

**EFFECT OF CAPITAL STRUCTURE ON THE VALUE OF  
INVESTMENT FIRMS LISTED AT THE NAIROBI SECURITIES  
EXCHANGE**

**BY  
VERAH AWUOR OTIENO**

**A RESEARCH PROJECT SUBMITTED IN PARTIAL  
FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF  
THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION,  
SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI**

**NOVEMBER, 2018**

## DECLARATION

I declare this research project is my own work and it has not been submitted for any degree or examination in any university.

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

**Verah Awuor Otieno**

**D61/85577/2016**

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

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

**Dr. Cyrus Iraya,**

**Senior Lecturer, Department of Finance and Accounting,**

**School of Business, University of Nairobi.**

## **DEDICATION**

This research project is dedicated to my family and friends.

## **ACKNOWLEDGEMENT**

I sincerely give thanks to God almighty for the gift of life, resources and good health throughout this research. I would also like to express special thanks of gratitude to my supervisor Dr. Cyrus Iraya for his able guidance, insightful comments and support to make this research a success. I also express my heartfelt thanks to The University of Nairobi for accepting my admission to the Master of Business Administration Program.

Special appreciation to my family, associates and colleagues for support and continuous encouragement they offered me during my education. Much appreciation also goes to my spouse for moral and financial support during this study.

## TABLE OF CONTENTS

<b>DECLARATION</b> .....	ii
<b>DEDICATION</b> .....	iii
<b>ACKNOWLEDGEMENT</b> .....	iv
<b>LIST OF TABLES</b> .....	vii
<b>LIST OF FIGURES</b> .....	viii
<b>LIST OF ABBREIATIONS</b> .....	ix
<b>ABSTRACT</b> .....	x
<b>CHAPTER ONE: INTRODUCTION</b> .....	1
1.1 Background of the Study .....	1
1.1.1 Capital Structure .....	2
1.1.2 Firm Value .....	3
1.1.3 Capital Structure and Firm Value .....	4
1.1.4 Investment Companies Listed at the Nairobi Securities .....	5
1.2 Research Problem .....	6
1.3 Research Objective .....	7
1.4 Value of the Study .....	7
<b>CHAPTER TWO: LITERATURE REVIEW</b> .....	9
2.1 Introduction.....	9
2.2 Theoretical Review .....	9
2.2.1 Pecking Order Theory .....	9
2.2.2 Trade off Theory .....	10
2.2.3 Modigliani and Miller Theory .....	10
2.3 Determinants of Firm Value of Investment Firms .....	11
2.3.1 Capital Structure .....	11
2.3.2 Management Efficiency .....	12
2.3.3 Profitability .....	12
2.3.4 Dividend Payout Ratio .....	13
2.4 Empirical Review.....	13
2.5 Conceptual Framework.....	16
2.6 Summary of Literature Review.....	17

<b>CHAPTER THREE: RESEARCH METHODOLOGY .....</b>	<b>18</b>
3.1 Introduction.....	18
3.2 Research Design.....	18
3.3 Population .....	18
3.4 Data Collection .....	18
3.5 Data Analysis .....	19
3.5.1 Analytical Model .....	19
3.5.2 Test of Significance .....	19
<b>CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND INTERPRETATION .....</b>	<b>20</b>
4.1 Introduction.....	20
4.2 Descriptive Statistics.....	20
4.4 Regression Analysis.....	22
Table 4.3: Model Summary .....	22
4.5 Interpretation of Findings .....	24
<b>CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS .....</b>	<b>25</b>
5.1 Introduction.....	25
5.2 Summary of Findings.....	25
5.3 Conclusions.....	26
5.4 Recommendations.....	27
5.5 Limitations of the Study.....	28
<b>REFERENCES.....</b>	<b>30</b>
<b>Appendix I: List Of Investment Companies Listed at NSE .....</b>	<b>32</b>
<b>Appendix II: Data Summary .....</b>	<b>33</b>

## LIST OF TABLES

<b>Table 4.1:</b> Descriptive statistics .....	20
<b>Table 4.2:</b> Pearson Correlation Matrix.....	21
<b>Table 4.3:</b> Model Summary.....	22
<b>Table 4.4:</b> Summary of One-Way ANOVA.....	22
<b>Table 4.5:</b> Regression Coefficients .....	23

## LIST OF FIGURES

Figure 2.1: Conceptual Framework .....	17
--	----



## **LIST OF ABBREIATIONS**

<b>CMA</b>	Capital Markets Authority
<b>MM</b>	Modigliani and Miller
<b>NSE</b>	Nairobi Securities Exchange
<b>SACCOs</b>	Savings and Co-operative Societies
<b>WACC</b>	Weighted Average Cost of Capital

## **ABSTRACT**

Every firm for it to enhance its activities, it must strive to attain an optimal capital structure that will in turn increase value of their firms. Recognizing the critical role that is played by capital structure decisions, it is imperative that firms adopt best practices with respect to capital structure decisions. The study period was a ten-year period from 2008 to 2017. The study involved use of a descriptive research design using a population of five investment firms listed at NSE. Secondary data obtained from audited financial statements of the listed investment firms was utilized. The data collected was systematically organized in a manner that facilitated analysis using the Statistical Package for Social Sciences (SPSS). Data was analyzed on the basis of mean and F test statistic was computed at 5% significance by regression analysis. To test the strength of the analytical model used for this study, Analysis of Variance (ANOVA) was conducted. From the findings, the F statistic was 2.685 and was found to be significant, equity had a t-value of 0.790 which was insignificant, liquidity had a t-value of 2.198 which was significant, firm size had a t-value of -0.461 which was insignificant and debt had a t-value of 2.072 which was significant. The study concluded that; capital structure had an effect on the value of investment firms listed at the Nairobi Securities Exchange. From the outcome of this research it recommends the adoption of optimal capital structure by firm's management team. To increase on the value of these firms, the study recommends more equity financing as opposed to debt financing and also proper management of liquidity since they were confirmed to be significant.

