research thus recommend that the real estate focus more on short-term debt as opposed to the overall debt to equity ratio since it has the most pronounced effect among all the variables. Thus it is necessary to explore the factors affecting short-term debt as the ultimately affect the level of profit.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Capital structure is the mixture of debt and equity in financing a firm's assets. Different firms in different industries have adopted varied capital structures, which they deem appropriate for the firms operations. These decisions are coupled by a number of constraints and thus have an impact on the firm. Bankruptcy and liquidation is the biggest challenge that could face a firm in the event of inappropriate choices between debt and equity (Titman, 1984). Modigliani and Miller (1958) are credited with the first seminal paper on the effect of capital structure on the value of the firm. Although the paper concluded non-existence of any relationship, subsequent papers have challenged this position taking into consideration imperfect market conditions.

The fast thriving real estate sector has attracted quite a number of investors both locally and internationally. The financial institutions have equally experienced a tremendous growth as the number has increased significantly. Today there are 43 commercial banks alongside a very vibrant micro-finance institutions sector, both offering credit facilities to firms (Central Bank of Kenya, CBA, 2014). This growth has seen both a reduction and relative stabilisation of interest rates, which has made debt financing more affordable and attractive. Kenya's capital market, the Nairobi Securities exchange (NSE) has by far provided the largest platform for public listed companies to raise funds whether debt or equity.

The NSE comprises of 64 listed firms drawn from different sectors of the economy with the financial services being the highest in number. The listed firms can raise debt or equity finance by either issuing new shares or rights issue. In addition, debt financing can be obtained from the capital markets through issuance of different types of commercial papers such as bonds.

The real estate sector has been experiencing a boom since mid-2000 and analysts have over the years termed it as a bubble waiting to burst similar to the happenings in the United States of America, (USA) prior to the 2008/2009 global financial crisis. This sector is largely dominated by a few wealthy Kenyans owing to the high property prices that have rocked the country. The demand is high and so are the prices for the same. The growth in this sector is largely attributed to a growing middle class occasioned by increasing young educated people able to secure jobs, which provide residual income necessary to service mortgages and loan facilities. A close look at 10 years and now, the infrastructure around major cities seem to have significantly improved. This has therefore attracted many locals as well as foreign investors here, which further increase the demand for property in the real estate sector. Alexander Forbes and Reliance are some of the leading foreign investors in the industry which has a total of 78 firms. This trend does not seem to change course in the near future due to the economic growth in Kenya, which has averaged 5% over the past five years (PKF, 2013)

1.1.1 Capital Structure

This refers to the mixture of debt and equity in the financing of a company's assets (Abor, 2005). Broadly, there are two categories of capital; equity and debt. Equity is

internal financing while debt is external financing which can be either long-term or short-term. Franco Modigliani and Merto Miller are credited with oldest modern theory of capital structure upon which other theories have been built on. These are; MM under perfect market conditions and MM under imperfect market conditions. MM under perfect market assumes the non-existence of bankruptcy, agency and taxes.

While in the past, debt financing had been misinterpreted and associated as a central characteristic of failing firms these days it has become a well-accepted mode of financing a company's assets. Debt can either be short-term or long term; the short-term debt is measured by the ratio of current liabilities to total assets while long term is the ratio of non-current liabilities to total assets (Bean, 2008). Interest rates on loan facilities have remained low owing to the cutthroat competition in the financial sector market. At the same time, asset financing has become a very popular product amongst commercial banks and micro-finance institutions and many firms have embraced the product.

On the other side, equity financing is that part which has been financed by the owners of the particular organisation. For public company's they can raise this from the capital market. The NSE can be used to raise any type of finance, whether debt or equity. When a company is seeking to expand, it can either raise additional funds through equity financing and debt finance (Bradley, Javrell, & Kim, 1984). Some of the companies that have raised finance through the NSE are; East Africa Breweries Limited recently issued an 11 Billion bond, Chase bank issued a 3 billion, 13.1%

coupon corporate bond, which was oversubscribed by 1.8 billion (Standard digital, 2014)

1.1.2 Profitability

Profits maximisation has remained one of the oldest and still relevant objectives of a firm. Commonly referred to as the bottom line determinant of performance for firm, profit refers to the excess of revenue over expenses incurred in generating the same income. In accounting, Profit is the excess of revenue over expenses, (Cassar and Holmes, 2003). The income statement gives the profit for a given firm. On annual basis, all registered companies in Kenya are required to file this alongside other financials with the Kenya Revenue Authority, (KRA). However, this is increasingly being prepared over shorter periods such as monthly, quarterly to measure the performance and take corrective measures in advance.

Even though a vast population may not understand other measures of a firm's performance, a majority understand and value profits hence its significance. In the world of increasing competition, it has become paramount for firms to develop and maintain a competitive edge in their respective industries. For this to happen, they ought to have resources and this can either be sought internally, retained earnings or externally debt financing (Doehring, 2012). Even with debt financing, a firm has to possess the capacity to service the debt instrument as and when the obligation falls due. Thus, firms that are not profitable may not access credit. Therefore, they will not survive in the long-term and eventually exit the market.

There are three different approaches to measuring a firm's profitability; Traditional approach, economic approach and market based approach. There are two ways of measuring profitability in the traditional approach the absolute profitability measure or the relative profitability measure (Strappazon and Fisher, 2001). The absolute terms is measured on the level of profit calculated as total income less total expenses. The relative approach focuses on the traditional ratios as measure profitability. These are the gross margin, net profit margin, return on assets, (ROA) and return on equity, (ROE). The ROA measures the pre-tax returns to the entire business (Doehring, 2012). It compares the income recurring to a business to its assets base. ROE is a measure of pre-tax returns to the equity base. It compares the income occurring to a business to the total equity base of a firm. The gross margin and the net margin ratios measure the efficiency of a firm in terms of how much of the sales are turned into profits.

