

**CAPITAL STRUCTURE AND FIRM'S PROFITABILITY: STUDY ON THE  
BANKING SECTOR IN KENYA**

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THE UNIVERSITY IN PARTIAL FULFILLMENT FOR THE DEGREE OF  
COMMERCE (FINANCE) OF STRATHMORE UNIVERSITY.**

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**DECLARATION**

**STUDENT DECLARATION**

I hereby declare this research project as my own work and it has never been presented in any college or university for academic credit.

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Date.....6-12-2019.....

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**SUPERVISOR'S DECLARATION**

This project proposal has been submitted for examination with my approval as the appointed supervisor.

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## **DEDICATION**

I dedicated this to my entire family members for the support during my studies journey.

## **ACKNOWLEDGEMENT**

First I take this opportunity to thank to the Almighty Lord for gift of life and good healthy during the period of this study that enabled me to undertake this research well until when I completed it. Also, I take this chance to pass my gratitude to my supervisor Mr. Fredrick Otieno for taking his time to guide me during the writing of this study. His guidance and motivations enabled me to complete the study.

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## **ABSTRACT**

This study dwells on the impact of capital structure on the firm's profitability based on the banks institutions operating in Kenya. The study will examine the listed banks in Kenya. There are numerous studies carried in Kenya on consequence of capital combinations on the firm profitability but most of them focused on the Microfinance businesses, industrial organizations and allied sectors. Banks operates differently from other financial sectors in general, hence banking sector should be properly distinguished from other firms that provide funds. Banks have unique regulations of operating and high leverage which makes them to be different from the rest of other firms in the market. Secondly, studies done pertaining significance of combination of capital of the banks listed in Kenya were very few. As we all know that Banks are among the key pillars financial providers and economy promoters, had to be studied. Due to the few research done to evaluate the effect of capital structure on banks profitability created the research gap. Furthermore, outcomes shall be of assistance to the banks managers when making decision on choosing the firms' capital structure, investors in making decision on their investments and Scholars who can use the findings to further this research. Debt, retained earnings as well as the equity were the independent variable used while Return on Asset and Return on Equity as dependent variables in this research. Descriptive design was utilized. This research utilized the secondary data where financial statements for the period 2005-2007 and 2010-2013 were sampled. The regression analysis results showed debt with equity had an adverse and significant relationship with banks profitability.

## ABBREVIATIONS

N.S.E-Nairobi Stock Exchange

ROA-Return on assets

ROE-Return on equity

R/A-Retained earnings to total asset

R/E-Retained earnings to stockholder's equity

SMEs-Small and medium-sized enterprises

U.S-United States

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## CHAPTER ONE

### 1.1 Introduction

Chapter one entails the background study showing the interrelationship of capital combination of banks listed and profitability. It is the chapter that covers the issues of the arguments, the goals of the study, the research questions and the importance of the analysis and finally the range of the research.

### 1.2 Background of the study

The choice on the source of funds is fundamental for any financial enterprise. The management is liable for establishing the company's combination of capital. The management should ensure the businesses meets its optimal capital combination so that it maximizes its wealth. While identifying the best mix of either debt, retained income or equity is hard for the companies. Firms have various capital structure decisions, the enterprises can choose to fund their activities by either issuing big or small debt, lease financing, offering convertible bonds, use of forward contract, using warrants or swapping trade bonds. The company should, however, attempt to discover the best mix to raise the business and shareholders value. Capital structure research helps to highlight the different funding mechanism that are utilized by firms to finance their operations/activities (Myers, 2001) it is how the company sponsors its activities by either use of debt, equity, retained earnings or the total debt to equity, Brigham, (2004) Financial companies prefers using debt to fund its activities to enhance its efficiency. Using debt as a funding source can reduce the company's tax, so ideal corporate capital structure should comprise of debt.