# CHAPTER ONE: INTRODUCTION

## 1.1 Background of the study 1.1

Financing decision entails critical decision taken by the finance managers which is aimed at determining the optimal ratio of equity and debt in their business entities. It is a general rule in the financing an entity's assets that the finance managers decide and select an appropriate debt and equity composition (Palmer, 2009). Recognizing the critical role that is played by capital structure decisions, it is imperative that firms adopt best practices to deal with them. Capital structure decisions are key in any managerial decisions because they influence the value of the business entities involved. Capital structure theory tries to find out if the different financing of various investment proposals matters (Palmer, 2009).

This research was anchored on pecking order theory which asserts that only when internal sources are depleted that firms exploit the less risky form of external financing such as low cost debt and subsequently external equity. The theory is therefore instrumental in advancing the argument that different financing components affect the value of firms. It advocates for the need of managers to balance between different sources of capital necessary to preserve financial stability to increase the value of the firms (Myers & Mjling, 1985).

Capital structure is a key among the listed firms because it influences their values and is able to signal the attainment of stakeholders needs. Capital structure decisions are key in ensuring the investment firms in Kenya are not faced with financial distress which can

adversely affect their values. The value of a firm is the economic measure which reflects the market value of an entity as a whole. Usually capital structure decisions are geared towards increasing the value of firms. Therefore an optimal capital structure is ideal for investment firms since it will eventually determine their survival in the market (Palmer, 2009).

### **1.1.1 Capital Structure**

Capital structure involves different long term capital which a firm utilizes in financing the assets (Harris, 1990). As per Kochar (1998), capital structure is the blend of equity, debenture and inclination to share capital. The settling on of a capital structure choice is gone for deciding ideal capital structure of the firm. An ideal capital structure is an ideal mix of the capital, structure segments (Bringham, 2003). At the ideal capital structure, firms can simultaneously optimize their value and minimize their general cost of capital.

When making capital structure decisions, it is prudent for the firms to take into account the tax advantage on the use of debt, the availability of collateral or the security used to secure debt capital, ability to change the capital structure and firms vulnerability to financial risk. The risks structure can affect the value of firms by either changing the expected returns or cost of capital or both. Generally, utilization of debt in capital structure will lead to an increase in gearing due to interest tax shield benefit. However, the effect of leverage is not very clear because of the relationship and the nature of capital structure theories (Titman, 1988).

Firms can obtain long term capital from various sources and the main long term sources of capital are equity capital, debenture capital and preference capital. This forms the

major component of the firm's capital structure. Kioko (2015) used leverage as the proxy for capital structure, Omondi (2016) and Kimani (2015) both used equity and liquidity as the proxies of the capital structure while Zhang (2014) in his study on how capital structure influenced the value of the commercial banks in china used leverage as the proxy for capital structure.

### **1.1.2 Firm Value**

Firm value means the economic measure which reflects market value of an entity as a whole (Kurshev, 2005). It involves summing up of all the claims of the claimants who include the creditors both secured and unsecured, the equity holders who include the preferred equity holders and common equity holders. Firm value forms one of the key fundamental metrics because it is used in valuing business entities and in portfolio analysis. Firm value can be obtained by summing up a firm's market capitalization, its outstanding debt, its preferred stock minus the cash together with the cash equivalent which is normally obtained in the balance sheet (Brigham, 2005).

Shareholders being the owners of firms would want the managers to maximize the investment values and they can achieve this by measuring and making value judgments concerning the performance of the firm by ensuring no conflict of interest exist between the owners of the firms and the managers. The main objective of any business firm is to create and enhance long term shareholders value which is wealth creation and ultimate maximization of the value of their firms (Brigham, 2005). This can be achieved by impressing an optimal performance and this can be assessed by value based performance

evaluation. The value of any firm comprises of equity and long term debt. Firm value was measured by Tobin Q.

### **1.1.3 Capital Structure and Firm Value**

Franco Modiglian and Merton Miller (1958) investigated capital structure and made several propositions. At the onset, they found that the traditional perspective unacceptable in part because it seemed unsupported by the theoretic frameworks. In particular, they found little reasons apart from some marketing perceptions which had an effect on capital structure of firms hence altering value of those firms. After all, neither earnings streams nor inherent risk could alter the value because it would remain the same under the same industries. The capital structure changes ideally will have no effect current market value of firms.

At disequilibrium, a levered firm may appear to have a higher value which according to MM will not persist for long at this firm and the levered firm is overvalued and therefore the investors in this company will attempt to make a switch from a levered firm to unlevered firm. Such investors will sell shares of a levered, borrow an amount which is equivalent to the amount which the management of the firm had borrowed on his behalf and then invest the entire cash proceeds in the levered firm (Modglian & Miller, 1958).

A study by Lewellen (2009) concluded that the value of the firms is not dependent on their capital mix but instead the efficient management of their resources. However, according to Kinyua (2015) the capital structure of firms was insignificant hence no effect on the firm values involved and Raviv (2015) on the study which focused on the

overall shareholders value of the commercial banks listed in Indonesia and concluded that capital structure positively influences the value of the firms.

#### **1.1.4 Investment Companies Listed at the Nairobi Securities Exchange**

Nairobi Securities Exchange is the only body mandated to list corporations in Kenya. Incorporated in 1954, NSE is a body corporate established under the companies Act and it comprises licensed stock brokers as the shareholders while NSE is publicly listed, it is mandated to facilitate and supervise transactions carried out by investors and supervise transactions carried out by investors of the listed companies. CMA is charged with the role of regulating and licensing capital market players such as stock brokers, the securities exchange and the listed entities. As at 31<sup>st</sup> December 2017, 72 firms were listed in the NSE across 10 sectors.