The economic approach in addition to the traditional expenses, takes into consideration the opportunity cost incurred by business. Its aim is to measure the net worth of your money, management and labour abilities. Thus, the opportunity cost refers to investment returns foregone by not having resources invested elsewhere. These thus form part of the expenses and are deducted from income alongside other conventional expenses. The perspective provides a long-term perspective of a business and reveals opportunities where resources could have been better utilised (Eilon, 1985). Under this approach, the time value for money is also considered and all cashflows are discounted to the net present value. It thus takes into consideration changes in inflation rates in order to reflect the true value of cash flows expected at different timing.

The profitability of a given firm rises with increasing level of consumer concentration. Firms in markets characterised by high customer concentration are considered more profitable and vice versa (Tregenna, 2009). The foundation is that those firms are powerful because of high demand that is occasioned by the high number of potential customers. Firms are thus able to make abnormal profits in this kind of market because of pricier products and high trade volumes. Thus in this approach market share is a good measure of a firms profitability.

1.1.3 The Effect of Capital Structure Profitability

Theoretically, a relationship has been established between these two variables. Debt financing is associated with tax benefit for interest payable while for equity financing bankruptcy and agency costs. As proposed by Modigliani and Miller, (1986), MM II the value of a firm increases with the use of debt up to a certain level beyond which the tax benefit associated with use of debt is exceeded by bankruptcy costs. The profits of a company increase with increase in income derived from sales. However the increase in income must be at higher rate relative to expenses.

While capital structure of a firm may not have any direct effect on the sales/income of a firm, it very well affects one of the profitability element, expenses hence its effects on profits. Every type of financing comes with its costs, while with equity dividends have to be paid to equity holders, for debt interest has to be paid on the principal sum at an agreed rate at specified times, normally monthly, quarterly or annually (Chandra, 2000). The use of debt comes with a tax benefit equivalent to the respective country's income tax rate. With equity financing, dividend is not a tax-

deductible expense in income tax computation, hence from this perspective debt financing appears more attractive.

Equity financing however has its merits, it shields against bankruptcy costs and agency costs. While with debt, financing a firm remains exposed to these two costs, which can be detrimental. In case of default the owners of debt may affect the terms and condition set forth in the debt instrument. These may cause the downfall of a business due to large capital outflow. Therefore, the profitability of these firms largely depends on how well a company can balance between the costs and benefits associated with each type of financing (Pandey, 2002).

1.1.4 The Real Estate Industry in Kenya

The real estate refers to all firms involved in land and any property that sits on it. It is divided into residential real estate, commercial real estate and Industrial real estate. Kenya has experienced a big boom in the real estate sector in the recent past to be ranked the fourth highest contributor to the economy (Kenya National Bureau of Statistics, KNBS, 2013). This is as a direct response to increased demand. The Kenya population is fast growing coupled with an increase in rural-urban migration. The middle class with demand for housing in the city is fast rising.

Mortgage availability has also facilitated home ownership among the Kenyan middle-class. Therefore, the profits in this sector have been relatively high from the mid-2000s to date and still expected to rise (PKF, 2013). While the prices for land and housing have been on the raise this has not been matched by raise in building materials hence the overly high profits. This has attracted even foreign investors into

the real estate sector. Some of the foreign companies include United Kingdoms' (UK) Knight Frank, which has been among the largest letting firms such as the latest Garden City Mall set to be home for over 120 retail stores. The Kenyan mid and upper class have embraced a new kind of shopping which has seen a sprung in shopping malls around the city centre and now expanding to the outskirts of the city.

The real estate firms require a huge initial investment to finance their projects. While this may not be attainable by a majority of the investors, most turn to debt financing from financial institutions. Financial institutions however prefer short term debt as opposed to long-term debt thus making long-term debt more expensive (Kamau, 2011). A majority of the firms in this sector are thus characterised by a higher level of debt compared to equity. The high debt structure tends to raise their liability to equity ratio which effectively impacts the cost of capital and profitability as well.

1.2 Research Problem

In today's world, survival for the fittest has become a common slogan for all businesses irrespective of sectorial inclination. The management is tasked with making a number of decisions ranging from day to day to long term asset-financing activities. The balance has to be made between equity and debt financing after due diligence on the effects that each has on the firm. This has proven to be quite tasking owing to theoretical foundations on the impact that capital structure has the value of the firm. It is no doubt that these two variables are interrelated and hence the need to establish the nature and significance of relationship.

The real estate firms require huge capital to begin and sustain their projects. Therefore, debt financing has been a popular feature of most firms in the real estate sector. The sector requires long-term financing as opposed to short-term financing because of the nature of the investment. Because of the growth experienced in the sector, there is also growing competition for financing (Kamau, 2011). The lending institutions have a high preference for short-term debt thus creating a mismatch in the sector (CBK, 2012).

A number of studies have been undertaken both locally and internationally on the topic of capital structure. Abor (2005) undertook a study to determine the relationship between capital structure and profitability for firms listed at the Ghana Stock Exchange. The study concluded a positive relationship for the 35 sampled firms. However, no common consensus reached as to the effect of capital structure on profitability. For instance, while a local study by Ibrahim (2009) concluded non-existence of any relationship, some international studies such as one by Abor, in Ghana reveal a positive relationship.

The significance attached to profitability as a measure of performance is quite high as the providers of debt determine whether a given firm can service a debt instrument without default based on how much profits it's making. On the other hand, equity providers the dividends paid are pegged on how profitable a firm is. This shows how profits are an important measure of performance. Most of the studies done on the relationship between capital structure and profitability are based in the developed countries with the few done locally being inconsistent hence the need for further

studies. Studies by Ibrahim (2009) concluded a non-significant relationship while those by Magero (2008) established a positive relationship.

