

# Drivers for Capital Structures of Real Estate Firms in Kenya

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### ABSTRACT

This study sought to examine the factors that influence the capital structures of Real Estate Firms in Kenya. The study was guided by the following specific objectives: to assess the factors which influence the capital structures of Real Estate Firms in Kenya; and to examine the effect of capital structure on Real Estate Firms in Kenya. To undertake the study, a descriptive research design was used. This type of design involves an extensive wellfocused literature review and identification of the existing knowledge gap. The method was preferred as it permits gathering of data from the respondents in natural settings. In this case, was possible for the researcher to administer the data collection tools to the respondents in their workstations, which was relatively easy and enhanced the response rate. The population of study was the Real Estate Firms registered with the Kenya Property Developers Association, whose number stood at seventy (70) as at June 30<sup>th</sup> 2008. The respondent in each of the companies was the Head of the Finance function or the appointed representative. It would have been desirable to undertake a census of all the Real Estate Firms in Kenya, but owing to their big numbers and spread all over the country, which would have serious cost implications, a sample of thirty-five of the Real Estate Firms was considered for the study, using stratified random sampling. Primary data was collected from the respondents using a semi-structured questionnaire. The questionnaire was pre-tested on five randomly selected respondents to necessitate adjustments in order to make it more suitable and minimize bias in responses. The procedure that was used in collecting data was through distribution of the questionnaires that is, dropping and picking questionnaires from respondents at their most convenient time that was agreeable to both parties. For purposes of the current study, the data was analyzed by employing descriptive statistics such as percentages, mean scores and standard deviations. Statistical Package for Social Sciences (SPSS) was used as an aid in the analysis. The researcher preferred SPSS because of its ability to cover a wide range of the most common statistical and graphical data analysis. Computation of frequencies in tables was used in data presentation. The information was presented and discussed as per the objectives and research questions of the study. The key findings of the study were as follows:-Majority of the Real Estate Firms in Kenya (80%) had a capital structure of 100% equity while the other 20% had a debt equity ratio of 50:50. The findings further show that the following factors, listed in their order of strength, influenced capital structures of Real Estate Firms: - Asset structure of the Firm; Growth rate of the Firm; Operating Risk of the Firm; Profitability of the Firm; Age of the Firm; Industry type; Size of the Firm; and Ownership control. Impact of Taxation has the least influence. Other factors that influence the capital structure of Real Estate firms include:- Government and other regulations from regulatory authorities; Prevailing market and economic conditions; Cost of capital; Cash flow stability; Expected returns of the organizations versus investment opportunities; and External factors such as inflation rates. The findings further indicate that the Real Estate Firms in Kenya were least affected by Bankruptcy costs (Legal and Administrative costs); followed by favorable tax treatment of interest payments (Interest is tax deductible expense). A firm that pays taxes receives a partially offsetting interest (tax-shield) in form of lower taxes paid. To some extent, the firms were affected by agency costs arising as a result of the relationship between shareholders and managers and those between debt holders and shareholders. Other effects included the following: High liquidity; Flexibility in decision making; Favorable returns on monetary investments; and Financial independence. Key words: Capital structures, Real Estate firms

ABBREVIATIONS	
CAPM	Capital asset pricing model
JVs	Joint Ventures
MM	Modigliani and miller
PICs	Property investment companies
POT	Pecking order theory
PTCs	Property trading companies
PTCs	Property trading companies
REITs	Real estate investment trusts
REITs	Real estate investment trusts
RELPs	Real estate limited partnerships
SMEs	Small and micro enterprises
SPSS	Statistical package for social sciences
TOT	Trade-off theory
UK	United kingdom
USA	United states of America

### 1.0 INTRODUCTION

### 1.1 Background of the Study

The theory of capital structure is one of the most researched and debated fields within corporate finance and the finance litterateur. Modern theory of capital structure began with Modigliani and Miller (1958) when they presented their article "The Cost of Capital, Corporation Finance and the Theory of Investment". They demonstrated that the choice between equity and debt financing and as well the value of the firms is irrelevant to its capital structure. They also assumed perfect and frictionless capital markets (Myers, 2001). Furthermore, Modigliani and Miller also stated the assumptions of an ideal capital market and developed two important propositions regarding corporate finance decisions about the firm's value and risk of the firms debt and equity securities (Ogden *et* al, 2003).

Researchers have since Modigliani and Miller's article discussed how a firm's amount of debt should be determined, how new investment should be financed as well as if firms have an optimal capital structure. This has made a rich theoretical framework to emerge and model the firm's choice of capital structure by using different theoretical frameworks. These theories give possible and complementing explanations to the choice of capital structure of the firms. The theories rely on traditional factors such as tax shield advantages, while other theories incorporate asymmetric information between the owners and the management of the firm and other theories suggest the capital structure can be used for signaling purposes to outsiders. (Bancel and Mittoo, 2004)

The finance literature has developed far away from Modigliani and Miller's efficient market theory and the traditional approach to corporate finance based on the assumptions of rational behavior, the capital asset pricing model (CAPM) and efficient markets (Shefrin, 1999). There are two opposite approaches in the field of corporate finance, more specific, the Neoclassical theory and the Post Keynesian theory. The Neoclassical theory has a strict approach when deciding rational investment decision. The superior purpose of the firm is to maximize the shareholders wealth through maximization of the firm's stock price by making rational investment decision. (Vasiliou and Daskalakis, 2006) The Post Keynesian theory emerged as a response to the Neoclassical theory and the criticisms it was exposed to. The standpoint for the Post Keynesian theory is that it recognizes agency relationships and the firms managers are assumed to follow their own goal when managing the firm. The main purpose of the firm is maximization of the long-term survival of the firm, which in turn secure the managers own security. (ibid) Further, the Post Keynesian theory identifies a principal-agent problem within the firms, which imply owners and managers in firms might have different incentives according to how the firm should be managed.

The recent theories within corporate finance attempts to better explain the motivation behind managers and investors' behavior and why they do not always act rationally. These theories are described as behavioral finance theories. The authors that support behavioral finance theories argue that psychological and social aspects interfere with the decision making, leading to some participants acting rational while others are acting irrational. (Baker et al, 2004) Behavioral finance is one of the most central theories today and it contradicts several aspects of Modigliani and Miller's efficient market theory. This new approach to corporate finance gives opportunities for other alternatives theories to emerge within the theory of capital structure decision.

Property development and investment plays an important role in any emerging market or economy. Entrepreneurs and industrialists require access to appropriately developed and constructed buildings for occupation under legally binding leases so as to ensure security of tenure. Businesses are then able to release financial resources for production and operation. One of the most efficient means of supplying the demand for accommodation is through a viable investment market. The capital structure adopted by property investors will include only long term, interest bearing debt and common stock, excluding short-term debt. There are various theories in finance that have been developed to try and explain how an investment should be financed if its value and the wealth of shareholders is to be maximized. These include the Modigliani and Miller (MM) theory and the traditional view of capital structure.

The current study seeks to examine the factors that influence the capital structures of Real Estate Firms in Kenva

#### 1.2 **Statement of the Problem**

An important financial decision facing firms is the choice between debt and equity capital (Glen and Pinto, 1994). The capital structure (or financial structure) of a firm is a specific mixture of debt and equity the firm uses to finance its operations. Capital structure decisions are crucial for any business organization. The decision is important because of the need to maximize returns to various organizational constituencies and also because of the impact such a decision has on an organization's ability to deal with its competitive environment (Abor and Biekpe, 2005). The key is for firms to choose a portfolio of capital structure that will maintain sustainability and generate more wealth. In general, a firm can choose among many alternative capital structures. It can 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. In an attempt to set a capital structure that maximizes overall market value, firms do differ in the way they deal with the issue of optimizing capital structure requirements. This case of the property sectors in Kenya demonstrates the strategic role of finance on the competitiveness and profitability of the industry. The capital intensiveness of property development has led to the formidable bargaining power of property developers. Substantial studies have been carried out in corporate finance with a view of addressing this problem but very little have been focused on property investment with emphasis on residential and commercial asset classes.

Since the seminal works of Modigliani and Miller (1958, 1963), there have been studies on capital structure of firms in such sectors as manufacturing, electric-utility, non-profit hospital and agricultural firms (Ooi, 1999a, b). However, only a few similar studies have been conducted in either the property or construction sectors (Ooi, 1999a, b). In the USA for instance, studies reach different conclusions on the impact of taxation on capital structure of real estate partnerships and REITs (Howe and Shilling, 1988; Maris and Elayan, 1990; Jaffe, 1991; Hamill, 1993; Allen, 1995). In Canada, Gau and Wang (1990) examine the capital structure of real estate investments at project level. In the UK, Barkham (1997) concludes that property development firms borrow more than property trading firms. As the former are believed to be riskier, the conclusion contradicts what the model on the trade-off between leverage and bankruptcy would have predicted. Similarly, Ooi (1999a) studies debt maturity and its determinants for property firms. The study concludes that large and profitable firms that undertake property trading and have more fixed assets tend to employ more long-term debts.

Ip and Hopewell (1987) investigated the corporate financial structure of firms in Hong Kong from 1970 to 1984. The financial leverage of firms, classified into eight industries including "building and real estate", was examined year by year. They conclude that there was a generally rising trend in corporate debt ratios. The mean debt ratio for firms in "building and real estate" increased from 0.21 in 1970 to 0.44 in 1984. However, in each of the 15 years, their mean debt ratio was lower than the average. Building and real estate firms generally borrowed less than the overall average during the period studied. Industrial classification was an important determinant of capital structure, suggesting the significant impact of business/operating risk on capital structure.

Ip and Hopewell (1987) also conclude that capital structure of firms in Hong Kong have generally followed the pecking order principle (Myers, 1977, 1984; Ross, 1977; Ooi, 1999a). Whenever possible, local firms raise finances preferably from their reserves, rather than bank loans and debt issues. The equity market is their last resort. A success in getting syndicated loans or an extension of time for loan repayment would be construed as good signals to the financial health of the firm. The pledge of tangible property and land assets as collateral also reduces both agency (Jensen and Meckling, 1976; Theis and Casey, 1999) and bankruptcy costs. Physical assets that are tangible and non-specific can easily be liquidated should a firm fail. Leverage is anticipated to increase as the ratio of property assets to total assets increases. Scott (1976) suggests that optimal leverage is related to the collateral value of a firm's assets. Ooi (1999b) finds that, in examining the collateral role of assets, this ratio is a statistically significant determinant of capital structure of property companies in the UK. Firms with more real assets employ relatively more debts. Ooi attributed the higher leverage to the fact that "most property development projects are funded through project financing, which usually involves higher gearing" (Shah and Thakor, 1987).

In Kenya, studies on capital structures so far undertaken include the following: - Kamere, N. (1987). Some Factors that Influence the Capital Structures of Public Companies in Kenya, Unpublished MBA Thesis, Nairobi, University of Nairobi; and Kiogora, G. (2000). Testing for variations in Capital Structure of companies quoted at the Nairobi Stock Exchange, Unpublished MBA Thesis, Nairobi, University of Nairobi.