The investment companies listed at the Nairobi Securities Exchange include; Centum Investment Limited, Home Africa Limited, Kurwitu Ventures, Olympia Capital Holdings and Trans-Century Limited. Unlike in developed economies where Capital Market systems are relatively elaborate, effective and quite efficient, the Kenya Capital Market is still immature on most fronts. To increase on the value of these firms, whenever they are in need of additional debt, capital, they naturally subscribe to commercial bank loans as their main source of debt finance (NSE, 2017).

Most of investment companies listed at the NSE are financed by a mix of debt and equity. Bank loans in Kenya are however characterized with significantly high interest rates regime which further strains the firms. Despite that the value of investment firms listed at

the NSE has greatly improved and this is evident from the improved share prices of these companies (NSE, 2017).

## **1.2 Research Problem**

Capital structure of a firm simply means composition of its financial obligations. From the strategic management point of view, capital structure plays a key role because it is always linked with the capacity of a firm to satisfy the demands of the stakeholders who are important to an entity in terms of success or failure. The common class of liability comprises of debt and equity in any firm and each represents the two major classes of investors. Each class of financing option is faced with different level of risks, benefits and even the control in the firms. The debt holders normally have minimal control but earn a good return from a fixed rate of return and they are guaranteed protection based on their contractual obligations with regard to their investment. On the other hand, equity holders bear most of the risk but have a vast control in terms of decision making and are residual claimants (Lewellen, 2006).

According to Roy (2007), the firm value depends on the present value which is expected from future cashflows generated by the assets and discounted at WACC. Management has a choice to make between equity and debt financing in order to determine the optimal capital structure which will maximize returns of shareholders. WACC is value of the firms and defines the values of firms by discounting future cashflows. The value of firms can be maximized by minimizing WACC. Capital structure is of a great concern among the investment firms listed at the NSE. This is based on the fact that they are deterred to establish an optimal capital structure that will maximize their firm values. By establishing



an optimal capital structure, the firms are therefore able to minimize overall cost of capital in the long run maximize their firm values.

Wasike (2016) confirmed a relationship existed between capital structure and firm values. According to Nyaboga 2015, the capital structure had a negative effect on the firm values. The findings from Rutherford (2010) indicated that Japanese firms relied heavily on debt financing while US and UK firms value of their respective firms greatly improved. However, according to Kinyua (2015) capital structure of firms had insignificant effect on the firm values. Investment firms are critical in development of any capital market in any country hence the need for a more conclusive research on this segment. This research sought to address the limitations of previous research works which included limited sample sizes and short study period. For it to answer this research question: What is the Effect of Capital Structure on the Value of Investment firms listed at the Nairobi Securities Exchange.

### **1.3 Research Objective**

The objective of this study was to determine the effect of capital structure on the value of Investment firms listed at the Nairobi Securities Exchange.

### **1.4 Value of the Study**

Conclusions from this study will be used to sensitize industry practitioners involved in making financing decisions by affording from a vital reference point on the need by firms to determine and maintain optimal financing framework necessary to cushion firms against risks of finance cost. This will not only maximize the shareholders wealth but will also boost investor confidence in the Kenya market.

The study findings are also of assistance to the CMA and other policy makers while formulating appropriate mechanism necessary to continuously monitor and evaluate the financing aspect of firms. This could be achieved by identifying specific industry-based debt thresholds which would ensure that firms are not un-necessarily exposed to financial risk.

This study will also add to the growing literature in academic research by acting as empirical reference point for capital structure studies. It will also be of importance to to academic scholars interested in researching on the effect of Capital structure on firm value.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This section covers the theories, empirical works on capital Structure, determinants of firm's values, conceptual framework and ends with summary of literature review.

### **2.2 Theoretical Review**

The accompanying theories are identified with capital structure and they include; Pecking order theory (Myers, 1985) and it expresses that organizations will incline toward internal sources of assets as opposed to external sources of funds, trade off theory (Black & Scholes, 1974) which expresses that organizations will choose the combination of equity and debt that in order to adjust the cost and advantages of obligation. Modgiliani and Miller (1958) expressed that market estimation of any firm is not dependent on its capital structure.

#### **2.2.1 Pecking Order Theory**

This theory asserts that, firms will prefer to utilize internal sources of funding to external sources of funding (Myers, 1985). It assumes that firms do not target debt ratio but instead it prefers external sources of funds when internal funds are insufficient. The theory further maintains that the firms which prefer internal sources of funds are profitable. The theory operates under the assumption that the company's dividend policy does not change and the firm prefers internal financing as opposed external financing.

Held income is typically given first need amid financing since it is viewed as most secure by the organizations. The pecking order theory has been criticized severally, as per the

Basikin (2001), this theory depends on the general financing expenses of a firm whereby firms will dependably need to utilize the financing model with insignificant costs to maximize its value at the expense of other components which have an influence on the firm, for instance the impact of macroeconomic factors. This theory is pertinent to this study since it reveals more insight into the significance of internal financing as compared to external financing.

### **2.2.2 Trade off Theory**

This theory was founded by Black and Sholes (1974). It clarifies the differences between the cost of money related to distress and the tax benefit associated with debt. It recommends that the organization trades off exposure of the organization's liquidation and agency cost against interest tax shield advantage. In this way the last capital structure adopted by the organization is a trade-off between advantages and cost. An optimal capital structure will be where the benefit is maximized and the cost minimized.

This theory assumes that there exist benefits associated with leverage with the capital mix applied to attain an optimal capital structure. High level of debt in business entities is very risky since the investors will not be interested in such a venture. However, researchers of trade off theory concluded mixed results. A research by Titman (1990), asserts that most profitable firms do not borrow more.

### **2.2.3 Modigliani and Miller Theory**

Franco Modigliani and Merton Miller (1958) investigated capital structure and made several propositions. At the onset, they found that the traditional perspective unacceptable because it seemed unsupported by the theoretic frameworks. In particular,

they found little reasons apart from some marketing perceptions which they seemed to have an effect on the financing. At disequilibrium a levered firm may appear to have a higher value which according to MM will not persist for long at this firm and the levered firm is overvalued and therefore the investors in this company will attempt to make a switch from a levered firm to unlevered firm. Such investors will sell shares of a levered, borrow an amount which is equivalent to the amount which the management of the firm had borrowed on his behalf and then invest the entire cash proceeds in the levered firm (Modigliani & Miller, 1958).