There exists significant variation in macro-economic variables affecting capital structure in different countries such as varying interest rates; capital markets conditions and so on. In addition, many studies have focused only on those firms that are listed at the NSE. Those comprise of firms from different sectors of the economy, which have had inconsistencies in reported profits. The real estate industry will provide a good population of study owing to the bubble being experienced in the sector. Profits are on the constant rise and this trend is likely to continue into the near future. The question therefore is what is the effect of capital structure on the profitability of the real estate firms in Kenya?

1.3 Research Objective

To determine the effect of capital structure on the profitability of the real estate firms in Kenya.

1.4 Value of the Study

The findings of this study will establish the key characteristics of each type of financing. Thus it will be useful to stakeholders in the real estate industry and even new investors as they get to clearly understand the merits and demerits of each type of financing. The stakeholders in the industry will thus be making informed decisions based on facts and not on assumptions in light of increasing competition.

This study will also be useful to policy makers and more so the government and the central bank of Kenya in undertaking their regulation role. The study will reveal the constraints facing firms in the real estate sector in financing their investments and thus reveal areas where the regulatory bodies can intervene in order to spearhead development in the sector and thus overall economic growth.

For academicians, it will be a point of reference for those seeking to further explore the area of capital structure. Future researchers will be able to advance the topic further and better as this study adds on the existing body of knowledge.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews both the existing theories of capital structure and documented studies on the topic.

2.2 Theoretical Review

This section will review theories that are relevant to the topic of study. The traditional theory, Modigliani and Miller, MM propositions, pecking order, trade-off theory and finally the market timing theory.

2.2.1 The Traditional Theory of Capital Structure

This traditional view asserts the existence of an optimum capital structure. In essence, the theory proposes that the cost of capital can decrease with reasonable use of debt to a certain limit (Solomon and Weston, 1963). The optimum capital structure is said to be that point where the cost of capital is minimum and the value of the firm is maximum. This theory has however been widely criticised by a number of scholars as follow; MM (1958) are of the view that the cost of equity can only remain unaffected by advantage to a certain limit beyond which it becomes affected.

This theory advocates that the use of debt can potentially reduce a firms cost of capital, thus increasing the profitability of a firm. However, this is based on assumptions some of which do not hold under the imperfect market. More so, the assumption that the totality of risk incurred by security holders can be changed by altering the way this totality is distributed amongst various securities does not hold.

2.2.2 Modigliani and Miller Propositions

The MM proposition I is based on assumptions of perfect market conditions. They argue that the percentage of either debt or equity in capital structure does not influence the market value of a given firm. In this proposition, the value of the firm is computed by capitalising the net operating. Thus, under this theory, the proponents conclude that there is no optimal capital structure.

MM II proposes that the cost of equity financing is equal to the constant average cost of overall capital plus a risk premium. Ideally, this proposition holds that the cost of capital will remain constant even when excessive debt is raised. This is not true as the cost of debt varies with the level of debt raised. This implies that even with increase in debt, there is no added value created since the burden of individual risk is shifted between different classes of investors. This proposition introduces the aspect of arbitrage to further support the proposition. The market equilibrium will always be restored through an arbitrage process whereby the investors will engage in personal leverage for firms with similar firms except for the degree of leverage. MM with taxes considers the tax deductibility of interest expense, which makes debt financing cheaper. An ideal capital structure would be made up of pure debt under MM II. Thus, under this proposition, for firms to increase their profitability, they should make use of more debt to equity since it results in to a lower cost of capital.

2.2.3 Trade-off Theory

This theory is also known as target adjustment theory as it suggests that if the adjustment of leverage ratios is costly, firms will not fully adjust. It holds that the optimal capital structure is achieved by proper balancing of the gains and losses of

debt (Myers, 1984). It borrows from MM proposition II and bankruptcy model of Litzenberger and Kraus, (1976). It takes into consideration the realities of the world; existence of bankruptcy costs mainly legal and administrative related, and agency costs. Agency costs arise because of separation of ownership and control of a firm, (Jensen and Meckling, 1976). According to Arnold (2008), the agency costs are as a result of owners of equity failing to provide managers with sufficient incentives in order to act in their best interest. While the use of debt results into a tax advantage, it also has its disadvantage; the bankruptcy costs and financial distress costs.

As the use of debt increases, its marginal benefit decreases and at the same time the marginal cost increases. Therefore firms have to balance between the use of debt and equity. Going with this model, a firm with an objective of maximising the value of the firm should maximise the use of debt if the probability of going bankrupt is low. As put out by Hovakiam, Opler, and Titman (2001), high profitability indicates higher tax savings hence low probability of going bankrupt.

2.2.4 Pecking Order Theory

This is an advancement of the trade-off theory, in addition to taking into account bankruptcy costs; this theory further incorporates the costs of asymmetric information. Donaldson was the first to suggest this theory in 1961 which was later reinforced in 1984 by Nicolas and Myers. According to this theory firms raise capital in a certain order, First the first source is internal financing, then debt-financing and finally equity financing. The next source of financing is only considered when the later is depleted. According to Myers (1984), he asserts that equity is least preferred source of financing because managers have an information advantage over investors

and when they issue new equity, they tend to think that the firm is overvalued and are therefore taking advantage of this. This results in to investors placing a lower value of new equity.

According to this theory, it is easy to predict the financial health a firm. The managers of any firm have an information advantage about risks, value and prospects over outsiders. A debt issue is interpreted as the confidence with the management that an investment is profitable and the current stock prices are undervalued. Similarly, the issue of equity indicates that the management lacks confidence and the current stock prices are over-valued. In essence therefore, the issuance of equity would result in to a decrease in share prices thus decreasing profitability while a debt issue would result in to increase in share price and profits as well.