Company profitability and capital structure can be narrowed to the work that was done by (Modigliani & Miller, 1958) Where he claimed lack of corporate taxes, information asymmetric, transaction and bankruptcy charges, the company's figure was insignificant to the funding decision taken (Jermias, 2008). Theory of Trade off together with pecking order among others came to expound the enterprise capital structure. A company source of funds choice is a fundamental issue hence firms should therefore choose the correct economic mix to maximize economic efficiency

### **1.2.1 Global Perspective**

Flannery and Rangan (2008) indicated that their capital was boosted by big banks in the United States. It is presumed that it is expensive to finance the company using equity (Flannery & Rangan, 2008). When legislative minimum exists, the banks should use and a bind to the minimum quantity set.

Berger and Bonaccorsi (2006), according to results of U.S. commercial banks, the low equity ratio and greater leverage are associated with elevated economic results. Structure capital is the quantity of loan to the quantity of total assets, both affecting the company's profits (Berger & Bonaccorsi, 2006). One of the facts is that a business capital structure affects both its activities and the profitability of its company (Berger & Bonaccorsi, 2006)

Financing choices cannot be concentrated on because there are other variables that cause failure of the business that needs be resolved using policies and decisions of financial which contribute to development as well as fulfillment of firm aims (Salazar, Soto, & Mosqueda, 2012). A finance aspect it's a primary influencer for business misery. The primary purpose of the financing choices is to maximize assets and to determine the implication of the choice on the company's profits (Salazar, Soto, & Mosqueda, 2012)

Taani (2013) found out in the research he carried that the amount of debt as important variable in finding the capital employed and net profit for banks in Jordan. He found out that the most of the banks in Jordan, the total capital structure comprises of 89% debt. He emphasized that banks are firms that are extremely leveraged. Both long term debts and the total amount of debt were found to have an impact in discovering the ROE in for the banks in Jordan (Taani, 2013)

### **1.2.2 Regional Perspective**

Awunyo-Victor & Badu, (2012) from his research study on the firm source of funds of banks at the Ghana stock Exchange noted that banks have an average capital structure of eighty-seven percent for the period between 2001 and 2010 implying banks are extremely geared. The elevated level of gearing experienced results to banks mostly relying on short-term loan as a consequence of comparatively huge loan rate by Banks of Ghana and poor market bond involvement (Awunyo-Victor & Badu, 2012). Banks relaying on short

borrowing lead to the high gearing. High bank of Ghana lending rare was one of the factors that lead the bank to relay on short term debt. The banks can increase their retained earnings by using debt which comes with the tax shield benefit; this make the entity to have more profits after tax (Awunyo-Victor & Badu, 2012).

### **1.2.3 Kenyan perspective**

Kamau ( 2009) in his study indicated that most Kenyan companies listed on the NSE are mostly relaying on short borrowing to be the source of funds to fund their activities/operations because of the difficulties of accessing long term loans.

Makau (2006) found growth, profitability, liquidity, size has a link to the company leverage, and he concluded between 2003 and 2007, there was leverage increase. (Makau, 2006).He also said that by increasing the variables and factors that increases growth and size may increase its leverage. The study indicates out the enterprise value is altered with the firm structure of the capital.

Kenya Commercial Bank (2013) According to their report on the credit rating report, KCB, the group is financed by the deposits, shareholder's equity and borrowing. It was concluded that listed firms can raise more capital by using the equity market.

### **1.3 Statement of the problems**

Financial firms have a vital responsibility of identifying the optimum capital mix that will lead to positive effect on its value. Optimum capital structure will increase firm profitability hence shareholders are ensured to receive high returns. Shareholders wealth maximization depends on the firm optimal structure.

Multiple researches conducted in Kenya on the capital structure. For instant in Kenya, many studies on the implication of capital structure on NSE listed companies have been done. (Chepkemoi, 2013), Research on how the capital structure alters the economic efficiency of SMEs discovered that the structure of capital has an adverse impact on profits and significant effects on return sales. (Karanja, 2014) Researched on dairy SMEs capital sources and profitability in Kiambu the findings were that the structure has insignificant link to the company profits. (Kuria, 2013) The capital structure has an adverse significance

to the company profitability evidence to research he undertaken on commercial banks on the interrelation between capital structure and their profits. Due to the arising mixed results, there is a need for further research. Hence this study is however aiming to responding to the question: The implication of capital structure and profitability of firms that are listed at the Nairobi stock exchange, based on the banks listed in Kenya. This research study will be able to add more information to the past research on this particular research topic.