### **2.3 Determinants of Firm Value of Investment Firms**

Firm value is influenced by the following factors; capital structure, profitability, dividend payout ratio and management efficiency.

#### **2.3.1 Capital Structure**

Capital structure is the financing plan of a company (Haugen & Baker, 2010). According to Modigliani and Miller the optimal capital structure does not exist. How the companies combine debt and equity will play a key role for the failure or success of such companies, the company can either use high proportion of equity capital and low debt and vice versa. The capital structure mix will affect the financial performance, the use of high debt financing exposes the company to bankruptcy because of high finance charges which the company cannot fully cater for, high amount of equity capital in the capital structure will help the company mitigate the risks associated with financial distress. Hence companies should strike a balance on the composition of the capital structure so that financial performance can be improved (Modigliani & Miller, 1958).

### **2.3.2 Management Efficiency**

According to Johnson (2005), management efficiency signifies a situation where by the resources are prudently applied to maximize the output levels. Management efficiency aims at the reduction of the use of available resources by maximizing the returns for example stock waste to improve efficiency and sharing of duties for example chief executive officer can equally act as the managing director. Operational efficiency deals with the management of the operating expenses. The management should ensure resources are deployed efficiently, operating costs are minimized and profit is maximized. The higher the proxy management ratio the greater the financial performance, management efficiency therefore improves the financial performance of the commercial banks.

### **2.3.3 Profitability**

The value of any company is significantly determined by its profitability. Higher profitability shows that the company is financially stable and can finance its operations without depending on leverages. Bankruptcy and agency costs have a direct relationship with leverage since increase in leverage leads to increase in agency and bankruptcy costs. In addition to leverage, the firm size and industry type are other moderator variables which influence profitability of a firm. Increased profits imply increased earnings to be shared among the shareholders hence increasing the firm value (Haugen& Baker, 2010). High returns on investment are an indicator of efficient management of firm values as well as key performance indicator of firm value.

### **2.3.4 Dividend Payout Ratio**

Dividend payout ratio illustrates proportion of net income business entities distribute to their shareholders in form of dividends. It is calculated as total dividend for the period divided by the net income available to common stakeholders. That proportion of net income that is not paid to the shareholders is normally for reinvestment which ensures the earnings grow in future dates. The term dividend implies the cash which is paid to the shareholder of a business entity out of the earnings within a certain period of time. The form of dividend payment varies across the companies. It is normally paid in form of buyback of shares, bonus shares and cash dividends (Lewellen, 2006).

### **2.4 Empirical Review**

Njogu (2014) did a research to investigate how capital structure affects the value of insurance companies in Kenya in the period 2012 and 2014. A sample of 18 insurance companies was identified for analysis from population of 34 insurance companies. The research majorly relied on secondary data for analysis and it was obtained from the insurance regulatory authority. The study utilized linear regression analysis. The period of the study was short hence study was not conclusive. The study concluded that use of debt in any capital structure influenced firms value positively.

Kreen and Sagn (2012) surveyed how capital structure affected the value of manufacturing firms in South Africa and it covered the study period from 2005 to 2011. 300 firms were targeted. To test for the degree of relationship, a multiple linear regression model was used in the analysis and different capital structure ratios were computed which concluded that long term debt was a key determinant of the firm's value.

Pipeda (2016) carried out a research to evaluate the effect of Capital structure on profitability of financial institutions in Ghana. He used a sample size of 56 companies from a population of 215 financial institutions between 2010 and 2012. The survey utilized the secondary data from the websites of the companies. The study also employed the linear regression model in the analysis. Period of the study was short in this study. From the analysis he concluded existence of a strong positive effect on firm value by capital structure.

Galpin (2014) looked at the impact of capital structure on value of pharmaceutical firms in India. The time of study was from 2000 to 2010. 340 pharmaceutical firms were considered however just 152 firms were chosen as the sample for the investigation. His study utilized secondary data which was obtained from websites of the pharmaceutical firms. Likewise, this study utilized linear regression model which was well organized and efficient. From the study, he concluded that the long term debt was significant determinant of the firm value.

Hall (2011) studied the impact of capital structure on the profitability of pharmaceutical companies in Nigeria between 2005 to 2010. A sample of 103 pharmaceutical firms was chosen from 314 pharmaceutical firms. The study utilized the secondary data for analysis. The study likewise utilized several regression models to demonstrate the association between the study variables. The research technique was proper in this study. He concluded that capital structure had insignificant impact on profitability and value of the pharmaceutical companies in Nigeria.



Raviv (2015) conducted a study on the effect of capital structure on the overall shareholder's value of the listed commercial banks in Indonesia between 2010 to 2015. Secondary data for this study was obtained from published financial statements of commercial banks in Indonesia. The study also employed the linear regression model and a sample size of 114 out of the 320 listed commercial banks in Indonesia. The study was well organized. From the findings, she concluded that capital structure positively influenced the profitability of the listed Commercial banks in Indonesia.

Mosota (2016) conducted a survey on the effect of capital structure on the value of listed Commercial banks in Kenya for the period between 2010 to 2016. The study utilized a sample size of 10 non- listed commercial banks out of 20 non listed commercial banks in Kenya. The study also employed a linear regression model in the survey. Capital structure variables which include leverage and EPS were computed and analyzed. Clear understanding of the content was well brought out. He concluded that capital structure was insignificant on the firm value.