None of the studies focused on the Real Estate sector, an investigation therefore into their capital structure and

subsequent linkage with firm performance is not only appropriate, but a necessity to aid effective policy design and formulation. This study will attempt to bridge the existing knowledge gap by seeking answers to the following research questions: (i) what are the factors that influence the capital structures of Real Estate Firms in Kenya?; and (ii) to what extent does capital affect structure on Real Estate Firms in Kenya?

### **1.3 Objectives of the Study**

### **1.3.1 General Objective**

The current study seeks to investigate the dynamics involved in the determination of capital structure of property companies in Kenya.

### 1.3.2 Specific Objectives

The study will be guided by the following specific objectives:

- (i) To assess the factors which influence the capital structures of Real Estate Firms in Kenya.
- (ii) To examine the effect of capital structure on Real Estate Firms in Kenya

### 1.4 Scope of the Study

The study examines the determinants of capital structure of Real Estate Firms in Kenya. The sample selected includes all Real Estate Companies registered with Kenya Property Developers Association. In all, thirty-five (35) property companies qualified for this study. The data will be collected from September 2008. The proposed period for the study will be three months, from July to September, 2008.

### 1.5 Definition of Terms

### 1.5.1 Capital Structure

The term capital structure is used to represent the proportionate relationship between debt and equity. Equity includes paid up share capital, share premium, and reserves and surplus (retained earnings). The capital structure decisions are significant in managerial decisions as it influences the shareholders return and risk, (Pandey, 2000).

### 1.5.2 Leverage

Leverage is the use of various financial instruments or borrowed capital, to increase the potential return of the investment. It is the amount of debt used to finance the assets of firm (Pandey, 2000).

### 1.5.3 Equity

Equity is the contribution that shareholders make to a company's operation. In other words, it is the contribution of owners of company towards its operation. Equity and debt consists the capital structure of a firm (Pandey, 2000).

### 1.54 All equity firms

Morellec (2001) defines all equity firms as those firms whose capital structure is a hundred percent funded by shareholders.

### 1.5.5 Optimal capital structure

Ross, et al (2002) defines optimal capital structure as one that results to the lowest possible weighted average cost of capital. That is the capital structure that minimizes the cost of capital or maximizes the total value of the firm.

### 1.5.6 Cost of capital

Ross, et al (2002) defines cost of capital as the appropriate discount rate on a new project. It is the minimum required return. It is called this because it is what the firm must earn on its investment in a project in order to break-even.

### 2.0 LITERATURE REVIEW

### 2.1 Theoretical Framework

### 2.2.1 Capital Structure and Financial Leverage

Capital structure refers to the mix of securities (long-term debt, common stock or preferred stock) issued by a firm for finance real investment. Researchers often refer to the proportions of debt and equity when studying capital structure. A firm is unlevered when it has no debt in its capital structure, while a firm with debt is said to be leveraged. Therefore, the value of equity in an unlevered firm is the same as the total value of the firm. In contrast, the value of stock in a levered firm is equal to the value of the firm less the value of its debt. (Brealey *et* al., 2003)

There are two leverage terms concerning capital structure, operational leverage and financial leverage. Operational leverage is related to the firms fixed operating cost, while the financial leverage is related to the fixed debt cost. More specific, the operating leverage increases the operating risk or business risk and the financial leverage increases the financial risk. The total leverage for the firm is given by the use of fixed operating costs and debt costs; more specifically, the total risk of the firm is equal to the business risk and the

financial risk. Most common measures of capital structure can be divided into two categories, those that are based on the market value of equity and those that are based on the booked value of equity. Han-Suck Song (2005) explain that different measures of financial leverage can be used to investigate firms choice of capital structure, these are long-term, short-term and convertible debt divided by respectively market and book value of equity. But for simplicity the book value of equity is more used in empirical studies due to data limitations. In our study we will only look upon long-term debt to the value of equity when analyzing the firm's capital structure decision.

Capital structure is often a concept which is perceived differently by researchers. Vasiliou and Daskalakis (2006) give definitions on different academics concept on capital structure; the capital structure can be the mix of long-term source of funds used by the firm or the long-term funds of the firm and debt capital as the all long-term borrowing incurred by the firm. Further on they write, the capital structure of the firm can be define as the firm's combination of different securities both short-term and long-term. Firms are often assumed to use short-term borrowing mainly for financing operating activities and long-term debt to finance their investment activities. In this thesis the concept of capital structure will therefore be excluded from short-term borrowing since we are only interesting in analyzing the firm's decisions behind investment funding.

#### 2.2.2 Modigliani and Miller

When Modigliani and Miller (1958) presented their article "The Cost of Capital, Corporation Finance and the Theory of Investment" it laid ground for several studies about capital structure. Their proposition one and two are today well-know and established within the academic field of corporate finance.

*MM Proposition I:* "The market value of a firm is constant regardless of the amount of leverage that the firm uses to finance its assets." (Ogden *et al.*, p. 31, 2003)

*MM Proposition II:* "The expected return on a firm's equity is an increasing function of the firm's leverage." (Ogden *et al.*, p. 32, 2003)

The first proposition implies that mangers cannot alter the market value of the firm simply by changing the firm's capital structure; this proposition is also called the capital structure irrelevance theorem. The second proposition is derived from the first proposition, but the second proposition shows that leverage does have effects on the capital structure. The risk and expected return of a firm's equity will be affected by increasing or decreasing leverage. (ibid)

Modigliani and Miller revised their propositions in 1963 order to account for corporate taxes and interest rate deductibility. By revising the two propositions they showed the effect of tax rates and interest rate deductibility on the capital structure and expected return of the firm's shares. Firms could through interest rate deductibility shift payments from going to the government and instead direct them to the firm's shareholders and creditors by increasing leverage. (Modigliani and Miller, 1963)

### 2.2.3 The Neoclassical Theory

The breakthrough of the neoclassical theory occurred in Europe around 1870. One of the most important and a powerful view of neoclassical economics is the concept of economic agents being rational. The Neoclassical theory of the firm has developed along two distinct branches, and different models have been developed for different purposes. Static models have been used to develop the combination of input-output for profit maximization and the optimum firm size. The basic determinants for the firm size are economics of scale in production and monopoly aspect in product and factors markets. Dynamic models have been used to obtain the optimul investment policies and the optimal growth rate for the firm. (Purvis, 1976)

The neoclassical theory state the most important factor in financial decision making is to maximize the interest of the shareholders. Thus, the theory assumes the main goal of the firm is to maximize the shareholders wealth, leading to the maximization of the firm's stock price, under the assumption that markets are efficient. Another main assumption which has evolved from maximization of shareholders wealth is capital market efficiency. It is important to note that capital market efficiency is another main assumption in the Neoclassical theory, this is because the market participants are assumed to behave rationally which in turn lead to rational capital markets. (Vasiliou and Daskalakis, 2006)

#### Neoclassical Investment Theory

A firm is acting rational when it maximizes the present value of future cash flow. When choosing the investments that maximize the present value, the firm is making rational investment decision (Mckenna and Zenonni, 2000). There are three main assumptions to the investments neoclassical theory according to Crotty (1992). The neoclassical theory assumes that maximization of the market value of the firm is the main objective for managers. Neoclassical theory also belief in agents capability of always give numerical possibilities to all future economic events and thus create a probability distribution of expected returns. The agents are assumed to have complete and correct knowledge about future outcomes and the effect of these outcomes. The liquidity of capital reflects to the users cost or the rental price for capital goods, therefore firms are according to the neoclassical theory indifferent between owning and renting their capital. There is no uncertainty about the future

in owning and renting capital goods. If the expectation about the future is dissatisfying, the firm can choose to resell the capital goods or decide not to renew the rental agreement. When investments are receivable, the financial commitments are also supposed to be receivable. Further, capital goods can always be resold to reduce the debt that financed them with no costs that load the process, leading the firm to have no sunk costs and no permanent debt burden. Future is not of particularly relevance for liquid capital and therefore the degree of uncertainty of the future is neither of importance. With liquid capital goods, the prospect of financial distress costs would be distressing for the management but according to the neoclassical investment theory these costs are of little concern for the owners. (Crotty, 1992)

The assumption that owners and managers are identical agents and behave identically removes the problem that owners and managers can have conflicting objectives and attitude towards risk. Financial agents have within the Neoclassical approach perfect knowledge about the future and use this knowledge for optimally investment decision. Dividend policy or the firm's degree of leverage has no effect on the firm's investments decision according to Modigliani and Miller's theorem and the neoclassical theory. (ibid)

#### 2.2.4 Post Keynesian Theory

The Post Keynesian financial behavior theory recognizes agency relationships as the key financial behavior and the theory presume that managers follow their own goals when managing the firm. Thus, the main goal of the firm is the maximization of the probability of long-term survival of the firm, which in turn secure the managers own security. (Vasiliou and Daskalakis, 2006) The theory assumes profits not to be reinvested, instead will investments depend on profit expectations based on animal sprits1. (Stockhammar, 2005) A major constraint to managers decision-making is the opinions of shareholders, creditors and other market participants. These individuals often have opinions different from the managers on how the firm should be managed, these opinions include stock price maximization, debt capacity et cetera. (Vasiliou and Daskalakis, 2006) The fundamental aspect in the Post Keynesian theory investment funding decision is the uncertainty for the future. (Eichner and Kregel, 1975) The future for the managers and the firm is risky, but it can be stated as actuarially certain. (Davidson, 2003) The Post Keynesian theory is interested in describing and understanding the process through which investment, saving and financing decisions are determined in a firm where the future is uncertain. In a real world market economy it is difficult for firms and managers to get the adequate information they require to undertake proper commitments and actions, thus corporations and mangers have to make critical judgments concerning investment and financing. (Crotty, 1980) Even if managers and firms cannot know the future stream of net returns due to uncertainty, the Post Keynesian theory is not claming that future profitability is irrelevant. (McKenna and Zannoni, 2000/2001)

Typical for the Post Keynesian theory is as written above that is recognize the principal-agent problem within firms. The principal-agent problem possesses that managers and owners have different motives in how the firm should be managed. Within the Post Keynesian theory individuals and firms have a conventional behavior, this type of behavior is based on custom, habit, tradition, rules of thumb, instinct and other socially constituted practices (Arestis et al., 1993). Decision makers often rely on their previous experiences and common sense more then on calculus of statistical probability of the future when determining investment and financing strategies (Kregel, 1998). Although, rationality according to Post Keynesian theory requires that managers to take uncertainty into account when determine the appropriate investment decision. (McKenna and Zannoni, 2000/2001)

The Keynesian theory of investment is developed in response to the Neoclassical theory of investment. The Keynesian theory of investment state the Neoclassical theory of investment to ignore major factors influencing investment decisions, these factors are principal-agent problems, conventional behavior and uncertainty. The Keynesian Theory of investment incorporates all these factors which enables for connecting it to the Post Keynesian theory, since they both incorporate the same assumptions. A correct theory of investment according to Keynesian theory of investment should incorporate the assumption of the firm as a semiautonomous agent with an own preference function. More specific, it is expected that the management of the firm will practice growth in size, market share and profit - growth objective. The management will also try to avoid threats to their decision-making and the firm's financial security - safety objective. The safety objective the firm's management has as a feature makes the firm and management risk-averse. When to pursuit the growth objective it requires capital. Financing it through debt requires legally binding cash flow commitment to creditors and internal funding and stock issues requires cash flow commitment to shareholders. Important for the management to consider when deciding upon financing alternative is that if the commitment to shareholders can not be met out of future earnings generated by invested capital, then the management might experience threats to their decision-making process. If the commitment to creditors is not fulfilled the firm might go bankrupt and the management safety is jeopardized. The decision-making dilemma the management faces is called the growthsafety trade-off. Consequently, the enterprise investment decision can be characterized by managerial preference for growth and safety, expected profit rates, financial strength and the degree of uncertainty. (Crotty, 1992)