2.2.5 Market Timing Theory

According to Baker and Wurgler (2002), market timing plays a significant importance in determining a firm's performance when organizing for the ideal financial structure. Managers consider the existing market conditions to issue either debt or shares. For instance, in the face of stringent debt terms, the managers seize this opportunity, issue shares, and eliminate constrictions associated with debt. In the event the financial markets are unpromising, the firm can turn the less risky debt market. According to the efficient market hypothesis, asset mispricing does not exist and the market equilibrium is always restored. This theory would be said to fall under the behavioural finance, as it does not explain the mispricing of assets. It goes further to depict that firms have an even strong prediction power of the mispricing than the markets.

This theory therefore contradicts the pecking order as it puts forth that firms do not really care the mode of financing, instead all they care about is what is valued more by financial markets. Effectively, if debt is more valued in the market a firm will finance its assets using debt in order to positively influence profitability. Similarly firms in the event that equity is more valued, a firm would raise equity in order to increase profits. Therefore if a firm is not able to take advantage of these timings due to other factors, it may incur a high cost of capital and thus decrease profits.

2.3 The Determinants of Profitability of Real Estate Firms

The profitability of any given firm is determined by the size, productivity, growth rate, financial strength and liquidity.

2.3.1 Size

The classification of a firm as either small or large is based on either the total assets or the total sales. According Seppa, (2008) and Abor (2007), the sales figure is a good determinant of a firm's size as it eliminates booking problems associated with firm's assets. The size of the firm is related to the bankruptcy cost risk where the larger the firm the more diversified the bankruptcy is therefore reducing it, (Al-Najjar and Taylor, 2008). Large firms normally borrow large amounts of debt relative to small firms which effectively reduces their transaction costs and interest rates. Hence the low interest rate and transaction cost motivates large firms to take more debt. The size of the firm thus has a large positive effect on profitability.

2.3.2 Productivity

Productivity is measured in terms of turnover. Thus there is a large relationship between a firm's productivity and efficiency levels of a firm. The ultimate measure is the ratio of inputs to outputs. High efficient firms are likely to have more productivity and vice versa (Craig and Harris, 1973). Therefore, high productivity translates to high incomes and high profits as well.

2.3.3 Growth Rate

According to Berger, Bruno, and Frankline (2008), the growth of a firm is the increase in value of firm's total assets. High growth firms tend to be characterised by more agency problems owing to high flexibility in their investment choices. Investors perceive this as high risk as they represent high volatility in reported earnings hence a negative relationship between growth and gearing level.

2.3.4 Financial Strength

The financial position of a firm is determined by the net of free cash flows determined by adding back interest expenses amortisation and depreciation to Earnings before tax, (Owasu and Badu 2009). The higher the cash flow amount the more financially healthy an organisation is considered to be. Therefore, these firms have the ability to finance debt hence a positive relationship between profitability and financial strength. These firms are thus able to exploit more lucrative opportunities requiring huge investments thus improving profitability compared to their counterparts.

2.3.5 Liquidity

Liquidity is measured by either current or quick ratios and determines the firm's ability to meet its obligations as and when they fall due. Thus, a higher liquidity ratio is an indicator of a firm's ability to meet its obligations (Al-Najjar and Taylor, 2008). However, this can go either way as high liquidity could be interpreted as a sign of a firm that has heavily invested in current assets or have the capacity to meet obligations. These firms are thus more profitable with lower probability of incurring financial distress and bankruptcy costs.

2.4 Empirical Review

A number of studies have been conducted both locally and internationally on the subject of capital structure. While some are quite similar, some are not directly related.

2.4.1 International Evidence

Studies by Fama and French (2002) suggest that most firms tend to adjust their capital structure towards targeted debt equity ratios. This is similar to the trade-off model of capital structure theory. Managers will therefore work towards what a firm considers as the desirable debt and equity mixture. In essence, therefore, companies set their own optimum capital structure and there is no exact capital structure. Therefore, from this study, it would be plausible to assert that capital structure is affected by factors that are unique to a firm.

The capital structure choice of a firm has a close to no effect on the performance of a firm (Ibrahim, 2009). The study conducted in Egypt utilised multiple regression in

defining the relationship for the period; 1997 to 2005. The financial measures of performance were gross profit margin, return on assets and return on equity. Hence, the conclusion is that the capital structure is an irrelevant determinant of the financial performance of a firm.

According to Shubita and Alsawallah (2012), debt and profits are negatively related, thus as profitability decreases with increase in debt and vice versa. The study concludes that profitability is increased by other variables such as sales and size. Firms listed in the first and second Amman stock exchange for the period 2004-2009 formed the population of study. Conditional sampling was adopted for this research. In the discussion, the paper asserts that as much as financial leverage increases tax benefit, it increases default risk to the lending institutions and thus credit becomes quite expensive hence limiting debt financing. The paper further recommends that firms must consider an optimal capital structure, a mixture of both debt and equity and not entirely debt.

A case study by Lee, Liang and Miglo, (2014) focused on the capital structure of internet companies. According to the study, large companies generally have low debt while small companies are characterised by high debt. The study compared the common capital structure theories; pecking order, trade-off and agency costs. It revealed that most internet companies are lowly leveraged a situation which has hurt the companies' profits. Most of those companies overuse internal funds with the misguided perception that the cost of capital of using equity is lower than that of debt. The study recommended the use of international financing for internet companies as it provides a platform for lower interest rates. Further, the study concluded that, capital

structure of different firms in the industry could be explained using different theories of capital structure.