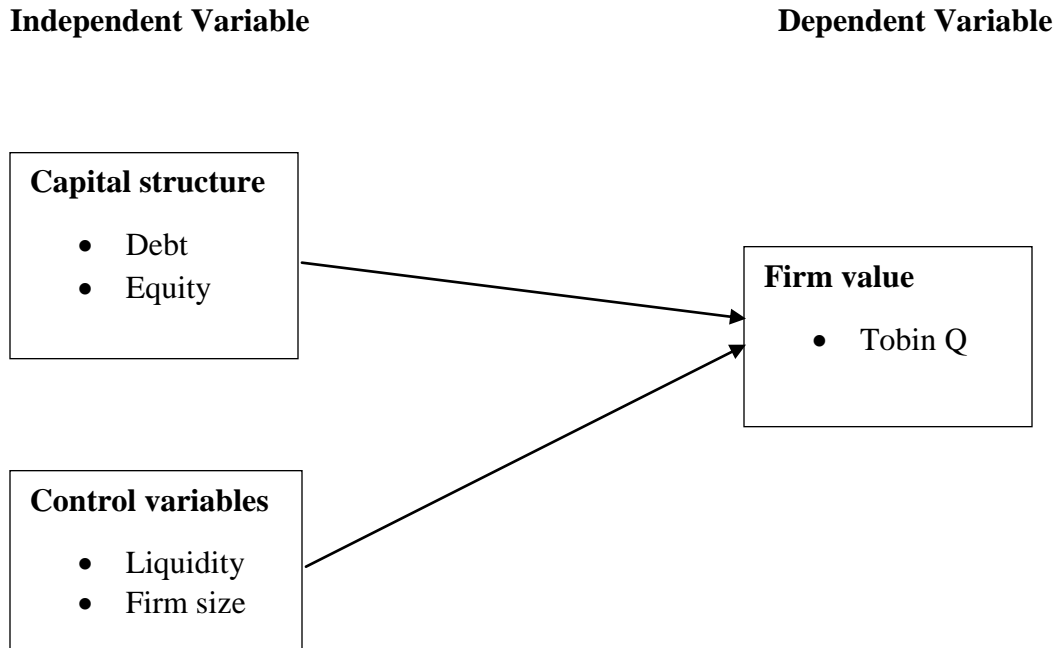
Omondi and Kinyua (2015) conducted a research on the effect of capital structure practices on the financial performance of selected firms listed at the NSE between 2010 to 2014. A sample of 14 selected companies was chosen for the study out of the 53 listed companies. The study relied on the secondary data which was readily available. The study also used the multiple regression model in the analysis. The choice of the variables was ok. The study concluded that leverage significantly affected the value of the listed companies at the NSE.

Kimani (2017) conducted a study to assess impact of capital structure on the value of insurance firms in Kenya between 2010 to 2016. A sample of 8 insurance companies were selected from the population of 63 insurance companies. Secondary data was utilized for this study and was obtained from published audited financial statements of the insurance firms for analysis. The study also employed the linear regression model in the analysis. The methodology was appropriate in this study. The study concluded that capital structure had insignificant effect on value of listed insurance firms.

From the findings of these studies, researchers came up with different results on how capital structure affects firm values among the different business entities surveyed. Some studies concluded that capital indeed improved the value of their entities. Some studies however, proved that capital structure was insignificant on the firm values hence the need for this study.

## **2.5 Conceptual Framework**

The research sought to analyze the effect of capital structure on value of investment firms listed at the NSE. The independent variable was Capital Structure which was measured by debt and equity, control variables was measured by firm size and liquidity and dependent variable was the firm value which was measured by Tobin Q.



**Figure 2.1: Conceptual Framework**

## **2.6 Summary of Literature Review**

The following theories were reviewed, Pecking order theory (Myers, 1985), trade off theory (Black & Scholes, 1974) and Modigliani and Miller (1958). Determinants of firm value of investment firms were discussed as well and they include capital structure, management efficiency, dividend payout ratio and Profitability. Various empirical literature were reviewed and they include Njogu (2014), Kreen and Sagn (2012), Pipeda (2016), Galpin (2014), Hall (2011), Raviv (2015), Mosota (2016), Omondi and Kinyua (2015), and Kimani (2017) and the conceptual framework. From the literature reviewed, the sample size used in some research was too small, the period of study was short and some research lacked the analytical model. This study therefore aimed at addressing those research gaps while conducting the study.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This section covers research methodology utilized while conducting the study. They include; Research design, Population, Data collection and data analysis.

### **3.2 Research Design**

Research involves techniques employed in leading a research. This study utilized descriptive research design since it helped in depicting the problem under study. Descriptive research design is appropriate in acquiring data about the current status of variables of interest or conditions in a circumstance (Mugenda, 2005).

### **3.3 Population**

According to (Mugenda, 2005) population entails collection of items to be investigated during a study. For this study a population of five investment firms listed at the Nairobi Securities Exchange as at December 2017 was utilized. All the five firms were selected to form part of the target population. See Appendix I.

### **3.4 Data Collection**

This study relied on secondary data that was obtained from published financial statements that were obtained from Nairobi Securities exchange and the respective companies from their financial statements in the websites because the secondary data was readily available. Data was collected for 10 year period from 2008 to 2017. Data that was collected, net income, total liabilities, total number of shares, current assets, current liabilities, share prices, equity and total assets.

### 3.5 Data Analysis

Mugenda (2005), elucidated that data analysis is the way toward giving meaning and order to the data gathered. Secondary data was gathered and analyzed utilizing the descriptive statistics in terms of mean values. Statistical software was used for data analysis in particular Statistical Package for Social Sciences.

#### 3.5.1 Analytical Model

This model shows the relationship between independent and dependent variables and the following multiple linear regression model was used.

$$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + e$$

Where Y is a firm value as measured by Tobin Q which is the ratio of total market value of a firm and total value of assets of a firm.  $\beta_0$  is the free term of the equation.

$\beta_1, \beta_2, \beta_3$  and  $\beta_4$  are the coefficients of independent variables

$x_1$  = Debt measured by debt ratio = total liabilities / total assets

$x_2$  = liquidity measured by = current assets / current liabilities

$x_3$  = Firm size = natural logarithms of total assets

$x_4$  = Equity as measured by market value of equity = current share price \* total number of shares outstanding

#### 3.5.2 Test of Significance

F –test and t test at 5% significance level was conducted to determine the strength of the model.