#### **1.4 Research objectives**

##### **1.4.1 General objectives**

The overall purpose for this research is to assess the impact of capital structure on the economic profitability of Nairobi stock exchange listed banking institutions.

##### **1.4.2 Specific objectives**

- i. To assess the impact of debt on profitability of banks listed on NSE
- ii. To evaluate the impact of equity on profitability of listed banks in Kenya
- iii. To evaluate the effect of retained earnings on profitability of banking firms listed on NSE

#### **1.5 Research Question**

- i. How does debt impact profitability of listed banks?
- ii. How does equity affect profitability of banking institutions at Nairobi stock exchange?
- iii. How does retained earnings impacts profits of banking organization?

#### **1.6 Significance of study**

- i. Finding shall help bank management to make informed decisions pertaining sources of finance so that to avoid poor financial results

- ii. Findings will also be helpful to investors who can use the output to understand capital structure policies and bank performance so that they can make a decision where they can invest.
- iii. Useful to scholars who want to further the study on the topic.

### **1.7 Scope of the study**

This study research constitutes banking sector firms which comprises of twelve banks that are listed at the Nairobi Stock Exchange. NSE currently has sixty-five listed companies that distributed into various sectors namely: investment, agriculture, manufacturing, telecommunication and technology, exchange traded fund, construction and allied, banking, energy and petroleum, commercial and services, automobiles and accessories and real estate investment trust. The study will examine financial reports for the year 2012 to 2017

### **1.8 Limitation of the study**

There exist several capital structures factors which impacts profitability of the organization such as liquidity, deposits and interest rates. But due to time constrained, this study will concentrate only on portion of variables of capital structures that affect an organization the profits. This factors are financing debt, equity and retained earnings

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

The sector entails the theoretical review which elaborates the capital structure theories, empirical review and conceptual framework. It also draws attention on studies that were undertaken on how capital structure impacts the profitability of firms.

### **2.2 Theoretical review**

Theoretical review part discusses some of theories which highlight the connection amongst capital structure with the business profitability. The theories discussed include the following, Modigliani and Miller's ideas and the pecking order.

#### **2.2.1 Modigliani miller irrelevance theory**

Modigliani and Miller (1958) theorem is one of the theories that illustrates a firm's ideal capital structure. It is viewed as the best theory that explains concept of capital structure of an organization. In an efficient marketplace where the absence of transaction costs, tax and information asymmetry, the firm's value is not contributed on firm choice to fund its operations (Modigliani & Miller, 1958). The firm's financial decision is not relevant to the firm's overall value. Theory of MM forecast that there isn't any link between the value of the organization and the choice of capital structure.

Modigliani and Miller (1963) come up with the second version considering other factors like presence of taxes, incur of transaction as well as bankruptcy cost and market asymmetric information. They stated, considering tax deduction, the organization can increase the amount of tax shield by utilizing more debt which enable the firm's value to rise. A firm enjoys tax shield benefit when it uses debt in financing its operation. This results the firm benefiting from taking more leverage.

According to (Modigliani & Miller, 1963), stated that with a tax shield benefit that a firm enjoys when considering the factor of corporate income tax, the firm needs to utilize much debt as possible to finance its business activities. However, MM theorem further explains that the firm should not use excessive debt to finance their activities. This is because

excessive debt will lead to risks to the firm. Thus bankruptcy cost factor emerged to counterbalance the benefits that come along with the debt as a mode financing.

Based on the Modigliani and Miller assumptions, there been various theories coming up to address the issue of imperfections, namely Theory of Trade off, agency cost, pecking order theory among other.(Myers S. C., 1984) designed theory of Pecking order and due to the information asymmetric in financial decision making, managers will use first the retained earnings, debt second when internal sources deplete and finally equity as the last means to finance their operations.