In Nigeria, a study by Chechet and Olayowola (2014) aimed to establish the relationship between capital structure and profitability of firms from an agency theory perspective. A sample of 70 firms listed at the Nigerian Stock Exchange, NSE was selected for a period of ten years. Multiple regression analysis was used where Profitability for a given period was the dependent variable and the independent variables were debt ratio for the period and equity ratio for the period. The results showed a significant positive correlation of 5 % between profitability and equity and a negative correlation of 1% between profitability and debt ratio. Therefore, the study concluded that a higher proportion of debt in capital structure has a negative impact on the firms' profitability and equity financing positively affects the profitability of a firm's profits though not significantly.

2.4.2 Local Evidence

Kariuki and Kamau (2004) conducted a study on the determinants of capital structure among private manufacturing firms in Kenya. The study sampled 121 firms in the food and beverage sector formed the sampling frame. The total sample comprised of 36 firms from which data was collected through questionnaires; both open-ended and closed. Multiple regression analysis was employed to establish whether a number of firm's specific factors could be used to predict corporate capital structure. A positive relationship was concluded between capital structure and asset tangibility. On growth opportunities, the study found out that firms with better growth opportunities are more likely to tap into the debt market relative to those with fewer opportunities. A firm's

profitability also influences the capital structure as firms that are more profitable finance most of their assets from debt financing.

The capital structure of listed companies and tax rate are positively related (Mutsotso, 2007). According to the study, it is evident that listed firms at the NSE have taxation as a major consideration in choosing between debt and equity. However, firms in the different economic sectors revealed significant differences in the degree of differences. The agricultural sector recorded the strongest relationship, with Industrial and allied coming second indicating the level of significance attached to tax savings resulting from use of debt. Notably the debt ration reduced with decreasing corporate tax rate.

Magero (2008) conducted a study on the effects of capital structure on the financial performance of commercial banks in Kenya. This was a complete census of all the commercial banks and secondary data was obtained from Central Bank of Kenya, (CBA). It concluded a positive relationship between capital structure with the main variables under consideration being ROA and ROE.

Yegon (2013) did a similar study locally. The study sought to determine the effects of capital structure on the profitability of the Kenya banking Industry. It utilised secondary data for firms listed at the NSE for a period of 8 years from 2004 - 2012. Data was also collected from specific banks website and an analysis for 11 commercial banks was undertaken using random sampling. Profitability measured by Return on Equity (ROE) and leverage ratios; current liabilities, long-term debt ratio total assets to total debt to ratio were used for analysis. The findings were that short-

term debt led to increased profits because it is inexpensive and a negative relationship between capital structure and profitability. The study further revealed that no relationship significant relationship existed between total indebtedness and the profitability a firm.

Mwangi and Birundu, (2015) conducted a study on the effect of capital structure on small and medium enterprises, (SME's) based on 40 firms in Thika sub-county which have been in operation for the period 2009 to 2013. The study employed a descriptive research design and multiple regression analysis used to determine the nature and significance of relationships between variables. Contrary to other researches, this study found no significant existence of relationship between capital structure and financial performance of SME's. The study concluded that there are other factors more significant than capital structure, asset tangibility and asset turnover that influence the performance of SME's.

2.5 Summary of Literature Review

The literature reviewed clearly reveals divergent views on the relationship between capital structure and profitability. Theoretical foundation capital structure has been continuously improved through taking in to consideration imperfect market conditions. The traditional theory held that, an optimal capital structure does really exist. However the assertion has been sharply criticized by subsequent papers which are more realistic. The conditions existing in the imperfect market such as the macro-economic variables; interest rates, inflation and taxation rates, are constantly changing and are unique to different countries. There is no consensus on the empirical studies reviewed both locally and internationally.

The international studies reviewed show some consistency by concluding non-existence of relationship between the variables of study however the local ones reveal inconsistencies. Studies by Kariuki and Kamau (2004) conclude that the more profitable a firm is the higher the level of debt is likely to have in its capital structure. While Yegon (2013) reveals a non-significant relationship where he concluded that the profitability of a firm is not affected by the mix of debt and equity. Mwangi and Burundu (2015) conclude non-existent of relationship. Thus, it is evident an area that requires further studies locally as a result the inconsistencies in the literature reviewed.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter details how the research was carried out. It covers the research design, target population, sample, data collection, data analysis, analytical model for data analysis and tests of significance.

3.2 Research design

A research design is the plan, structure and execution methodologies with the aim of maximising the validity of research findings (Yin, 2003). It thus involves answering the following key questions; what, why, when and how regarding a study topic. This study adopted a descriptive research design as it establishes the relationship between variables of study (Mugenda and Mugenda, 2003). A descriptive design depicts the existing facts about a phenomenon under study. A descriptive research design was undertaken to describe the current situation within the real estate firms.

3.3 Target Population

A target population must have some observable characteristics, which the researcher can use to generalise results of the study (Mugenda and Mugenda, 2003). The target population consisted of all firms in the real estate industry in Kenya, that are members of the Kenya Property Developers Association (KPDA). This association has 78 member firms as at 31st December 2014 (Appendix I).

3.4 Data Collection

Data collection templates were used to collect secondary data from published accounts for the real estate forms for both the dependent and independent variables. The study covered a period of 7 years from 2008 to 2014. This is the duration that KPDA, has been in existence and hence data is available.

3.5 Data Analysis

The multiple regression model was used in establishing whether the dependent variable, profitability is affected by the independent variable, capital structure. The independent variables, total debt to equity ratio, total long-term debt to total liabilities ratio and total short-term debt to total liabilities ratios was regressed against the profitability.

3.5.1 Analytical Model

A linear multiple regression models aids in determining the nature of relationship between the dependent and independent variables. The nature of relationship is defined by the coefficient of correlation and coefficient of determination.