## **CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND INTERPRETATION**

### **4.1 Introduction**

This section presents results of data analysis. In section 4.2 data was analyzed in terms of descriptive statistics and in section 4.3, and section 4.4 data was analyzed in terms of inferential statistics and section 4.5 presents discussions of findings.

### **4.2 Descriptive Statistics**

Independent variables analyzed here included the firm size, debt ratio, equity and working capital while the dependent variable was Tobin Q. The means, standard deviation, minimum and maximum values of the variables for this study were tabulated as shown below.

**Table 4.1 Descriptive Statistics**

	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std Deviation</b>
Equity	50	4.76	9.32	7.5800	0.91815
Liquidity	50	0.51	0.97	0.7134	0.13783
Debt	50	0.06	0.92	0.5588	0.32167
Firm size	50	8.58	20.07	10.9888	1.78302
Tobin Q	50	0.13	0.82	0.4722	0.21967

From the results, the minimum number of equity was 4.76, the maximum value was 9.32, the mean was 7.5800 and the standard deviation was 0.91815 which indicated a relatively large variation in equity. The minimum value of liquidity was 0.51, the maximum value was 0.97, the mean was 0.7134 and the standard deviation was 0.13783 which shows moderate variations. The minimum value of debt was 0.06 the maximum number was

0.92, the mean was 0.5588 and the standard deviation was 0.32167 which shows a small variations. The minimum value of firm size was 8.58, the maximum number 20.07 the mean was 10.9888 and the standard deviation was 1.78302 which shows large variations. The minimum value of Tobin Q was 0.13, the maximum number was 0.82. The mean was 0.4722 and the standard deviation was 0.21967 which shows a large variation.

### 4.3 Correlation Analysis

This tests the relationship that exists between each independent variable to the dependent variable as shown in the table 4.2 below.

**Table 4.2: Pearson Correlation Matrix**

	<b>Equity</b>	<b>Liquidity</b>	<b>Debt</b>	<b>Firm size</b>	<b>Tobin Q</b>
Equity	1				
Liquidity	0.168	1			
Debt	-0.193	0.001	1		
Firm size	0.147	-0.175	0.23	1	
Tobin Q	0.098	0.337	0.258	-0.036	1

\*. Correlation is significant at the 0.05 level (2-tailed).

The result of correlation analysis above shows that, appositve relationship exist between equity and firm value. Correlation coefficient of 0.098 and the relationship is insignificant. The findings further showed that, liquidity and firm value had a positive relation with correlation coefficient 0.337. The relationship was significant. Debt is positively related to firm value with a correlation coefficient of 0.258 and the relationship

was insignificant. Firm size was negatively related to firm value and relationship was significant.

#### 4.4 Regression Analysis

Regression analysis between dependent and independent variables was carried out.

**Table 4.3: Model Summary**

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std Error of Estimate</b>
1	.439	.193	.121	.20596

The value of the correlation coefficient from the table above is 0.439 which implies that a relationship exists between the study variables. The adjusted R Square was 0.21 which implies that 12.1% of the influence of debt, equity, firm size and liquidity was explained by the model.

**Table 4.4: Summary of One- Way ANOVA**

<b>Model</b>	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
1 Regression	0.456	4	0.114	2.685	.043
Residual	1.909	45	0.042		
Total	2.364	49			

The results in table above show the value of F statistic was 2.685 at 5% level of significance and statistic was significant since the P-value was 0.043 which is less than 0.05 implying that, the model used was significant.



**Table 4.5: Regression Coefficients**

Model		Un standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.103	.325		-.318	.752
	Equity	.027	.034	.113	.790	.434
	Liquidity	.488	.222	.306	2.198	.033
	Debt	.201	.097	.295	2.072	.044
	Firm size	-.008	.018	-.066	-.461	.647

The regression equation above established that holding all other factors constant, the value of investment firms listed at the Nairobi Securities Exchange would be at -0.103. A unit increase in equity led to an increase in value of investment firms by 0.027. A unit increase in liquidity led to an increase in firm value of investment firms by 0.488. A unit increase in debt led to an increase in firm value of investment firms by 0.201. Finally, a unit increase in firm size led to a decrease in firm value of investment firms by 0.008.

The standardized beta coefficient of equity was 0.113 which means that equity has a moderate effect on firm value. The standardized beta coefficient of liquidity was 0.306 which implies that liquidity has a moderate effect on firm value. Standardized beta coefficient of debt was 0.295 meaning moderate effect on value of a firm. The standardized beta coefficient of firm size was -0.066 which implies a strong effect of firm size on the firm value.

#### **4.5 Interpretation of Findings**

The results of descriptive statistics show that on average, liquidity reported an increasing trend over the study period. With the lowest value and the highest value being 0.51 and 0.97 respectively. Debt, equity and firm size posted mixed results. From the regression analysis results, the research established a number of variables that affect firm value and they included liquidity, debt, equity and firm size, and the intercept for all these factors was found to be -0.103 for the years analyzed. The four independent variables which were analyzed included liquidity, debt, equity and firm size which were able to explain their effect on the firm value up to 12.1% as shown by adjusted R square. This implies that the four variables inputs 12.1% on the firm value and the remaining 87.9% is contributed by the factors not studied.

This research found out that the coefficient of equity was 0.027 meaning that equity positively influences firm value. This means that, holding all other factors constant, as equity increases, firm value also increases. Liquidity positively affects the firm value this is evident from the value of the coefficient of 0.488. Debt impacts positively on firm value since its coefficient was 0.201. Firm size showed a negative influence on firm value since the coefficient was -0.008 implying that, an increase in firm size led to a decrease in firm value. In general capital structure affects value of firms. This study concurs with the study by Maribar (2016) who concluded that capital structure affects value of investment firms in South Africa.