### **2.2.2 Pecking order theory**

Theory states that the financial businesses have a hierarchy when making financial decisions. Firms will intend to borrow funds in place of giving out equity when the internal sources are insufficient to finance the firm's operations. The implication is firm is encouraged to utilize the retained earnings/internal source of fund as the priority instead of the external funding sources. Internal funding sources have lacks flotation costs and the firm does not need to expose or show its information concerning the financial outcomes unlike the external funds that requires to disclose additional information. It also suggested that businesses need to follow the specified ways of financing so that it can minimize its information asymmetry costs. First choice is to use retained earnings/internal funds, when internal funds is not sufficient the debt can be used and last use of equity as a last option. It explains that the firm should fund its long term projects using the profits/retained earnings and when the retained earnings is insufficient, the firm should borrow funds and when the debt exhaust, the firm should use equity as the last option.

When information asymmetry arises among investors and firm, the financing cost varies between the financing options (Berger & DeMarzo, 2007). The greater the firm is exposed to the asymmetry information risks for the certain sources of finances beyond the retained earnings,(Berger & DeMarzo, 2007).Hence, firms prefers using internal mechanism of fund to borrowing, short borrowing instead of long borrowing and last option debt instead of equity.

Managers of the companies are viewed to have more information (uncertainties and business opportunity) concerning the organization compared to the outsiders i.e. shareholders and investors, this is the main assumption of the theory of the pecking order. When firms use internal sources of funds, it hinders the managers from making public disclosure about the opportunities that will result by investing. Secondly, the managers perform their activities on the basis of the interest of shareholders

The flaw of pecking order is that the concept doesn't really spell out tax considerations, security issuance expense of the business, or even any investment opportunities appropriate to the company on the company's real capital structure. The theory also assumes the complication that might emerge if the managers contain too much financial slack.

In summary, the pecking order theory suggests that profitable businesses that produce high cash flow should incorporate little borrowings when funding their operation than those firms that produce lower cash flows. It also explains firm need to use a specified aspect/set of finance sourcing and emphasize on internal sources of funds when exist. However, the theory explains that when the firms require using external sources of funds, it should use debt second instead of equity.

Therefore, companies that have more profits and produce good cash flows are required to incorporate fewer loans opposed to ones that produce low cash flow. Pecking order hence highlights that the firm wish using debt instead of equity (Muritala, 2012). From previous research; it's seen that this theory has a negative link between firm profitability and capital structure. That's why businesses that are profitable prefer using internal funds rather than the borrowing.

## **2.3 Empirical review**

### **2.3.1 Debt Financing and profitability**

Borrowing funds from the lender so that to fund operation is known as debt financing. The principal amount borrowed will be paid later at a point plus some interest. A firm can either take short or long borrowing so as to fund for its operation. Short term borrowing is used

by the firm to fund obligations for the short period while long term loans is used to cater for long term obligations or projects. Firms use borrowing to fund their operations to increase the volume of operation and also to increase ROE. If firm rate of return is higher the interests charged, this indicates that the organization is in the state of repay the principal plus the interest charged. This is because a firm will be making profit and hence the surplus will be retained for stakeholders.

According to the pecking order, a firm should use borrowing as a source of fund as the last resort after internal financing and equity have exhausted (Afrasiabishani, Ahmadinia, & Hesami, 2012). Optimal capital structure does not hold (Chen, Jung and Chen, 2011).

Size, profitability and tangible assets alters the capital structure of a company that are listed Ondiek (2010). The findings suggested the best capital structure of listed firm is elaborated by two theories that is pecking order together with Trade off theory.

Abor (2005) found out that short term borrowing and overall debt has a positive relationship with return on equity while long term borrowing has a negative relationship with the return on equity. This indicates that huge long term debt reduces the financial performance of the firm since the long term debt tends to be bit expensive.

Abor (2007) in his study in South Africa found that, short term and ROE have a positive link. Mesquita and Lara (2003) who carried out the study on Brazilian companies found out a positive relation amid the short term borrowing and ROA.