The multiple regression model is as follows;

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where; Y is profits in measured by ROA, the ratio of net income after tax to the total assets. a is the constant term, X_1 is the total debt to equity ratio, X_2 total short term debt, payable in a years' time, to the total liabilities X_3 is the total long-term debt, payable in more than a year's duration, to the total firms liabilities. In the model, a represents the constant while β_1 , β_2 , and β_3 represent the changes in the variables X_1 , X_2 , and X_3 because of changes in Y. On the other hand, ε is the error term representing unexplained variations in the model.

3.5.2 Test of Significance

F-test was used to determine whether a linear relationship exists between the dependent and independent variables. The test determines the relationship between the dependent variable and each of the independent variables by determining a p-value that will indicate how likely the results of the study were gotten by chance.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND INTERPRETATIONS

4.1 Introduction

In this chapter, data relating to nature of capital structure and profitability of commercial banks was analysed and interpreted. The variables for the study were analysed using SPSS 20 and this chapter discusses the findings of the analysis.

4.2 Descriptive Statistics

The below model descriptive statistics were obtained after analysing the data.

Table 4.1 Descriptive Statistics

	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance
					Statistic	Std. Error		
ROA	24	.570	.01	.58	.149	.023	.149	.022
Debt/Equity Ratio	24	1.18	.02	1.20	.46	.035	.23	.051
L/Term/Total Debt Ratio	24	.92	.06	.98	.86	.024	.16	.024
S/Term/Total Debt Ratio)	24	.92	.02	.94	.13	.024	.16	.024
Valid N (Listwise)	24							

Source: Research Findings

In the model, the total number of data analysed (n) is 24 real estate firms for the 4 variables of the study. The range represents the difference between the maximum and minimum of the respective statistics. The mean ROA is significantly high at 0.15 with a standard deviation of 0.14 implying that most of the firms have a ROA clustered

around the mean. The total debt to equity ratio has the highest standard deviation thus the ratio for the different firms is not clustered around the mean.

4.3 Inferential Statistics

In order to arrive on a conclusion on the nature of the relationship between the dependent and independent variables, the study conducted including, correlation analysis and multiple regression analysis.

4.3.1 Correlation Analysis

A correlation analysis was conducted at a 95% confidence level so as to determine the degree of relationship among the independent variables and eliminate multicollinearity.

Table 4.2 Correlation Matrix

		ROA	Debt/Equity Ratio	L/Term/Total Debt Ratio	S/Term /Total Debt Ratio
ROA	Pearson Correlation Sig.	1			
Debt/Equity Ratio	Pearson Correlation Sig.	.219	1		
L/Term/Total Debt Ratio	Pearson Correlation Sig.	-.085	.016	1	
S/Term /Total Debt Ratio	Pearson Correlation Sig.	.085	-.016	-1.000**	1

Correlation is significant at the 0.01 level (2-tailed).

Source: Research Findings

The findings indicate that for the period under study, the ROA of real estate firms in Kenya had a positive correlation with the overall debt to equity ratio ($R = 0.219$). The total long-term debt to total debt ratio had a negative correlation with short term debt at the same level as total short-term debt ratio to total debt ratio ($R = -1$). The study dropped long-term debt to total debt due to the high level of collinearity with short-term debt to total debt

4.3.2 Regression Analysis

A regression analysis is carried out to determine the nature of relationship between the dependent and independent variables and the prediction power of the regression model as well. The regression results are discussed below correlation analysis, regression analysis and analysis of variance.

Table 4.3 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.240 ^a	.057	.043	.08944

a. Predictors: (Constant), S/Term /Total Debt Ratio, Debt/Equity Ratio

Source: Researcher Findings

The above table gives the summary of the model; the R, R^2 , adjusted R^2 and standard error which explain how well the regression model fits the data analysed. R measures the quality of prediction of the dependent variable. The value of R is 0.24 implying a low prediction power of the independent variable to the dependent variable. R^2 is the coefficient of determination with a value of 0.057. The coefficient of determination indicates the variability's in the dependent variable attributable to the independent variables. Thus only 5.7% of the changes in profits of real estate companies in Kenya can be attributed to debt to equity ratio, long term debt to total debt and short term

debt to total debt. Therefore the 94.3% of the profitability of these firms is affected by other factors other than the independent variables of the study.

4.3.3 Analysis of Variance

An analysis of variance is used to determine the significance of the regression model. The below ANOVA model summarises the significance of the estimated model.

Table 4.4 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.063	2	.032	3.956	.021 ^b
	Residual	1.040	130	.008		
	Total	1.103	132			

a. Dependent Variable: ROA

b. Predictors: (Constant), Debt/Equity Ratio, S/term/Total Debt Ratio

Source: Research Findings

The analysis of variance table shows whether the overall regression model is a good fit for the data. The F ratio is $F(2,130) = 3.956$, $P > 0.05$, thus the regression model is not a good fit for the data.

Table 4.5 Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	.071	.012		6.008	.000	.048	.095
Debt/Equity Ratio	-.002	.011	-.017	-.198	.844	-.025	.020
S/term/Total Debt Ratio	.208	.074	.238	2.797	.006	.061	.355

a. Dependent Variable: ROA

Source: Research Findings

The above table shows the model coefficient results from the analysis.

$$Y = 0.071 - 0.002 X_1 + 0.208 X_2$$

Where;

Y = Profits in measured by ROA.

a = the constant term,

X₁ = the total debt to equity ratio,

X₂ = total short term debt, payable in a years' time, to the total liabilities.

From this model, there is a negative relationship between the total debt to equity ratio and profitability. The profitability will decrease by a statistically insignificant percentage of 2% if there is growth in the debt to equity ratio. However there exists a positive relationship between profitability of real estate firms and short term debt to total debt ratio. A growth in this ratio would lead to a 20.8% growth in profitability. Effectively, this shows that profitability and long-term debt are negatively related such that an increase in long term debt would lead to a decline in profits.