# **CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

## **5.1 Introduction**

This section covers summary of research findings, conclusions, recommendations, limitations and suggestions for further studies.

## **5.2 Summary of Findings**

The aim of this study was to establish whether capital structure has an effect on value of investment firms listed at the Nairobi Securities Exchange. This research established that, a correlation existed between capital structure and firm value of listed investment firms. This is based on the fact that the way companies combine debt and equity plays a key role for the failure or success of such companies. Companies can either use high proportion of equity capital and low debt and vice versa. Capital structure mix affect firm value since the use of high debt financing exposes the company to bankruptcy because of high finance costs which the company cannot fully cater for.

This study established that equity had a positive correlation on the value of firms. Equity is a major indicator of internal strength of a firm which will enable them to finance the daily operations of the business entity. The fundamental objective of any Management is to ensure that it has enough cash to finance their activities. Debt had a positive effect on firm value. Firms are at times forced to adopt aggressive, moderate and conservative management policies. Under the aggressive policy, business entities employ more of short-term funds in form of debts so as to finance their activities adequately. This approach will bring about an increase in liquidity risk and cash flow challenges but there

is likelihood of firm value increase since short term finances are cheaper. This study also established existence of negative correlation between firm size and firm value. Firm size had a direct relationship with firm value hence can influence the firm value of a company positively or negatively. Large business entities can have poor management efficiency by hiring expensive experts leading to decrease in firm value due to increased costs.

The ANOVA was employed to determine how strong the model was in the analysis. Based on the analysis of the regression statistics, the research concluded that the four factors which included: liquidity, equity, debt and firm size had an effect on firm values of the five investment firms listed at the Nairobi Securities Exchange. All the four independent variables were able to explain their influence to 12.1% and the rest was by other factors not considered in this research meaning the model was significant.

### **5.3 Conclusions**

This study established a weak positive correlation between equity and firm value. Correlation coefficient was found to be 0.098 which was insignificant because P value of 0.152 was greater than 0.05. A moderate positive relationship existed between liquidity and value of firm, Correlation coefficient was 0.337 and the relationship was found to be significant because P value was less than 0.05. It was also established that a weak positive correlation existed between debt and firm value with correlation coefficient of 0.258. The relationship was weak and insignificant since P value of 0.673 was greater than 0.05. In conclusion a negative relationship between firm size and value was established.

Capital structure mix was found to have an impact on value of a firm and use of high debt financing exposes a company to bankruptcy because of high finance costs which the company cannot fully cater for. High amount of equity capital in the capital structure will help the company mitigate the risks associated with financial distress which might arise.

This research therefore concluded that indeed capital structure had an effect on the value of investment firms listed at the Nairobi Securities Exchange. This is based on the fact that a number of variables studied proved the existence of a relationship between capital structure and firm value. This implies that, the better the capital structure the higher the firm value. This is in agreement with Oraqir (2012) who argued that capital structure had a direct impact on firm value of investment firms listed in Japan.

#### **5.4 Recommendations**

This study therefore recommends adoption of optimal capital structure by firms' management team. To increase on the value of these firms, whenever they are in need of additional funds, firms naturally subscribe to commercial bank loans as their main source of debt finance. Despite the fact that bank loans in Kenya are characterized with significantly high interest rates regime which strains the firms, it is the only best option for external financing.

This study recommends prudent use of debt since this financing strategy increases the firm value. It is believed that capital structure determines the survival and the profitability of the companies since it identifies the optimal values of liquidity, equity and debt which are likely to positively or negatively affect the firm value.

Research is a process, for it to be conclusive, more time is needed. This study recommends that more time be set aside which will enable the completion of the research on time. Lack of enough time delays the research process.

For research to be more conclusive, it calls for considerable funding which will enable the researcher to collect all the necessary data. This study recommends that researchers set aside enough funds to aid the entire research process.

This research recommends a longer period of study for example it can be done over a fifteen year period. This will enable comparison of the research outcomes to enable conclusive outcomes.

### **5.5 Limitations of the Study**

The time within which this research was conducted was not sufficient to obtain necessary permit to collect data from different sources. Sufficient time allows for the application of all necessary methods to collect data.

The sample for this study was very small. This was due to the fact that this study focused on the listed investment companies which were only five. This means that the results of this study may not irrefutably prove the effect of capital structure on firm value of investment firms listed at the Nairobi Securities Exchange.

This study covered only ten years due to time constraint. Enough time for the entire research process can guarantee the completion of studies which are done over longer period of time for example twenty years.

## **5.6 Suggestion for further studies**

The limitations of this study provide possible areas for further research, which include a similar study in future whose objective would be to reaffirm these findings. Opportunity for further study is also available, which include carrying out a comparative study by focusing on SACCOs and private non-listed and listed companies at NSE on how capital structure affects their performance.

A study can be done but now focusing on all the listed companies as opposed to one segment. This can enable researchers to compare their performance with the investment firms to make the generalized conclusions.

A study can be conducted on commercial banks since they form that portion of business entities which are concerned on the strategic financing options to avoid the risks which are associated with financing.

A study can be conducted but focus on the debt financing and their effects on performance. It will help in establishing whether the use of high proportion of debts by the firms is beneficial to them.