The enterprise investment decisions discussed above do not relate to stock price maximization and

which could be interpreted as shareholders do not play an important role in the firm's investment decision according to the Post Keynesian theory. (Stockhammar, 2005)

### 2.2.5 Behavioral Finance

The task of corporate finance theory is to try to explain financial contracts and investment behavior, studies within the subject often assume that both managers and investor behave rational. These market participants are supposed to make unbiased forecasts about the future and base their decisions upon these forecasts. Although, in today's fast changing environment is it not realistic to assume rationality. Managers and investors do not always act rationally, and often they act on behalf on their on incentives and interests. Thus, a new field within corporate finance has emerged; called behavioral finance. This field is concerned with trying to describe why some market participants act rational and some of them act irrational. (Baker *et* al., 2004)

Behavioral finance theory explains through psychological and sociological aspects the decisionmaking process of agents, groups and firms (Ricciardi and Simon, 2000). Ricciardi and Simon write "behavioral finance attempts to explain the what, why, and how of finance and investing, from a human perspective." (Ricciardi and Simon, 2000, p. 2). The implementation of behavioral finance have contributed with considerable implications for them whom practice corporate finance, the main distinction between traditional corporate finance and behavioral finance is the role of psychological forces interfering with decision-making within the firms which behavioral finance assume. The psychological phenomena prevent the managers from always acting in a rational manner, this results in behavioral costs for the firm and for the investors (Shefrin, 2001). Rationality according to the Neoclassical theory assumes agents to adequate and accurately update their beliefs when receiving new information (Crotty, 1992). Although, prospect theory which can be connected to behavioral finance has demonstrated that individuals often make irrational choices depending on optimism, overconfidence, conservatisms and preferences. Individuals are often blinded of the fact that one option look better than the other, but in fact are they the same or sometimes are the option made by the individual less advantageous then the other option offered. (Barberis and Thaler, 2002) Van deen Steen (2005) shows that a manager can have an important indirect influence on the firm's behavior and performance. The interest and incentives which the managers possesses results in a behavioral bias within the firm.

Baker *et al.*, (2004) locate two separate approaches within the theory of behavioral finance, the first approach assume investors to be less then fully rational and the second approach assume managers to be less then fully rational. These two approaches discuss different behavioral issues and they have different impact on the decision-making process within the firm. The first approach assumes managers to response rational to securities market mispricing caused by irrational investors. More specific, this approach assumes the securities market arbitrage imperfect and thus is the prices too low or too high. Managers will notice these mispricings and make decisions to encourage or act in response to the mispricings. The managers identify these mispricings since they possess more information about the firm then the investors and the managers which identify these mispricings can take advantages of them in order to raise capital. More specific, they can issue new stocks if they identify the firm's share price is to be overvalued. To prevent these mispricings the managers must provide more information to the market. (Baker et al., 2004) The behavior of managers to identify mispricing and explore them is consistent with the market timing theory (Huang and Ritter, 2007)

The second approach assumes that irrational managers operate in efficient capital markets; meaning that the decisions managers make have behavioral biases (Baker *et al.*, 2004). This bias in the decision-making arise when managers are either to optimistic and to overconfidence or vice versa about the value of the firm's assets and investment opportunities, these psychological features will affect the capital structure and investment funding in both positive and negative aspects (Vasiliou and Daskalakis, 2006). Hence, the rational investors can through corporate governance mechanisms employ constraints in order to prevent the managers to act irrational, these mechanism could be bonus schemes, compensation plans et cetera (Baker et al., 2004). Furthermore, Baker et al (2004) write that an optimistic manager would not choose to issue new equity for funding of a new investment, instead he would choose internal generate funds or debt and as last way out equity. This behavior occurs due to the managers optimistic beliefs of the firm's assets and investment opportunities. This managerial behavior is consistent with the pecking-order theory, which assumes that firms and managers will first choose internal generated funds, second debt and last equity when determining capital structure and investment funding (Myers, 1984).

It is vital to notice the dissimilar views these two approaches have concerning the role of the managers, thus have they different implications on the decision-making process within the firms. According to the first approach when the source of irrationality is on the investors' side, managers need to focus on long-term value maximization and economic efficiency. This could be difficult due to pressure from investors to boost short-term share price, thus is it also important for the managers to strive after flexibility in their decision-making process because some decisions might be unpopular at the market. In the second approach were the managers are assumed to be irrational, it is important to reach efficiency through increase the transparency within the company

and oblige the managers to respond properly to market signals such as changes in prices and market conditions. (Baker et al., 2004)

#### 2.2.6 Capital Structure Theory

#### Trade-Off Theory of Capital Structure Choice

The trade-off theory is an approach to determine the optimal capital structure, in literature described as the tradeoff between tax benefits and the cost of financial distress. The debt ratio that managers should choose according to the trade-off theory is the ratio which maximizes the firm value (Brealey et al., 2003). The optimal capital structure is determined more specifically by adding taxes, the cost of financial distress and agency cost holding the assumptions of market efficiency and that information is symmetric. (Baker and Wurgler, 2002)

The costs of financial distress depends both on the probability of the firm entering into financial distress and the magnitude of costs if distress occur. Financial distress arises when the firm has difficulties fulfilling commitments to creditors, drawn to the extreme it can lead to bankruptcy. Financial distress can be very costly for the firm. As the firm increases its debt level, the tax shield also increases. At moderate debt levels the probability of financial distress costs are small and also the cost of financial distress is trivial and the tax benefits are central. The firm can use the tax shield and the costs of financial distress for determine the optimal debt ratio, called the trade off theory of capital structure. (ibid)

Within the literature the costs of bankruptcy are categorized in direct or indirect costs that affect the optimal capital structure. Direct costs are born direct from the bankrupt firm or from the claimants of the firm's assets. Specifically, professionals such as lawyers and accountants, internal staff resources and reduced marketability contribute to the direct cost of handling bankruptcy in the firm. The costs of bankrupt often increase as the firm gets into more serious financial difficulty. Indirect costs are costs the bankrupt firm suffers from but can create opportunities for others, these include market share lost and short run focus. The bankruptcy costs usually have a negative effect on the firm's capability to compete in the market because suppliers and customer are less prone to do business with the firm. Furthermore, employees and potential employees are less likely to be secure or interested working for the firm and the firm could loose valuable labor. The firm also has to shorten its focus and preserve cash and avoid undertaking long-term responsibilities that are difficult to hold. (Branch, 2002)

When the interests of the firm's managers are in conflict of those of the firm's owner agency costs arise. Jensen and Meckling (1976) define an agency relationship as when one party (the principal) employs another party (the agent) to perform some service on the principal's behalf. The principal delegate decision making authority to the agent, but the principal can limit the divergences in the conflict of interest between the two parties by monitor the agent. However, the choice of the firm's capital structure could lower agency costs. (Jensen and Meckling, 1976)

Baker and Wurgler (2002) write that previous academic researchers have identified imperfections which lead to an optimal trade off. More specific, they write that previous studies have shown that when taxes on dividends increase it give an indication of the firm to take on more debt, when the costs of financial distress increases it give an indication to the firm to increase debt levels. They also write that agency problems are an indication for the appropriate level of debt for the firm, either more or less debt. (Baker and Wurgler, 2002)

Agency cost can be divided into two parts, the cost of equity and the cost of debt. The agency costs of outside equity may be reduced by increased leverage, while the opposite may occur for the agency costs of debt if there is a conflict of interest between debt holders and shareholders. High leverage reduces agency cost of equity and increases firm value by encouraging the management to act more in the interest of the shareholders. When the firms amount of debt is high it increases the agency cost of debt in terms of risk shifting or the firms reduced effort to control risk resulting in higher expected cost of financial distress, bankruptcy or liquidation and thus the firm has to compensate debt holders for their expected losses, leading to higher interest expenses. (Berger and Bonaccorsi di Patti, 2004)

#### **Pecking-Order Theory of Financial Hierarchy**

In contrast to the trade off theory, the pecking order theory assumes firms to not have a target debt ratio (Graham and Harvey, 2001). Myers (1984) first described the pecking-order theory, stating that there is no optimal capital structure. If the firm increases its external finance it will be costly for the firm because managers have more information about the risks, values and the prospect of the firm than the outside investors. These investors are aware of this and recognize it as information asymmetries. This lead to a pecking-order of corporate financing with the following four assumptions: (i) Firm prefer internal financing to external financing; (ii) The target dividend payout is adapted to the firm's investment opportunities in order to prevent changes in the firm's dividends policy; and (iii) If the firm only has the choice of external financing, the firm should first issue the safest security. Starting with debt, then the hybrid such as convertible and at the last equity. (Myers, 1984)

Information asymmetries have a profound impact on investment funding and will affect the firm's choice of internal or external financing, if the firm chose external financing information asymmetries will affect the choice between equity securities and new issues of debt (ibid.). Myers and Majluf (1984) identified outside

investors to markdown the firm's stock price when managers issued equity instead of risk less debt. Hence, the managers avoid issuing equity if there are other possible alternatives, this for avoiding the stock price to fall. If the firm lacks investment opportunities, the firm retains profits to build a financial slack to avoid the need of raise external finance in the future.

#### Signaling with Capital Structure

The irrelevance of capital structure in Modigliani and Miller's theorem implicitly assumes that the market have full information. If managers within a firm possess private information then their incentives will be signaled with the firm's capital structure and information will be given to the market. In a competitive market the inferences drawn from the signals will be confirmed by the market (Ross, 1977). The firm's capital structure and its market value can provide a reward to the managers in the form of capability when signaling their choice of capital structure. Agency costs for the firm can therefore decrease due to shareholders are provided more information (Eldomiaty and Ismail, 2004)

Manager of a firm often have private and better information about the value of the firm than outsiders i.e. shareholders, creditors and the market as a whole. The firms often have to abstain from leaving out information in order to prevent its competitors to get valuable information about the firm, which could lessen the firm's value. Signaling models, suggest that the firm's leverage can be used for signal the value of the firm. The underlying condition is information asymmetries between the firm and the market. The management can differentiate its firm by issuing debt and with this signal that the firm has strength to make interest payments by committing to creditor. Further, can the managers signal confidence in the firm's ability to generate future cash flow. (Ogden *et al*, 2003) However, Pinegar and Wilbricht, (1989) find that most managers do not explicitly signal firm value through adjustments in capital structure. In the optimal capital structure model, debt is assumed to provide information about the firm's value to investors and at the same time function as a tool to limit management's self-interest activities. Information is provided by contractual payments to debt holders and if the firm enters default the management has to negotiate with the firm's creditors for avoiding liquidation, which provide information to creditors. (Ogden *et al.*, 2003)

### 2.3 Empirical determinants of capital structure

Myers (1984) pointed out that financial economists have not hesitated to give advice on capital structure, even though how firms actually choose their capital structures remains a puzzle as the theories developed did not seem to explain fully actual financing behavior. This view is supported by Harris and Raviv, 1991 who pointed out that numerous attempts to explain capital structure have proved to be inconclusive. The capital structure decision is even more complicated when it is examined in an international context, particularly in developing countries where markets are characterized by controls and institutional constraints.