The above table is used to test the statistical significance of each of the independent variables. Thus it tests whether the standardized and unstandardized coefficients are equal to zero in the population. From the above table, the coefficients for debt to equity ratio are significant while that for short-term to long term debt is statistically insignificant zero at a 95% confidence level. The standardized and unstandardized coefficients are not statistically significantly different.

4.4 Interpretation of the Findings

The findings of this study indicate that for the period under study, the ROA of real estate firms in Kenya had a positive correlation with the overall debt to equity ratio. This was at $R = 0.219$ at a 95% significance level, $p < .001$. The short term debt to total debt has a negative correlation with long-term debt to total debt, $R = -1$, at a 95% significance level. Thus this implies that the overall debt to equity ratio does indeed affect the profitability of real estate firms, hence this needs factors affecting capital structure need to be properly monitored.

From the above analysis it is can be observed that indeed capital structure does have some effects on the profitability of real estate firms in Kenya. The coefficient of variable X_1 reveals little or no correlation; changes in the overall debt to equity ratio of a company can only result to a 2% change in profits of that company. The relationship established is negative. However with variable X_2 , short term debt to total debt, a positive relationship has been established. This is to the extent that growth in this ratio would lead to a 20.8% growth in profits of real estate firms.

Eminently, a negative relationship exists between profitability and long-term debt to total debt. This situation can be attributed to the fact that commercial banks in Kenya

prefer short-term debt to long term debt due to the uncertainties associated with the future. Thus the price charged by these lending institutions for long-term debt is cheaper compared to long-term debt. Effectively this would relatively lead to reduced periodic payments thus making a saving which increases profits. The value of R is 0.24 indicating the low prediction power of the model. In addition the coefficient of determination, R^2 has a value of 0.057 implying that 94.3% of the variability's in Profitability is affected by other factors outside the model.

The ANOVA is used to test whether the regression model is a good fit for the data. The F ration is $F(2,130) = 3.956$, $P > 0.05$, thus the regression model is not a good fit for the data. The profitability of real estate firms in Kenya cannot be predicted using the capital structure ratios since the significance level is more than 0.05 by a large extent, 0.16.

A further analysis of the independent variables reveals that the effect of capital structure on the profitability of real estate firms is quite insignificant. Thus the profitability of these firms is a function of other factors other than choice between equity and debt financing. Therefore, capital structure has an insignificant effect on the profitability of real estate firms in Kenya. The findings of this study agree with those of Kuria (2010) who concluded that capital structure does have a minimal effect on the performance of commercial banks. These results are also backed by Mwangi and Bulundu (2014) who concluded an insignificant relationship between capital structure and performance. They however differ with those by Magero,(2008) who concluded a significant positive relationship between capital structure and performance.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarises the findings of the study based on findings in chapter four, gives a conclusion, and highlights the limitations as well as giving recommendation in light of the objective of the study.

5.2 Summary

The objective of this study was to determine the effect of capital structure on the profitability of real estate firms in Kenya. Using a regression model, the results of the study indicate that profitability as measured by ROA had a mean of 0.149, implying that real estate firms 14.9 % into profit for every shilling invested in assets. Capital structure was measured by debt to equity ratio, short-term debt to total debt ratio and long-term debt to total debt ratio. The overall debt to equity ratio is 0.46 for the period, 2008-2014. This illustrates that real estate firm's finance on average 46% of the total assets using debt finance and the remaining 54% using equity finance.

The regression analysis model reveals that capital structure does indeed have an effect on the profitability of real estate firms in Kenya. However the model depicted a low prediction power of 0.24 with a coefficient of determination of 0.057. Thus most of the variability's in profitability of real estate firms, 94.3% could not be explained using the variables used to measure capital structure in this model. Therefore there are other major factors affecting the profitability of these firms. The overall model depicts a positive relationship. The short-term to total debt ratio reveals a positive relationship with ROA at 0.24 while the overall debt to equity depicts a negative relationship.

However an analysis of variance reveals that the model is not a good fit for the data. The F ratio is $F(2,130) = 3.956$, $P > 0.05$. Thus although a relationship does exist between capital structure and profitability, this relationship is statistically insignificant. Therefore, there are other major factors other than can capital structure that affect the profitability of real estate firms in Kenya.

5.3 Conclusion

It can be concluded that capital structure does have an effect on profitability of real estate firms in Kenya. However, this effect is statistically insignificant. Short-term debt does have a significant effect on profitability. This can be attributed to the trends in the commercial bank sector where short-term debt is more preferred thus cheaper. Therefore there are other factors affecting the profitability of real estate firms in Kenya which account for 94.3%. These factors may comprise of both micro and macro-economic factors ranging from management, advertising to interest rates, political and inflation factors. Thus these factors should be incorporated in other studies touching on profitability of real estate firms in Kenya.

5.4 Recommendations for Policy and Practice

The results of this study show that capital structure has very minimal effects on the profitability of real estate firms in Kenya. Profitability being a very old measure of performance yet so relevant, there is need to establish what really drives profits in this industry and more so because of the current bubble. By understanding these drivers, the firms can maximise on them and push profits further up. On the other hand, the regulators can better regulate these firms with that knowledge.

Firms can also increase their short term debt relative to the total debt as a way of pushing profits up. This is so because a positive relationship has been established between the two. However, managers should focus on other factors other than capital structure in their quest to increase profitability as they are weightier.

5.5 Limitations of the Study

The major limitations relating to this study are as follows;

The process of data Collection was quite involving as it encompassed getting the data in hard copy documents and keying all that into Microsoft excel to facilitate analysis.

This was quite time consuming and requires patience and planning at the same time.

Time was a major constraint as well. The procedures followed at Registrar of Companies on file perusal allow only a maximum of 8 files a day. Thus with a population of 78 this took quite some time even so data for some of the companies was missing. Therefore there is need to identify the data source at earlier stages of the project and understand the processes involved in obtaining the same. This study only used the traditional measures of capital structure. There is need to incorporate more measures of capital structure in order to have a more robust model.