Size of the firm influences the capital structure mode. Most of big of companies that are at the securities exchange markets are considered financially stable and hence likely to use more debt to fund their activities. The large firm in the market tends to enjoy economies of scale. (Wahome, Memba, & Muturi, 2015)

Firm use debt to fund its operation so that they enjoy a tax shield advantage that comes along when using debt. Firms tend to borrow much because they want maximize their tax benefits which will results to a firm obtaining more profits. However, use of excess borrowing by the firm may lead to bankruptcy. Hence the financial managers address the problems and risks factors i.e. the implication of using high debt-equity ratio may cause the business to be exposed to high bankruptcy risk. (Antwi, Filifi, Mills, & Zhao, 2012)

The fact that a firm has a low or high potential growth, the firm will prefer to using debt for funding over equity financing because debt financing is cheaper. (Dube, 2013)

### **2.3.2 Equity financing and profitability**

Firms with high profits rely majorly on using equity to fund their activities. They consider using equity as a source of finance for their operations. (Shubita & Alsawalhah, 2012). They also discovered a positive connection that exists among borrowing and equity to the organization profitability.

Velnampy and Nireesh (2012) found out that banks' financial profitability and capital structure have a negative relationship but they further stated that there is a positive link between debt to equity and the return on equity. From this finding, it shows banks remain extremely geared. According to the Abor report (2005), there is a positive correlation between total debt and financial debt per year.

Startup enterprises require more equity than borrowing; hence, the capability of the firm borrowing increases as the firm grows. There are firms with low opportunity growth, others high opportunity growth while others have no growth opportunity (Vanacker, 2007)

According to Julius (2012) suggested that most firm consider to be financed using internal sources that is represented by equity. Where equity is insufficient, debt financing is ranked second to equity as an external source of financing.

Stephen (2012) research states that equity is the portion of shareholders' interest on the firm's asset after deducting all liabilities. Equity may take the form of share capital, capital surplus, retained earnings, preferred stock and reserves in the firm financial statements. Growth of the firm is another factor that predicts the debt and equity. Firms that expects to grow will prefer using equity financing over debt financing (Draniceanu & Ciobanu, 2014)

### **2.3.3 Retained Earnings and profitability**

Retained earnings are known as the total amount of income after tax deduction and are not distributed to shareholders as dividends but set for reinvestment purposes.

According to Kanwal (2012) explained the variation in the prices of the stock of chemicals in Pakistan based on their finding that ROE & retention ratio got a positive connection with financial performance. Kanwal (2012) Indicates that a firm has the chance of growing when it retains more earnings.

In the research study of the impacts of retain earnings on the firm profits and return on the stock by Khan and Zulfiqar (2012) found an insignificant interrelationship between the stock performance and the retain earnings.

#### **2.3.4 Financial Performance**

The capital structure for a business comprises the combination of equity and debt which the enterprises consider to be suitable to finance its activities (Kyereboah-Coleman, 2007). Thus it's considered to be among the factors that affects the firm performance

From the research of Silva (2008) suggested that the amount of debt and short borrowing ratio affects positively on the ROE and negatively on ROA. Further found out that the debt ratio had a positive effect on return on assets but no effect on ROE of MFIs. This indicates that long borrowing may be used by MFIs to fund their operations without any effect on their management (Silva, 2008). Hence this indicates MFIs utilizes more long term borrowing to finance their operation so as to become more profitable.

#### **2.4 Research Gap**

The conflicting findings on implications of the source of finance on various research done by researchers Velnampy and Niresh 2012, Abor 2005, Taani 2013, Gleason 2000, Mesquita & Lara 2003, Silva 2008 and Victor and Badu 2012. Locally, studies by Kibet 2009, Ondiek 2010 and Kamau 2009 focused mainly on implication of structure capital on SMEs, microfinance enterprise and industrial enterprises.