Since the seminal work of Modigliani and Miller (1958), much subsequent research has been devoted to task of finding a coherent explanation for what influences the choice of capital structure. Traditional corporate finance models suggest that firms choose optimal capital structures by trading off various tax and incentive benefits of debt financing against financial distress costs. While there is support for these tradeoff models in the empirical literature, other studies indicate that a firm's capital structure decisions are affected by several firm related characteristics such as future growth options, earnings volatility, and profitability and control (Titman and Wessels, 1988; Glen and Pinto, 1994). Studies such as Jensen and Meckling (1976); Williamson (1988); Harris and Raviv (1990); Rajan and Zingales (1995) have explained factors influencing capital structure from the perspective of asymmetric information and agency theory. However, in the international context, country norms, type and size of industry and host government controls could play a role in determining the capital structure. For example, it has been suggested that tax differentials between countries influence the way the firm is financed (Booth *et al.*, 2001; Lee and Kwok, 1988).

Other studies investigating into the determinants of capital structure of firms in different businesses include, manufacturing sector (Long and Malitz, 1985; Titman and Wessels, 1988), electricity and utility companies (Miller and Modigliani, 1966), and agricultural firms (Jensen and Langemeier, 1996). In these studies, one of the main findings is that industrial or sectoral classification is an important determinant of capital structure. Thus, firms in different sectors employ different mix of debt and equity for their operations. However, studies emphasizing on linkage between capital structure and performance have been scanty. For instance, Abor (2005) on capital structure and profitability of SMEs in Ghana, show that short-term debt ratio is positively correlated with return on equity. In a similar study, Chiang Yat Hung *et al.* (2002), on capital structure and profitability of the property and construction sectors in Hong Kong conclude that while high gearing is positively related to asset, it is negatively related to profit margins. The separation of ownership and management of any corporate entity leading usually to divergent objectives raises questions on how much debt and equity should be employed. A clear case of agency costs which could be viewed from different perspectives by management and owners.

In the following discussion, we use classical capital structure determinants: size, asset structure,

profitability, risk and growth. Most of these classical variables suffer of the weakness cited above. To mitigate these weaknesses, we take also a more direct route which consists in seeking the type of financing actually chosen by the companies (the so-called financial deficit approach). All the determinants are measured using book values because data come from financial statements only.

#### 2.3.1 Size of the Firm and Capital Structure

Firm size has been found to be a factor in determining capital structure (Scott, 1976; Booth *et al.*, 2001). In a study of factors influencing capital structure in developed countries, Rajan and Zingales (1995) reported that an increased debt ratio is associated with firm size in all the G-7 countries with the exception of Germany. It is thus argued that large firms tend to be well diversified and hence are less likely to go bankrupt. Therefore, lower expected bankruptcy costs enable large firms to take on more debts. In sum, the empirical efforts of multiple investigators have found size effects to be present in varying degrees.

Smaller firms may find it relatively more costly to resolve informational asymmetries with lenders and financiers, which discourages the use of outside financing (Chung, 1993;) and should increase the preference of smaller firms for equity relative to debt (Rajan and Zingales, 1995). However, this problem may be mitigated with the use of short-term debt (Titman and Wessels, 1988). Relative bankruptcy costs and probability of bankruptcy (larger firms are more diversified and fail less often) are an inverse function of firm size (Warner, 1977; Ang *et al.*, 1982; Pettit and Singer, 1985; Titman and Wessels, 1988). A further reason for smaller firms to have lower leverage ratios is that smaller firms are more likely to be liquidated when they are in financial distress (Ozkan, 1996). Marsh (1982) and Titman and Wessels (1988) report a contrary negative relationship between debt ratios and firm size. Marsh (1982) argues that small companies, due to their limited access to equity capital market tend to rely heavily on loans for their funding requirements. Titman and Wessels (1988) further posit that small firms rely less on equity issue because they face a higher per unit issue cost. However, the presence of inconsistent findings suggests further study in this area is necessary.

### 2.3.2 Asset structure of the Firm Capital Structure

Asset structure is an important determinant of the capital structure of a new firm. The extent to which the firm's assets are tangible and generic would result in the firm having a greater liquidation value (Harris and Raviv, 1991; Titman and Wessels, 1988). Studies have also revealed that leverage is positively associated with the firm's assets. This is consistent with Myers (1977) argument that tangible assets, such as fixed assets, can support a higher debt level as compared to intangible assets, such as growth opportunities. Assets can be redeployed at close to their intrinsic values because they are less specific (Williamson, 1988). Thus, assets can be used to pledge as collateral to reduce the potential agency cost associated with debt usage (Smith and Warner, 1979). Marsh (1982), Long and Matlitz (1985) and Allen (1995) provide empirical evidence of a positive relationship between debt and fixed assets. The empirical evidence suggests a positive relation consistent with the theoretical arguments between asset structure and leverage for large firms (Van der Wijst and Thurik, 1993; Chittenden *et al.*, 1996; Michaelas *et al.*, 1999).

### 2.3.3 *Profitability* of the Firm and Capital Structure

Corporate performance has been identified as a potential determinant of capital structure. The tax trade-off models show that profitable firms will employ more debt since they are more likely to have a high tax burden and low bankruptcy risk (Ooi, 1999). However, Myers (1984) prescribes a negative relationship between debt and profitability on the basis that successful companies do not need to depend so much on external funding. They, instead, rely on their internal reserves accumulated from past profits. Titman and Wessels (1988) and Barton *et al.* (1989), agree that firms with high profit rates, all things being equal, would maintain relatively lower debt ratio since they are able to generate such funds from internal sources. Empirical evidence from previous studies (Chittenden *et al.*, 1996) appears to be consistent with the pecking order theory. Most studies found a negative relationship between profitability and debt financing.

### 2.3.4 Risk and Capital Structure

Given agency and bankruptcy costs, there are incentives for the firm not to utilize the tax benefit of debt within the static framework model. As a firm is exposed to such costs, the greater its incentive to reduce its level of debt within its capital structure. One firm variable which impacts upon this exposure is firm operating risk, in that the more volatile a firm's earnings streams, the greater the chance of the firm defaulting and being exposed to such costs. Firms with relatively higher operating risk will have incentives to have lower leverage than more stable earnings firms. Empirical evidence suggests that there is a negative relationship between risk and leverage of small firms (Ooi, 1999; Titman and Wessels, 1988).

### 2.3.5 *Growth* of the Firm and Capital Structure

Applying pecking order arguments, growing firms place a greater demand on their internally generated funds. Consequentially, firms with high growth will tend to look to external funds to finance the growth. Firms would; therefore, look to short-term, less secured debt then to longer-term more secured debt for their financing needs. Myers (1977) confirms this and concludes that firms with a higher proportion of their market value accounted for by growth opportunity will have debt capacity. Michaelas *et al.* (1999) found future growth positively related to

leverage and long-term debt, while Chittenden *et al.* (1996) and Jordan *et al.* (1998) found mixed evidence. 2.3.6 Tax and Capital Structure

Different authors on capital structure have given different interpretations of the impact of taxation on corporate financing decisions in the major industrial countries. Some are concerned directly with tax policy. For instance Auerbach (1985), MacKie-Mason (1990), etc. studied the tax impact on corporate financing decisions. The studies provided evidence of substantial tax effect on the choice between debt and equity. They concluded that changes in the marginal tax rate for any firm should affect financing decisions. A firm with a high tax shield is less likely to finance with debt. The reason is that tax shields lower the effective marginal tax rate on interest deduction. Graham (1996) on his part concluded that, in general, taxes do affect corporate financial decisions, but the extent of the effect is mostly not significant. Ashton (1991) confirms that any tax advantage to debt is likely to be small and thus have a weak relationship between debt usage and tax burden of firms. De Angelo and Masulis (1980) on the other hand, show that depreciation, research and development expenses, investment deductions, etc. could be substitutes for the fiscal role of debt. Titman and Wessels (1988) provided that, empirically, the substitution effect has been difficult to measure as finding an accurate proxy for tax reduction that excludes the effect of economic depreciation and expenses is tedious.

Non-debt tax shield like tax deduction for depreciation and investment tax credits are substitutes for the tax benefit of debt financing (DeAngelo and Masulis, 1980). Therefore, the tax advantage of leverage decreases when other tax deduction increases.

### 2.3.7 Age of the Firm and Capital Structure

The longer a company has been servicing its loan, the more likely the business is viable and its owner trustworthy. In consequence, the duration of the relation between a company and the banking system reduces information asymmetries between companies and banks. Following POT, this reduction should facilitate the access to debt financing and have a positive effect on leverage ratio (Petersen and Rajan, 1994). On the other hand, young firms tend to be externally financed while older tend to accumulate retained earnings so age must be negatively related to leverage (Petersen and Rajan, 1994). So, theoretical effect of age on leverage is ambiguous. Empirical evidences (Petersen and Rajan, 1994, Michaelas *et al.*, 1999) are in favour of the second hypothesis.

### 2.3.8 Industry type and capital structure

Firms have a corporate personality but from the outside they are assumed to have an impersonal appearance. However, on the inside, the personalities of the owners and managers have a strong impact on firm behavior. Struggles over control of the firm are frequent for one obvious reason: with control comes access to the firm's earnings, not to mention various non-pecuniary benefits. As a result, maintaining control can preoccupy management (owners if they are different) whenever capital structure decisions are being made and the choice between debt and equity can at times tilt in favor of debt on the basis of control, even when cost considerations would favor equity. This is particularly true in sub Saharan Africa where governments make every effort to control sectors considered strategic to the wellbeing of the country. In these sectors, the government may be in favour of more equity as against debt as more debts may increase the chances of takeover should JVs fail to meet their debt obligations.

### 2.3.9 Ownership control and capital structure

Control in a joint venture can be defined as a process through which parent companies ensure that the way the JV is managed conforms to their interests (Schaan, 1983). Closely allied with control is the level of ownership of each partner in that, the split of ownership between the partners of a JV influences the level of resource commitment, control and consequently the strategic direction of the JV (Lorange and Roos, 1990). Ownership level of partners to a JV may be an important influence of capital structure in that, Africa, including Ghana, is perceived to be a risky place to do business (Boateng, 2000). Consequently, it may be argued that one of the tools available to the foreign partner is to manage this risk by debt policy. It is, therefore, expected that a foreign partner would finance its capital contribution to the JV mostly through borrowing in order to minimize the risk. This is because debt financing offers significant advantages over equity financing as interest payment on debt are not subject to tax whereas dividend payments to equity shareholders are taxable. Given the fact that foreign investors constitute a substantial source of capital inflows in developing countries, it is likely to affect the capital structure.