5.6 Suggestions for Further Research

Further studies should be carried out on firms in other industries such as manufacturing, oil and gas in order to establish whether a similar trend exists or otherwise. This is important before drawing a general conclusion on the relationship between capital structure and profitability.

Studies on factors affecting capital structure choice would also be of importance as they reveal why firms in different industries may adopt varied capital structure. This may aid in understanding the difference in profitability as well.

Further, more studies on this topic should be done focusing on specific types of financing existing in the real estate sector. This is an area of interest considering the high capital structure required by industry players and assess the impact of each type of debt on profitability of the real estate firms.

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APPENDICES

Appendix I: Real Estate Firms in Kenya as at 31st December 2014

1. Active Homes
2. Afriland Agencies
3. Ark Consultants Ltd
4. Barloworld Logistics (Kenya) Ltd
5. Betterdayz Estates
6. British American Asset Managers
7. Canaan Properties
8. Capital City Limited
9. CB Richard Ellis
10. Colburns Holdings Ltd
11. Coral Property Consultants Ltd
12. Country Homes and Properties
13. Crown Homes Management
14. Crystal Valuers Limited
15. Daykio Plantations Limited
16. Double K Information Agents
17. Dream Properties
18. Dunhlill Consulting Ltd
19. East Gate Apartments Limited
20. East Gate Apartments Limited
21. East Gate Apartments Limited
22. Eastwood Consulting Limited
23. Ebony Estates Limited
24. Economic Housing Group
25. Elgeyo Gardens Limited
26. Fairway Realtors And Precision Valuers
27. FriYads Real Estate
28. Gimco Limited
29. Greenspan Housing
30. Hajar Services Limited

31. Halifax Estate Agency Ltd.
32. Hass Consult
33. Hewton Limited
34. Homes and lifestyles
35. Housing Finance
36. Jimly Properties Ltd
37. Jacent Properties Limited
38. Jogoo Road Properties
39. Josekinyaga Enterprises Ltd
40. Josmarg Agencies
41. Kali Security Limited
42. Karengata Property Managers
43. Kenya Prime Properties Ltd
44. Kenya Property Point
45. KilifiKonnection
46. Kiragu&Mwangi Limited
47. Kitengela Properties Limited
48. Knight Frank Limited
49. KusyombunguoLukenya
50. Land & Homes
51. Land & Homes
52. Langata Link Estate Agents
53. Langata Link Ltd
54. Lantana Homes
55. Legend Management Ltd
56. Lloyd Masika Limited
57. MamukaValuers (M) Ltd
58. Mark Properties Ltd.
59. MarketPower Limited
60. Mentor Group Ltd
61. Merlik Agencies
62. Metrocosmo Ltd
63. Mombasa Beach Apartments
64. Monako Investment Ltd

65. Muigai Commercial Agencies Ltd.
66. Myspace Properties (K) Ltd.
67. N W Realite Ltd
68. Nairobi Real Estates
69. Neptune Shelters Ltd
70. Oldman Properties Ltd
71. Oloip Properties
72. Ounga Commercial Agencies
73. Palace Projects Limited
74. Property Investment Network
75. Property zote.com
76. Raju Estate Agency Limited (REAL)
77. Tysons Limited
78. Urban Properties Consultants & Developers Ltd

Source: Kenya Real Estate Directory

Appendix II: Raw Data

		Short term debt	Long term debt	Net Income	Total Assets
Firm	1	269,415,287.	473,411,722	251,110,337	12,473,814,077
Firm	2	95,771,867	402,091,202	505,236,814	675,552,872
Firm	3	138,590,918	623,763,711	533,612,266.	772,311,724
Firm	4	131,788,791	642,902,749	463,285,595	1,141,892,057
Firm	5	84,502,286	313,813,321	285,494,028	699,611,787
Firm	6	125,900,824	493,344,945	383,139,671	991,723,324
Firm	7	75,221,381	323,348,291	412,779,347	828,550,536
Firm	8	166,600,014	772,760,087	448,369,627	1,074,880,443
Firm	9	178,504,695	666,088,172	714,369,03	1,006,033,864
Firm	10	174,838,832	765,551,087	555,636,523	1,087,820,823
Firm	11	43,065,651	134,893,910	60,133,464	345,870,727
Firm	12	163,421,170	743,796,924	515,341,549	1,723,958,794
Firm	13	152,542,777	716,355,754	631,895,624	1,017,635,465
Firm	14	109,709,237	492,564,521	577,367,131	875,359,615
Firm	15	190,285,203	609,070,719	488,314,315	956,890,089
Firm	16	84,373,472	358,509,935	322,879,612	730,624,773
Firm	17	152,515,805	674,584,832	607,976,992	1,028,574,939
Firm	18	168,273,124	753,087,347	505,173,186	1, 730,849,655
Firm	19	98,956,681	401,139,587	362,896,525	773,667,751.
Firm	20	190,758,219	876,190,318	571,081,912	1,455,521,809.
Firm	21	147,844,816	692,208,396	542,959,278	1,349,324,769.
Firm	22	183,014,922	846,769,036	651,343,418	1,795,274,856
Firm	23	309,840,941	1,132,743,646	3,153,491,376	2,747,696,737

Source: The Registrar of Companies (2014)

Appendix III: Industry Averages

Year	Average ROA	Average debt/ equity ratio	Average short- term/debt ratio
2014	0.14	0.54	0.75
2013	0.09	0.45	0.78
2012	0.12	0.46	0.81
2011	0.10	0.6	0.65
2010	0.08	0.39	0.53
2009	0.11	0.42	0.72
2008	0.09	0.4	0.66

Source: Research Findings