## REFERENCES

- Brigham, E. F., & Houston, J. F. (2003) *Fundamentals of financial management*: Cengage Learning. 2007.
- Brigham, E.F., Houston, J.F. (2005). *Fundamentals of Financial Management, concise 4th ed.*, South-Western Educational Publication, Mason, OH.
- Graham, J.R., Harvey, C.R. (2001): The theory and practice of corporate finance: Evidence from the field. *Journal of Financial Economics*, 60(2-3), 187-243.
- Harris, M. a. (1990). The theory of Capital Structure. *Journal of Finance*, 46:297-355.
- Kinyua, P. (2015). Effect of Capital Structure on the value of the firms in Kenya. Unpublished Master of Business Administration Research Project of the University of Nairobi, Nairobi.
- Kochhar, Rahul (1998). Strategic assets, Capital Structure, and Firm Performance, *Journal of Financial and Strategic Decisions, Volume 10 Number 3, Fall 1997*.
- Kurshev, Alexander&Strebulaev, Ilya A. (2005). Firm Size and Capital Structure. *Journal of Financial Economics*, 2006.
- Lewellen, K., (2006). Financing Decisions When Managers are Risk Averse. *Journal of Financial Economics. Volume 82, issue 3, pages 551 – 589*.
- Modigliani, F., & Miller, M.H. (1982). Corporate income taxes and the cost of capital: A correction. *The American Economic Review*, 53(3), 433-443  
re financial rationale for the conglomerate merger. *Journal of Finance*, 26, 521-537.
- Modigliani, Franco and Merton H. Miller. (1958). The Cost of Capital, Corporation Finance and the Theory of Investment. *American Economic Review*, 48:261-297.



- Myers S., Majluf, (1985), Corporate financing and investment decision when firms have information that investors do not have, *Journal of Financial Economics*, 13(2), 187-221
- Nyaboga, J. (2015). *Influence of Capital Structure on the value of the firms that optimally engage financial leverage in their operations*. Unpublished Master of Business Administration Research Project of the University of Nairobi, Nairobi.
- Oraqir, L.K (2012). Impact of capital structure on firm value of investment firms in Japan. *The Journal of Finance* 2(1) 112-121.
- Pandey, I. M. (2008). *Financial Management*, 9<sup>th</sup>ed: Vikas Publishing House PVT LTD.
- Roy, S. A. (2007). Firm size and capital structure. *The Bell Journal of Economics*, 8(1), 23-40.
- Rutherford, Janette, (2010). An international perspective on the capital structure puzzle, in Joel Stern and Donald Chew, eds: *New Developments in International Finance*. Basil Blackwell, New York, NY.
- Titman, S. a. (1988). The determinants of capital structure choice. *The Journal of Finance* 4(2) 124-130.
- Wasike, P. (2016). The relationship between Capital Structure and the value of the firms that optimally engage financial leverage in their operations. *Unpublished Master of Business Administration Research Project of the University of Nairobi, Nairobi*.
- Weston, I. F. & Copeland, T. E. (1989). *Managerial Finance* (8th ed.): The Dryden Press. XLIII(1), 1-19.

## **Appendix I: List Of Investment Companies Listed at NSE**

1. Centum Investment Company Limited
2. Home Africa limited
3. Kurwitu ventures
4. Olympia Capital Holdings limited
5. Trans -century Limited

## Appendix II: Data Summary

FIRM	year	Debt	ln assets	ln equity	Tobin q	Liquidity
OLYMPIA CAPITAL HOLDINGS	2008	0.89	8.71	6.88	0.67	0.88
	2009	0.54	9.25	8.42	0.65	0.90
	2010	0.08	9.53	6.00	0.63	0.92
	2011	0.18	11.01	9.32	0.61	0.94
	2012	0.69	20.07	8.95	0.59	0.61
	2013	0.81	12.67	9.31	0.58	0.63
	2014	0.82	12.77	6.23	0.56	0.64
	2015	0.87	12.87	6.96	0.13	0.66
	2016	0.89	12.96	6.13	0.52	0.67
	2017	0.79	13.06	7.86	0.50	0.69
CENTUMINVESTMENTS CO.	2008	0.89	11.25	6.90	0.58	0.70
	2009	0.31	11.34	8.23	0.60	0.72
	2010	0.70	11.43	8.40	0.63	0.74
	2011	0.74	11.52	8.15	0.66	0.75
	2012	0.83	9.23	7.05	0.69	0.97
	2013	0.08	9.96	7.58	0.71	0.94
	2014	0.84	9.13	7.26	0.75	0.91
	2015	0.75	10.86	7.52	0.78	0.88
	2016	0.82	9.90	8.18	0.82	0.86
	2017	0.92	9.98	7.93	0.54	0.83
TRANSAN- CENTURY LTD	2008	0.76	9.36	6.50	0.56	0.58
	2009	0.06	9.98	8.02	0.69	0.56
	2010	0.08	9.91	8.16	0.66	0.54
	2011	0.07	8.58	8.19	0.65	0.53
	2012	0.91	10.86	7.48	0.62	0.51
	2013	0.89	9.54	7.22	0.13	0.53
	2014	0.54	9.71	6.36	0.18	0.55
	2015	0.08	11.47	6.98	0.17	0.58
	2016	0.18	8.77	5.88	0.32	0.60
	2017	0.69	9.25	7.90	0.24	0.54
HOME AFRIKA LTD	2008	0.81	12.00	6.50	0.13	0.55
	2009	0.82	12.09	6.95	0.32	0.57
	2010	0.87	12.19	4.76	0.67	0.58
	2011	0.89	12.28	8.10	0.65	0.74
	2012	0.79	12.38	7.11	0.63	0.76
	2013	0.89	10.63	8.33	0.61	0.78

	2014	0.31	10.72	8.65	0.59	0.79
	2015	0.70	10.80	8.39	0.58	0.81
	2016	0.74	10.89	7.28	0.56	0.83
	2017	0.83	10.98	7.82	0.13	0.85
KURWITU VENTURES	2008	0.15	11.07	7.50	0.13	0.86
	2009	0.16	11.16	7.68	0.18	0.88
	2010	0.15	11.25	8.29	0.17	0.90
	2011	0.65	11.34	8.30	0.32	0.59
	2012	0.15	11.42	8.14	0.24	0.61
	2013	0.14	11.51	8.52	0.13	0.61
	2014	0.46	9.88	8.41	0.32	0.63
	2015	0.10	9.97	7.47	0.13	0.64
	2016	0.11	10.05	7.54	0.23	0.66
	2017	0.52	11.90	7.31	0.47	0.67