### 2.4 The determinants of capital Structure in the property industry

The literature on corporate finance has seen some significant progress since the seminal works of Modigliani and Miller (1958; 1963). Theoretical advancement, particularly development of capital structure models based on tax balancing and asymmetric information, and more recently, on product-market and corporate control considerations, have managed to shed some light on the financing behavior of corporations. The validity of the modern theory of finance has been tested by many researchers. Numerous studies have also investigated the capital structure of firms in various sectors of the economy, such as manufacturing firms (Long and Malitz, 1985; Titman and Wessels, 1988), electric-utility companies (Miller and Modigliani, 1966), and agricultural firms

(Jensen and Langemeier, 1996). One of the main conclusions of empirical studies is that industrial classification is an important determinant of capital structure.

The capital structure of property companies is, however, still a relatively under-explored area in the property literature. Currently, we do not have a clear understanding on how the companies choose their capital structure and what factors influence their corporate financing behavior. Given the unique product-market environment property companies operate within<sup>1</sup>, there are strong grounds justifying a separate study on the capital structure determinants of property companies. Event studies by Howe and Shilling (1988) and Allen and Rutherford (1992) have also shown that stock prices of real estate organizations in the USA do not react to debt issues in the same manner as share prices of other corporations. Contrary to the theoretical predictions of corporate finance literature, the two studies observe that companies engaged in the property business are perceived by the market as benefiting from additional leverage.

Gau and Wang (1990) were amongst the first to apply the theory of capital structure directly to real estate investment decisions at the project level. Their optimization model illustrates how certain characteristics of the property may affect the investor's choice of loan-to-value ratio. Based on a sample of 1,423 apartment and commercial property transactions in Vancouver between 1971 and 1985, Gau and Wang observe that the level of debt employed in a property acquisition is directly related to the cost of the investment and inversely to the size of its depreciation tax shield, expected costs of financial distress and market interest rates. The applicability of Wang and Gau's results to the financial context of property companies at the corporate level has not been tested. There are, nevertheless, two existing studies in the USA that have examined the capital structure of property organizations in a non-tax environment. Maris and Elayan (1990) and Allen (1995) study the financial structure of tax-exempt real estate investment trusts (REITs) and real estate limited partnerships (RELPs) respectively. Both studies yield results which indicate that the nature of the assets owned by an organization has a significant impact on its capital structure.

In a recent study, Barkham (1997) examines the financial structure and ethos of property companies in the UK. The main conclusion of the study is that the classification of property companies as property investment companies (PICs) and property trading companies (PTCs) is valid. PTCs buy and develop property assets with a view to selling them on in the short term, while PICs engage in the acquisition and development of property assets to augment their portfolio which is held for long term. Barkham notes that the PTCs are more focused on profits whereas the PICs are more concerned with delivering returns to their shareholders via share price movements. He also observes that the PTCs operate against the constant danger of insolvency and indeed when the market turns they become unable to meet interest payments almost immediately. Due to their different ethos, the capital structures of property companies in the two categories are not the same. In particular, Barkham observes that during the study period (between 1987 and 1991) the PTCs are on average more highly-geared than PICs. This observation, however, contradicts the prediction of the conventional trade-off models of capital structure that risky firms should employ less debt in their capital structure.

Our paper is the first rigorous attempt to study the financial structure of property companies in Kenya. Although property finance has become more sophisticated in recent years, the property profession has generally been slow to get involved in the financial dynamics of property deals (see Orchard-Lisle, 1987; Barkham and Purdy, 1992; Riley, 1994). Furthermore, many financial decisions are often explained in the property literature using traditional notions that may not stand the rigors of economic theories (Shah and Thakor, 1987). Existing property literature has also focused largely on property financing at the individual project level. Whilst it is possible to view a corporation as a series of separately financed investment projects, such approach ignores the interaction and synergistic effects of the projects at the firm level (Williamson, 1988). At the corporate level, the whole account may equate to the sum of the parts.

### 2.5 The effect of Capital Structures on Profitability

The relationship between capital structure and firm value has been the subject of considerable debate. Throughout the literature, debate has centered on whether there is an optimal capital structure for an individual firm or whether the proportion of debt usage is irrelevant to the individual firm's value. The capital structure of a firm concerns the mix of debt and equity the firm uses in its operation. Brealey and Myers (2003) contend that the choice of capital structure is fundamentally a marketing problem. They state that the firm can issue dozens of distinct securities in countless combinations, but it attempts to find the particular combination that maximizes market value. According to Weston and Brigham (1992), the optimal capital structure is the one that maximizes the market value of the firm's outstanding shares.

<sup>&</sup>lt;sup>1</sup> The product-market environment of property companies is in many ways different from that of other firms. In particular, property assets are known to be indivisible and highly localized in nature. The high cost associated with property transactions also discourages firms from dealing frequently in the market. Furthermore, the property market is highly cyclical. The combined effect of these factors is an illiquid property market with high business risk.

The seminal work by Modigliani and Miller (1958) in capital structure provided a substantial boost in the development of the theoretical framework within which various theories were about to emerge in the future. Modigliani and Miller (1958) concluded to the broadly known theory of "capital structure irrelevance" where financial leverage does not affect the firm's market value. However their theory was based on very restrictive assumptions that do not hold in the real world. These assumptions include perfect capital markets, homogenous expectations, no taxes, and no transaction costs. The presence of bankruptcy costs and favorable tax treatment of interest payments lead to the notion of an "optimal" capital structure which maximizes the value of the firm, or respectively minimizes its total cost of capital.

Modigliani and Miller (1963) reviewed their earlier position by incorporating tax benefits as determinants of the capital structure of firms. The key feature of taxation is that interest is a tax-deductible expense. A firm that pays taxes receives a partially offsetting interest "tax-shield" in the form of lower taxes paid. Therefore, as Modigliani and Miller (1963) propose, firms should use as much debt capital as possible in order to maximize their value. Along with corporate taxation, researchers were also interested in analyzing the case of personal taxes imposed on individuals. Miller (1977), based on the tax legislation of the USA, discerns three tax rates that determine the total value of the firm. These are: (i) the corporate tax rate; (ii) the tax rate imposed on the income of interest inflows.

According to Miller (1977), the value of the firm depends on the relative level of each tax rate, compared with the other two.

Other theories that have been advanced to explain the capital structure of firms include bankruptcy cost, agency theory, and the pecking order theory. These theories are discussed in turn.

Bankruptcy costs are the cost directly incurred when the perceived probability that the firm will default on financing is greater than zero. The bankruptcy probability increases with debt level since it increases the fear that the company might not be able to generate profits to pay back the interest and the loans. The potential costs of bankruptcy may be both direct and indirect. Examples of direct bankruptcy costs are the legal and administrative costs in the bankruptcy process. Examples of indirect bankruptcy costs are the loss in profits incurred by the firm as a result of the unwillingness of stakeholders to do business with them (Titman, 1984). The use of debt in capital structure of the firm also leads to agency costs. Agency costs arise as a result of the relationships between shareholders and managers and those between debt-holders and shareholders (Jensen and Meckling, 1976). The need to balance gains and costs of debt financing emerged as a theory known as the static trade-off theory by Myers (1984). It values the company as the value of the firm if unlevered plus the present value of the tax shield minus the present value of bankruptcy and agency costs.

The concept of optimal capital structure is also expressed by Myers (1977) and Myers and Majluf (1984), based on the notion of asymmetric information. The existence of information asymmetries between the firm and likely finance providers causes the relative costs of finance to vary between the different sources of finance. For instance, an internal source of finance where the funds provider is the firm will have more information about the firm than new equity holders; thus, these new equity holders will expect a higher rate of return on their investments. This means that it will cost the firm more to issue fresh equity shares than using internal funds. Similarly, this argument could be provided between internal finance and new debt holders. The conclusion drawn from the asymmetric information theories is that there is a hierarchy of firm preferences with respect to the financing of their investments (Myers and Majluf, 1984). This "pecking order" theory suggests that firms will initially rely on internally generated funds, i.e. undistributed earnings, where there is no existence of information asymmetry, and then they will turn to debt if additional funds are needed and finally they will issue equity to cover any remaining capital requirements. The order of preferences reflects the relative costs of various financing options.

The pecking order hypothesis suggests that firms are willing to sell equity when the market overvalues it (Myers, 1984; Chittenden *et al.*, 1996). This is based on the assumption that managers act in favor of the interest of existing shareholders. As a consequence, they refuse to issue undervalued shares unless the value transfer from "old" to new shareholders is more than offset by the net present value of the growth opportunity. This leads to the conclusion that new shares will only be issued at a higher price than that imposed by the real market value of the firm. Therefore, investors interpret the issuance of equity by a firm as signal of overpricing. If external financing is unavoidable, the firm will opt for secured debt as opposed to risky debt and firms will only issue common stocks as a last resort. Myers and Majluf (1984), maintain that firms would prefer internal sources to costly external finance. Thus, according to the pecking order hypothesis, firms that are profitable and therefore generate high earnings are expected to use less debt capital than those that do not generate high earnings. Several researchers have tested the effects of profitability on firm leverage. Friend and Lang (1988) and Kester (1986) find a significantly negative relation between profitability and debt/asset ratios. Rajan and Zingales (1995) and Wald (1999) also confirm a significantly negative correlation between profitability and leverage.

Fama and French (1998), analyzing the relationship among taxes, financing decisions, and the firm's

value, concluded that the debt does not concede tax benefits. Besides, the high leverage degree generates agency problems among shareholders and creditors that predict negative relationships between leverage and profitability. Therefore, negative information relating debt and profitability obscures the tax benefit of the debt. Booth *et al.* (2001) developed a study attempting to relate the capital structure of several companies in countries with extremely different financial markets. They concluded that the variables that affect the choice of the capital structure of the companies are similar, in spite of the great differences presented by the financial markets. Besides, they concluded that profitability has an inverse relationship with debt level and size of the firm. Graham (2000) concluded in his work that big and profitable companies present a low debt rate. Mesquita and Lara (2003) found in their study that the relationship between rates of return and debt indicates a negative relationship for long-term financing. However, they found a positive relationship for short-term financing and equity.

Hadlock and James (2002) concluded that companies prefer loan (debt) financing because they anticipate a higher return. Petersen and Rajan (1994) identified the same association, but for industries. Baker (1973), who worked with a simultaneous equations model, and Nerlove (1968) also found the same type of association for industries. Roden and Lewellen (1995) found a significant positive association between profitability and total debt as a percentage of the total buyout-financing package in their study on leveraged buyouts. Champion (1999) suggested that the use of leverage was one way to improve the performance of an organization.

In summary, there is no universal theory of the debt-equity choice. Different views have been put forward regarding the financing choice. The present study investigates the effect of capital structure on profitability of Real Estate Firms in Kenya.

### 2.6 Previous Empirical Studies

Vasiliou and Daskalakis (2006) analyzed the capital structure determination within Greek listed firms. They show that capital structure decisions and the financial behavior within firms in appear to deviate from the neoclassical paradigm. The theories of behavioral finance and Post Keynesian supply a better explanation to the understanding of financial managers opinions and behavior. From their study they draw conclusions that managers can be explained by behavioral finance theory, especially the irrational investor and rational investor approach explained by Baker et al., (2004). Managers within Greek listed firms recognize market inefficiency caused by irrational investors and benefit from them. Vasiliou and Daskalakis (2006) also conclude that Greek managers can be explained by the Post Keynesian approach, opinions are shaped by past experience and the managers show an uncertainty for the future.

The authors investigate in their article the question "What factors affect your investment funding decisions?", they determined that maintenance of long-term viability, maintenance of a high competitiveness, level of forecasted flows from the investment projects, maintenance of a desirable credit rating and financial independency was the most important factors affecting the managers decisions when deciding investment funding for their respective firm. These answers are better explained by the behavioral finance approach and Post Keynesian approach then by the Neoclassical approach. Stock price maximization which is consistent with the Neoclassical approach came eight in the ranking of the determining factors. To summarize, Vasiliou and Daskalakis (2006) found throughout the whole study very little evidence for the Neoclassical approach to be valid within Greek firms.

Bancel and Mittoo (2004) survey managerial behavior and capital structure choices in Europe, they conducted their studies on firms in sixteen different European countries. The purpose of their study is to examine the link between theory and practice of capital structure across European countries with different legal systems. Their findings suggest that the search for financial flexibility and credit rating are two of the most important determinants of capital structure decision within European firms, these findings are especially strong for the Scandinavian firms within the sample. Bancel and Mittoo (2004) also find evidence of market timing within European firms, European managers tried to time the window of opportunity in order to raise capital; they also find mediate support for the trade-off theory and weak support for the pecking-order theory or agency framework. The authors find the major determinants of capital structure within European firms.

The evidence of European managers taking advantages of market timing aspects when raising funds, imply they consider both interest rates and market value of equity, when choosing funding. Bancel and Mittoo (2004) also find evidence of managerial concern for weighted average cost of capital and tax advantages, but these two factors do not determine the capital structure within the firms. The authors find weak evidence for industry norms; European firms tend not to follow each other in terms of capital structure within their respective industry.

Graham and Harvey (2001) conducted an investigation about capital structure and the decisions behind capital structure within firms on the US market, this by examine the answers of 392 financial managers which they gathered through a questionnaire. Their findings suggest US firms to be concerned about maintaining

financial flexibility, credit rating and stock price appreciation when choosing the appropriate investment funding. They find moderate evidence for the pecking-order theory and trade-off theory and little evidence that managers are distressed about asymmetric information, tax shield considerations, transaction costs, free cash flows or clientele taxes.

Vasiliou and Daskalakis (2006, No. 2) investigate the similarities between Greek firms capital structure decisions and the firms capital structure decisions Harvey and Graham (2001) and Bancel and Mittoo (2004) investigated. They survey financial managers in 89 listed companies on the Athens Exchange. They find Greek firms to have an own-business policy and seem to care more about the disadvantages of debt instead of exploiting debt. Financial distress considerations, market timing and competitiveness are important factors determining Greek firms capital structures. Agency costs of equity, pecking order and the signaling theory are not applicable on the Greek firms capital structures. Although, Vasiliou and Daskalakis's (2006, No. 2) findings indicate internal financing to be the main source of funding when Greek firms finance new projects, but they do not find it to have implications on the capital structure. The authors findings are comparable to those of Graham and Harvey (2001) and Bancel and Mittoo (2004), all three studies find evidence of market timing considerations, weak evidence concerning pecking-order behavior and the difficulties to apply agency cost theory on the firms capital structure.

### 2.7 Capital Structure in Transition Economies

The importance of studying the capital structure of firms in transition economies was first pointed out by Cornelli et al. (1998). Modern financial markets emerged in those countries in the early 1990's. In terms of capital structure theories, it means that local country factors could be doubly significant in explaining firm leverage. For example, the trade-off theory argues that firms balance the tax benefits of loans with the potential bankruptcy costs to achieve an optimal leverage level. In the case of transition economies, the cost of adjusting capital structure might be very high and hence, the firm's leverage might be distorted. Based on the pecking order theory of capital structure, firms prefer internal funds to outside sources since the latter are poorly priced due to the asymmetry of information between owners and investors. This asymmetry of information is expected to be especially large in transition economies and therefore firms are less likely to turn to outside sources of finance even if the investment opportunities exceed the internal funds.

Cornelli et al. (1998) use data on Hungarian and Polish firms from the early 1990's to report stylized facts about firm leverage in transition countries. They find that levels of leverage are lower than in Western economies and the proportion of short-term financing dominates long-term debt. They estimate simple static leverage regression, where the explanatory variables were tangibility, size, profitability and a dummy for state ownership. Contrary to studies on Western firms they found that tangibility is negatively related to leverage. They offer several explanations for this. First, they claim that pretransition firms financed fixed assets with equity and therefore the relationship to debt is negative. Second, they argue that the book value of fixed assets might differ from the market values. Cornelli et al. (1998) lack the country specific variability in their study to measure the significance of institutional and macroeconomic differences for firm leverage.

Later studies by Nivorozhkin (2005) and Haas and Peeters (2004) explore the dynamic capital structure of firms in transition countries. Both of those papers use data from the Amadeus database provided by Bureau Van Dijk, and have adopted the methodology from Banerjee et al. (2004). In a dynamic capital structure framework, actual leverage is allowed to deviate from optimal because of adjustment costs. Banerjee et al. (2004) allow both the leverage target and the adjustment speed to vary across firms and over time. Haas and Peeters (2004) analyze ten countries over the period 1993–2001. Nivorozhkin (2005) analyses five countries over the period 1997–2001. Both papers show that firms are moving towards their leverage targets. Haas and Peeters (2004) used both firm- and country-specific variables in the target leverage estimation. In a recent paper, Roberts (2002) claimed that a time-varying adjustment speed complicates the model statistically and the economic interpretation is difficult. This is one reason why a simple model is preferred in this paper. Another reason for using a simple static leverage model in this paper is that I am interested in the sources of capital structure not the dynamics of leverage per se. The cross-country yearly firm-level data used in this study are an excellent basis for evaluating the importance of the firm-specific, country institutional and macroeconomic factors for determining a firm's capital structure.

### 3.0 METHODS

### 3.1 Research Design

According to Brown *et* al (2003), research design provides the glue that holds the research project together. A design is used to structure the research, to show how all of the major parts of the project - the samples or groups, measures, treatments or programs, and methods of assignment - work together to try to address the central research questions. To undertake the study, a descriptive research design will be used. This is a scientific study done to describe a phenomena or an object. In this case the study phenomenon is capital structure. This kind of

study involves a rigorous research planning and execution and often involves answering research questions. It involves an extensive well-focused literature review and identification of the existing knowledge gap. The method is preferred as it permits gathering of data from the respondents in natural settings. In this case, it will be possible for the researcher to administer the data collection tools to the respondents in their workstations, which was relatively easy, with high likelihood of increasing the response rate.

### 3.2 Population and Sampling Design

### 3.2.1 Population of the Study

The population of study will be the Real Estate Firms registered with Kenya Property Developers Association whose number stood at seventy (70) as at June  $30^{\text{th}}$  2010. The respondents in each of the companies will be the Head of the Finance function.

### 3.2.2 Sampling Design

It would have been desirable to undertake a census of all the Real Estate Firms in Kenya, but owing to their big numbers and spread all over the country, which would have serious cost implications, a sample of thirty-five (35) of the Real Estate Firms will be considered for the study. A two state stratified random sampling will be used in selection of the study sample. A list of all the Real Estate Firms registered with the Kenya Property Developers Association will be drawn, from which the firms will be categorized in terms of Residential investment, Commercial investment and Composite investment (Both Commercial and Residential investment) players. A sample of 50% will then be drawn from each of the stratum. Table 3.1 below presents the sample size.

### Table 3.1: Sample Size

Category of Real Estate Firm (Stata)		Sample Size (50% of the population
	(population)	of the population
Firms that have invested in Commercial Property only	10	5
Firms that have invested in Residential property only	48	24
Firms that have invested in both Residential and Commercial	12	6
property (Composite)		
Total	70	35

Source: List of Members of the Kenya Property Developers Association (June 2010)

## 3.3 Data Collection

### 3.3.1 Data Collection Tools

Primary data will be collected from the Heads of Finance of the selected organizations using a semi-structured questionnaire. The questionnaire will consist of two sections, Section I and section II. Section I will consist of items pertaining to profile of the respondents while section II will consist of items pertaining to the area of study. The researcher will also use interview schedules, which will have open questions, aimed at meeting the objectives of the study.

The sets of questionnaires and interview guides will be pre-tested on five randomly selected respondents to necessitate adjustments in order to make them more suitable and minimize bias in responses. The procedure that will be used in collecting data will be through distribution of the questionnaires that is, dropping and picking questionnaires from respondents at their most convenient time that will be agreeable to both parties.

### 3.4.2 Data Collection Procedures

The questionnaires will be administered to the listed companies whose head offices are Nairobi by hand delivery. Once completed, the researcher will personally collect the questionnaires from the respondents. This will give him the opportunity to conduct clarify certain issues arising from the various responses. The companies whose offices are located outside Nairobi will receive their questionnaire by email and will be expected to complete them online and then send them back to the researcher. A letter of introduction, which states the purpose of the study, will be attached to each questionnaire. In addition, the researcher will make telephone calls to the respective respondents to further explain the purpose of the study and set a time frame for the completion of the questionnaires.

In addition, personal interviews will be conducted with eight of the respondents selected at random, aided by an interview schedule. In this case the researcher will be able to obtain additional information to corroborate findings from the questionnaire.

### 3.4 Data Analysis and Presentation

For purposes of the current study, the data will be analyzed by employing descriptive statistics such as percentages, mean scores and standard deviations. Statistical Package for Social Sciences (SPSS) will be used as an aid in the analysis. The researcher prefers SPSS because of its ability to cover a wide range of the most common statistical and graphical data analysis. Computation of frequencies in tables, charts and bar graphs will

be used in data presentation. The information will be presented and discussed as per the objectives and research questions of the study.

### 3.5 Chapter Summary

The chapter has given insight into how the way the research will be conducted. Specifically, the researcher has discussed the Research Design, Study Population, Methods of data collection, Research procedures, Data analysis and presentation. A descriptive survey will be undertaken, focusing on all the companies listed on the Nairobi Stock Exchange. Both quantitative and qualitative methods of analysis will be used. The quantitative data and qualitative information collected will be coded and summarized in various forms. The data will be analyzed by employing descriptive statistics such as percentages, frequencies and tables. Statistical Package for Social Sciences (SPSS) will be used aid in analysis.

### CHAPTER FOUR

### **RESEARCH FINDINGS AND ANALYSIS**

### 4.1 Introduction

This chapter covers the data analysis, presentation and interpretation. The data used was obtained from the questionnaires distributed to Heads of Finance of the Real Estate Firms registered with the Kenya Property Developers Association. The general objective of the study was to investigate the dynamics involved in the determination of capital structure of property companies in Kenya. The specific objectives were:- to determine the factors which influence the capital structures of Real Estate Firms in Kenya; and to establish the effect of capital structure on Real Estate Firms in Kenya.

Thirty Five questionnaires were distributed, out of which 30 were returned completed (86% response rate). The high response rate could be attributed to the researcher's good relationship with the respondents, who made a follow up of every questionnaire sent out. The information is presented and discussed as per the objectives and research questions of the study.

### 4.2 Demographic Data

### 4.2.1 Period of Operation in Kenya

The respondents were asked to indicate the time period which their respective organizations had been in operation in Kenya. The longer an organization operated in a given environment, the more experience it had in as far as environmental forces are concerned and the higher the ability to respond appropriately. The findings indicate that out of the 30 respondents, none of the organizations had been in operation for less than 1 year, 4 of the organizations had been in operation for between 11 and 15 years while 20 organizations had been in operation for 16 years and above. Further probing revealed that some of the banks recorded to have operated in Kenya for between 6 and 10 years had actually been in operation for longer periods of time but had changed names as a result of mergers and acquisitions. It can thus be concluded that the respondent organizations had been in operation in Kenya for a long period of time and as such, their responses would be objective. The responses are summarized and presented in table 4.1 below.

### Table 4.1: Period of Operation in Kenya

Period of Operation in Kenya	Distribution	
	Frequency	Percentage
Less than 1 year	-	0
1 to 5 years	4	13
6 to 10 years	-	0
11 to 15 years	6	20
16 years and above	20	67
Total	30	100

#### 4.2.2 Market Segment served by the Real Estate Firms

The respondents were asked to indicate the category to which their respective firms belonged with regards to the markets they served. The responses are summarized and presented in table 4.2 below.



#### Table 4.2: Market Segment served by the Real Estate Firms

Market Segment Served by the Respondent Banks	Distribution	
	Frequency	Percentage
Commercial Property	8	27
Residential Property	10	33
Both Commercial and Residential Property	12	40
Total	30	100

The responses in table 4.2 show that whereas 27% of the Real Estate Firms had invested in commercial property only, 33% had invested in residential property only, while 40% had invested in both commercial and residential property.

#### 4.2.3 Number of Full Time Employees

The researcher sought to determine the size of the Real Estate organizations by establishing the number of full time employees. The higher the number, the higher the volume of business and hence the bigger the size of the organization. The responses are summarized and presented in table 4.3 below.

### Table 4.3: Number of Full Time Employees

Number of full time employees	Distribution	Distribution		
	Frequency	Percentage		
Less than 25	16	53		
26 to 50	12	40		
51 to 75	2	7		
76 to 100	-	0		
101 and above	-	0		
Total	30	100		

The findings in table 4.3 show that majority of the Real Estate firms in Kenya (53%) have less than 25 full time employees. Whereas the firms with between 26 and 50 full time employees comprised 40% of the respondent organizations, none of them had above 50 full time employees. Considering that the service offered by the firms is mainly professional in nature, and 40% of the respondent firms having between 26 and 50 full time employees, the Real Estate firms are relatively big in size.

#### 4.2.5 Gender Distribution of Respondents

The respondents were asked to indicate their gender. The Government of Kenya is currently putting emphasis on gender balance in employment in all sectors of the economy. The responses indicate that 53% were female while 47% were male. The findings show a relatively gender balanced establishment amongst the Real Estate firms in Kenya.

### 4.2.6 Age Distribution of Respondents.

The respondents were asked to indicate their age by ticking against given age brackets. The responses are presented in table 4.4 below.

### Table 4.4: Age Distribution of Respondents

Age Bracket	Distribution	Distribution		
	Frequency	Percentage		
18 – 25 years	-	0		
26 - 35 years	18	60		
36 - 45 years	8	27		
46 – 55 years	4	13		
56 years and above	-	0		
Total	30	100		

The findings in table 4.4 show that none of the respondents was aged below 25 years, 60% of the respondents were aged between 26 and 35, 27% were aged between 36 and 45, while 13% were aged between 46 and 55 years. None of the respondents was above 55 years of age (the mandatory retirement age in the public service in Kenya). It can be concluded that majority of the respondents (87%) were aged between 26 and 45, a relatively youthful age.

### 4.2.7 Academic Qualifications of Respondents

The respondents were asked to indicate the highest qualification they had attained. The responses are summarized and presented in table 4.5.

### Table 4.5: Highest Academic Qualification

Highest Academic Qualification	Distribution	
attained by Respondents	Frequency	Percentage
Secondary school	3	10
Tertiary college	2	7
Undergraduate	18	60
Postgraduate	7	23
Total	30	100

The findings show that majority of the respondents (60) at least had attained a first degree, 23% had attained a postgraduate qualification while 7% had attained tertiary level education (Diploma). The findings also show that 10% of the respondents had attained secondary education and undertaken accounting courses. The 10% were serving in either accounting or finance positions. The fact that 83% of the respondents had at least attained a University degree is an indication that employees in the Real Estate industry in Kenya have attained high academic qualifications and hence their responses were bound to be objective.

### 4.2.8 Current Position of Respondents

The researcher sought to determine the position of the respondent (either Heads of Finance or other officer delegated to participate in the study). The responses are summarized and presented in table 4.6.

### Table 4.6: Current Position of Respondents

Current Position of Respondents	Distribution		
	Frequency	Percentage	
Head of Finance	6	20	
Chief Accountant	6	20	
Deputy Chief Accountant	6	20	
Property Manager	6	20	
Property Officer	6	20	
Total	30	100	

The findings in table 4.6 show that 60% of the respondents were high senior officers within finance or accountant profession, whose responses on finance related issues could be considered objective. In addition, the property managers and Property officers are senior employees in the firms' management and could articulate policy issues objectively. The findings indicate that the researcher managed to reach the target respondents.

### 4.2.9 Period Respondent Worked in Current Position

The respondents were asked to indicate the period of time they had worked in their current position. The longer one worked in a particular position, the more experienced one became and the more objective the responses would be regarding issues pertaining to the position. The responses are summarized and presented in table 4.7 below

#### Table 4.7: Period Respondent worked in Current Organization

Period Respondent in Current Position	Distribution	Distribution		
	Frequency	Percentage		
1 Year	2	7		
2 Years	6	20		
3 Years	7	23		
4 Years	7	23		
5 Years	8	27		
Total	30	100		

The findings indicate that majority of the respondents (73%) had worked in their current position for at least 3 years. It can be concluded that the respondents had worked in their respective positions for a period long enough to understand functions of the positions. Their responses would thus be objective.

### 4.2.10 Period Respondent Worked in Current Organization

The respondents were asked to indicate the period of time they had worked in their current organizations. The longer one worked in an organization, the more conversant they became with the strategies and operations of the organization, hence the more objective the responses were expected to be. The responses are summarized and presented in table 4.8 below



#### Table 4.8: Period Respondent worked in Current Organization

Period Respondent worked in Current Organization	Distribution	Distribution		
	Frequency	Percentage		
Less than 1 year	2	7		
1 to 5 years	24	80		
6 to 10 years	4	13		
11 to 15 years	-	0		
16 years and above	-	0		
Total	30	100		

The findings indicate that majority of the respondents (80%) had worked in their current organizations for between 1 and 5 years. It can be concluded that the respondents had worked in their respective organizations for a period long enough to understand operations of the organizations. Their responses would thus be objective.

### 4.3 Factors that Influence the Capital Structure of Real Estate Firms in Kenya

#### 4.3.1 The factors which influence the capital structures of Real Estate Firms in Kenya

#### 4.3.1.1 Ratio of Debt to Equity

In order to meet the first objective of the study, "to determine the factors which influence the capital structures of Real Estate Firms in Kenya", the respondents were asked three questions. Firstly, the respondents were asked to the ratio of debt to equity that their respective organizations used in their operation. The responses are summarised and presented in table 4.9 below.

#### Table 4.9: Ratio of Debt to Equity of Respondent Real Estate Firms

Ratio of Debt to Equity of Respondent Real Estate Firms	Distribution	Distribution	
	Frequency	Percentage	
50% Debt: 50% Equity	6	20	
100% Equity	24	80	
Total	30	100	

The findings show that while only 20% of the Respondent Real Estate Firms had a 50% debt: 50% Equity ratio as their capital structure, 80% of the firms had 100% equity.

#### 4.3.1.2 Extent of influence of listed factors on the capital structures of Real Estate Firms

Secondly, the respondents were asked to indicate the extent to which they agreed or disagreed that each of the listed factors influenced the capital structure of their respective organizations. The responses are summarised and presented in table 4.10 below.

#### Table 4.10: Extent of influence of listed factors on the capital structures of Real Estate Firms

Factors that	Rating					Mean	Standard
influence capital structures	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Score	Deviation
Size of the Firm	2	4	4	12	8	2.00	4.000
Asset structure of the Firm	-	2	2	16	10	3.391	6.782
Profitability of the Firm	-	2	6	10	12	2.550	5.099
Operating Risk of the Firm	-	-	6	16	8	3.317	6.633
Growth rate of the Firm	-	3	1	14	12	3.260	6.519
Impact of Taxation	2	10	8	7	3	1.696	3.391
Age of the Firm	1	2	6	9	12	1.557	3.114
Industry type	3	2	4	5	16	2.851	5.701
Ownership control	-	1	10	7	12	2.670	5.339
N=30							

The findings in table 4.10 show that the listed factors influence capital structures but to a varying degree. The factors are presented in order of their strength of influence as follows:- Asset structure of the Firm, as indicated by at least 26 respondents and a mean score of 3.391; Growth rate of the Firm as indicated by at least 26 respondents and a mean score of 3.260; Operating Risk of the Firm as indicated by at least 24 respondents and a mean score of 3.317; Profitability of the Firm as indicated by at least 22 respondents and a mean score of 2.550; Age of the Firm as indicated by at least 21 respondents and a mean score of 1.557; Industry type as indicated by at least 21 respondents with a mean score of 2.851; Size of the Firm as indicated by at least

20 respondents and a mean score of 2.00; and Ownership control as indicated with at least 19 respondents, with a mean score of 2.670. Impact of Taxation has the least influence, as indicated by at least 10 respondents with a mean score of 1.696. Other factors that influence the capital structure of Real Estate firms include:- Government and other regulations from regulatory authorities; Prevailing market and economic conditions; Cost of capital; Cash flow stability; Expected returns of the organizations versus investment opportunities; and External factors such as inflation rates

#### 4.3.1.3 Other Factors that have influenced the Capital Structures of Real Estate Firms

Thirdly, the respondents were asked to list and briefly explain any other factors that could have influenced the capital structure of their respective organizations. The responses are summarized and presented in table 4.11 below (Multiple responses were allowed).

Findings in table 4.11 show that the other factors that were considered to strongly influence capital structures include owners' capital base; Investment costs; external factors such as inflation rates; Expected returns of the organizations versus investment opportunities; Payback period – duration before recouping back initial investment; Industry trends – growing, stagnant or retarding; Prevailing market and economic conditions; and Government and other regulations from regulatory authorities.

Other Factors that have influenced the Capital Structures of Real	Distribution		
Estate Firms	Frequency	Percentage	
Government and other regulations from regulatory authorities	6	20	
Prevailing market and economic conditions	7	23	
Owners' attitude	5	17	
Owners' capital base	9	30	
Owners' other investments	3	10	
Dominant investors mentality at the time of investment	4	13	
Proprietors' attitude to risk	2	7	
Existing investors' psychology at the time of acquisition of the property	2	7	
(most of the investors in the early 70s' and 80s' were mainly rich people			
who did not require external debt			
Cost of capital (if costs of borrowing are high then equity capital is	5	17	
preferable)			
Development of the capital market – more developed equity market means	3	10	
more equity to be used and vice versa			
Level of economic development – if level of economic development is high	2	7	
then debt would be required.			
Cash flow stability -with unstable and unpredictable cash flows, the	5	17	
organization would not be able to afford debt equity			

Table 4.11: Other Factors that have influenced the Capital Structures of Real Estate Firms



### Table 4.11 continued

Other Factors that have influenced the Capital Structures of Real	Distribution		
Estate Firms	Frequency	Percentage	
Investment costs – commercial properties are usually characterized by high initial investment costs since the costs associated with land are high compared to residential properties investment. Going for debt financing thus means high interest rates and hence extended payback period, hence preference is usually equity financing where possible.	8	27	
Supply, Demand conditions and competition for properties within the industry	4	13	
Payback period – duration before recouping back initial investment	7	23	
Industry trends – growing, stagnant or retarding	6	20	
Expected returns of the organizations versus investment opportunities	7	23	
Opportunity costs within various investments in Real Estate i.e. residential vs commercial	5	17	
External factors such as inflation rates	9	30	
N=30			

#### 4.3.2 The effect of capital structure on Real Estate Firms in Kenya.

In order to meet the second objective of the study, "to establish the effect of capital structure on Real Estate Firms in Kenya", the respondents were asked to indicate the extent to which their respective organizations had experienced the listed effects as a resulting of their capital structures. The responses are summarised and presented in table 4.12 below.

 Table 4.12: The effect of capital structure on Real Estate Firms in Kenya.

Effect of capital structure on	Rating				Mean	Standard	
organizations	Not at		Somehow	Much	Very	Score	deviation
	all	(2)	(3)	(4)	Much		
	(1)				(5)		
Agency costs arising as a result of							
the relationship between	10	8	2	6	4	1.581	3.162
shareholders and managers and							
those between debt holders and							
shareholders							
Bankruptcy costs (Legal and							
Administrative costs)	20	8	2	-	-	4.243	8.485
Favorable tax treatment of interest							
payments (Interest is tax	18	3	5	4	-	3.524	7.047
deductible expense). A firm that							
pays taxes receives a partially							
offsetting interest (tax-shield) in							
form of lower taxes paid							

The findings further indicate that the Real Estate Firms in Kenya were least affected by Bankruptcy costs (Legal and Administrative costs) since only 2 respondents at least indicated "somehow"; followed by favorable tax treatment of interest payments (Interest is tax deductible expense) since only 9 responses at least indicated "much" or "somehow". A firm that pays taxes receives a partially offsetting interest (tax-shield) in form of lower taxes paid. To some extent, the firms were affected by agency costs arising as a result of the relationship between shareholders and managers and those between debt holders and shareholders. Other effects included the following: - High liquidity; Flexibility in decision making; Favorable returns on monetary investments; and Financial independence.

Further, the respondents were asked to list and briefly explain any other effects of capital structure that have impacted on their respective organization's operations. The responses are summarised and presented in table 4.13 below (Multiple responses were allowed)

Other effects of capital structure on Real Estate Firms in Kenya.	Distribution	
	Frequency	Percentage
Ease of access to loans - short - term and long - term	5	17
High liquidity – due to low minimal distributions (absence of expenses due to	6	20
non-distribution of dividends		
Flexibility in decision making – due to absence of debt financiers' interests	7	23
Favorable returns on monetary investments – resulting from high liquidity	6	20
100% equity financing hence no interest expense and consequently, higher returns	11	37
Competitive advantage over competitors in the form of final pricing of the products since use of equity financing compared to debt financing	5	17
Financial independence – protects the organization (equity financing) against high interest rates associated with inflation under debt financing	4	13
N=30		

#### Table 4.13: The other effects of capital structure on Real Estate Firms in Kenya.

The other effects of capital structure on Real Estate Firms, listed in order of strength were listed as follows:- 100% equity financing hence no interest expense and consequently, higher returns; Flexibility in decision making – due to absence of debt financiers' interests; Favorable returns on monetary investments – resulting from high liquidity; High liquidity – due to low minimal distributions (absence of expenses due to non-distribution of dividends; Ease of access to loans - short – term and long – term; Competitive advantage over competitors in the form of final pricing of the products since use of equity financing compared to debt financing; and Financial independence – protects the organization (equity financing) against high interest rates associated with inflation under debt financing.

#### **CHAPTER FIVE**

#### CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents the summary of key findings, conclusions and recommendations of the study. The general objective of the study was to investigate the dynamics involved in the determination of capital structure of property companies in Kenya.

### 5.2 Summary of Findings

#### The key findings of the study were as follows:-

Majority of the Real Estate Firms in Kenya (80%) had a capital structure of 100% equity while the other 20% had a debt equity ratio of 50:50. The findings further show that the following factors, listed in their order of strength, influenced capital structures of Real Estate Firms:- Asset structure of the Firm; Growth rate of the Firm; Operating Risk of the Firm; Profitability of the Firm; Age of the Firm; Industry type; Size of the Firm; and Ownership control. Impact of Taxation has the least influence. Other factors that influence the capital structure of Real Estate firms include:- Government and other regulations from regulatory authorities; Prevailing market and economic conditions; Cost of capital; Cash flow stability; Expected returns of the organizations versus investment opportunities; and External factors such as inflation rates

The findings further indicate that the Real Estate Firms in Kenya were least affected by Bankruptcy costs (Legal and Administrative costs); followed by favorable tax treatment of interest payments (Interest is tax deductible expense). A firm that pays taxes receives a partially offsetting interest (tax-shield) in form of lower taxes paid. To some extent, the firms were affected by agency costs arising as a result of the relationship between shareholders and managers and those between debt holders and shareholders. Other effects included the following: - High liquidity; Flexibility in decision making; Favorable returns on monetary investments; and Financial independence.

### 5.3 Conclusions

The current study aims at investigating factors that influence the capital structures of Real Estate Firms in Kenya. Further, the study investigates whether the Neoclassical theory can be used to explain the capital structure decisions or if theories which incorporate behavioral aspects give an better explanation. The findings show that several theories are necessary to explain the results and one single theory is not able to alone explain the incentives behind capital structure decision. This has also been concluded by other authors, e.g. Graham and Harvey (2001), Bancel and Mittoo (2004) and Vasiliou and Daskalakis (2006).

Creditability and liquidity were also major determinants of capital structure in firms on the Greek market. The authors draw from these findings the conclusions that firms generally avoid debt instead of taking

advantage of it, our findings indicate on a similar behavior within Real Estate firms in Kenya. Bancel and Mittoo (2004) state financial flexibility to be the most important consideration for European managers when deciding capital structure, this in order to be prepared for different economic outlooks.

The empirical findings of the survey reveal the main factors which determine the capital structure in Real Estate firms. These factors are maintenance of a desirable credit rating, debt repayment capability and maintain certain liquidity. Other factors such as investment opportunities, risk exposure and future market developments were factors the managers also stated as determinants of capital structure. The method of comparing the debt ratio of the firm over time is used mainly by the managers in order to determine capital structure. Furthermore, most likely to affect the firm's capital structure are the opinions of shareholders. The findings further suggest that the majority of Real Estate firms do not use their capital structure for signaling purposes.

As the results show, financial flexibility is the major factor which affected the firm's choice of longterm debt. Other factors which also had a noteworthy impact on the firms decision were credit rating, potential costs of financial distress, the volatility of forecasted earnings and cash flows and transaction costs and fees for issuing debt. These findings are consistent with the findings of which factors determine the firms capital structure and investment funding decision. Financial flexibility and credit rating are factors the managers repeatedly stress as important. The results are similar to those found by Graham and Harvey (2001).

The factors which primarily affect the Real Estate firms investment funding are financial flexibility, forecasted cash flows from the investments projects, maintain a long-term capacity and the projects risk. In addition, the majority of Real Estate firms retain earnings for future investments. In order to choose the appropriate amount of long-term debt for the firm, Real Estate firms consider financial flexibility as the major determinant. However, other important factors are credit rating, potential cost of financial distress, the volatility of forecasted earnings and cash flows and transaction costs and fees for issuing debt. The Real Estate firms considered it to be important to focus on financial distress in a long-term perspective. The findings show that managers within Real Estate firms have different opinions regarding management's flexibility when changing the leverage ratio.

Managers within Real Estate firms do not consider agency cost and information asymmetries to be important and therefore they do not treat them in any special way. Managerial incentives behind decision regarding capital structure, investment funding and long-term debt deviate from the Neoclassical theory and are instead better explained by the Post Keynesian theory and behavioral finance theory. The major reason why the findings deviate from the Neoclassical theory is due to the uncertainty about the future the managers in Real Estate firms show with regards to the major focus the managers have on maintenance of a desirable credit rating, debt repayment capability, maintenance of a certain liquidity, financial flexibility, potential costs of financial distress, forecasted cash flow, maintenance of a long-term capacity and the project's risk.

Managers in Real Estate firms instead show incentives which appear to focus on the future survival of the firm consistent with the Post Keynesian theory of maximize the long-term survival, which in turn strengthens the manager's position within the firm. The major findings in the survey show consistency with the Post Keynesian theory imposing a principal-agent problem within Real Estate firms. Support is found for the growth-safety trade-off, the growth objectives are the investment opportunities and future development while the safety objectives are risk exposure and liquidity. We find low support for the trade-off theory since the managers considerations about tax shield was low and they show an unwillingness to exploit debt. Further, we also find low support for the Pecking-order theory.

### 5.4 Recommendations

### 5.4.1 Recommendations for Policy and Practice

In view of the findings of the study, the following recommendations are made:-

The maintenance of desirable credit rating, debt repayment capability and maintenance of certain liquidity are the factors managers within the Real Estate firms consider most important when determining the firm's capital structure. The other factors that cannot be overlooked include investment opportunities, risk exposure and future market developments.

Maintenance of a desirable credit rating is important since managers making the decisions in the firm are uncertain about the future and what it will bring, thus there is need to choose the capital structure which might maintain or perhaps increase the firm's rating. If the firm is not able to maintain their credit rating financial expenses will increase leading to an alteration in their financial status which could jeopardize the manager's status. An altered rating will also affect the debt repayment capability and liquidity within the firm, leaving the manager with increased or decreased financial flexibility.

They have a responsibility not only towards creditors in terms of interest payments and transactions cost, but also against shareholders in terms of financial distress. Debt repayment issues can be connected with the distress of lack of liquidity. Lack of liquidity could make the managers incapable to cope with the firm's debt repayments.

### 5.4.2 Recommended Areas of Further Study

The findings of this study, it is hoped, will contribute to the existing body of knowledge and form basis for future researchers. A recommendation for future studies is to investigate more thoroughly Real Estate firms' managers incentives behind capital structure decisions, this by incorporating more describing questions in the questionnaire and use other different theories than used in our and previous studies regarding capital structure. An idea is also to incorporate questions regarding equity and have separate question concerning short-term and long-term debt.

Another alternative of study is to use both a regression and a survey in order to investigate what determines Real Estate firms capital structure. The regression will then consist of accounting data and the survey should be sent to managers in the firms, this to get a broad picture. The uncertainty of Real Estate Firms' managers is also a interesting subject to further investigate, for instance, it would be interesting to see a study which further investigate why the managers consider credit rating to be an important factor when determining capital structure.

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