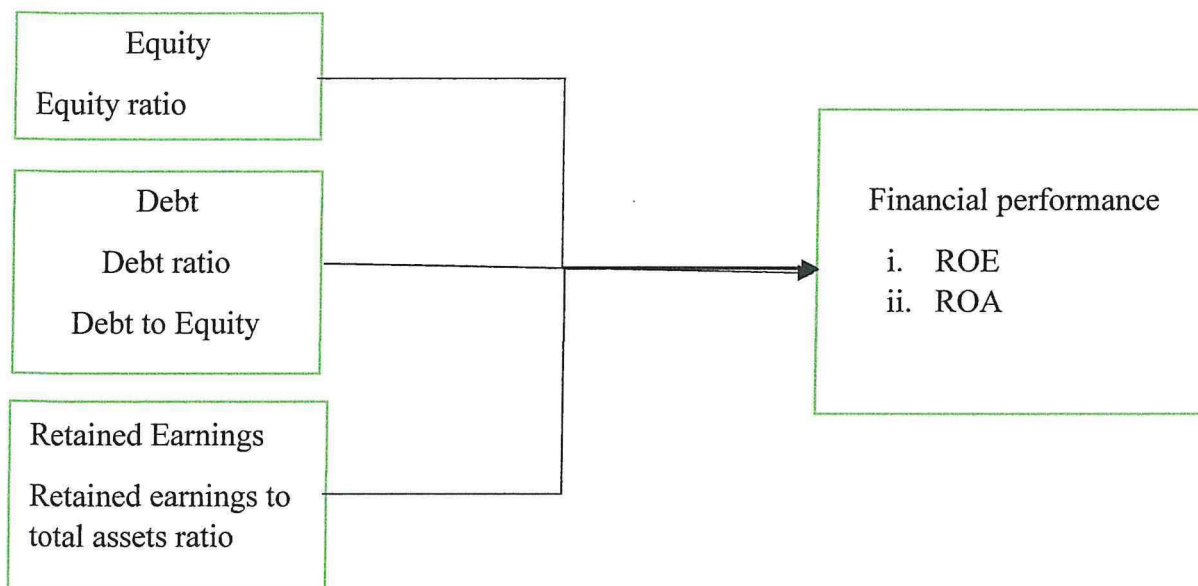
Insufficient research completed on assessing the connection among combination of capital and the profitability of the banking institutions raised a study gap. Therefore, it was necessary to close the gap by researching on the connection between capital structure and profitability of banking institutions listed on NSE.

## 2.5 Conceptual framework

The chart below represents the diagrammatical interrelation between equity, debt and retained earnings versus ROE and ROA

**Figure 2. 1 Conceptual framework**

### Independent Variables



Conceptual framework (Source, Author, 2019)

## 2.6 Summary of Literature Review

This study intent to provide information concerning implication of capital structure mix on the profitability of banking institutions listed at the NSE. The conceptual literature review consists of capital structure theories that reveal the results of capital structure on the company performance (profitability). The theories include; the theory of Modigliani Miller irrelevance and the theory Pecking order. This section consists of empirical studies that were performed about capital structure and firm profitability, the results for the research and lastly the clarification of the findings

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

It's a section that covers the methods of study which shall be employed by researcher. It also embraces design of the research of the study, Target population, sampling frame, data collection procedure, sampling and sampling techniques, and data analysis.

### **3.2 Research design**

Based on Kothari (2014) research design is a trademark for collecting, measuring and analyzing data required for a study. The descriptive design technique of research was adopted in this particular study. Saunder, Thornhill and Lew( 2009) described descriptive design approach appropriate when investigating the current state of affairs concerning the combination of capital and profits of banking organizations that are listed. Research design which is descriptive in nature is appropriate since this research requires accurate determination of the implication of capital combination on financial profitability for NSE listed banks. Kothari, (2014) Explained the design of descriptive research as a powerful quantitative analysis form. Descriptive research assists in describing the area of research, state the connection and result of the data gathered.

### **3.3 Target Population**

This research target population are the twelve banking insitutions listed at Nairobi stock exchange. Neuman ( 2001) identified population to be the exact number of things the researcher wants to examine. This particular research intent to assess the outcome of capital combination on company's profitability of twelve banking institutions for the period between 2005 to 2013. Due to time constrain, the study will scrutinize the financial performance of the companies for the past five years.

### **3.4 Sampling Frame**

A sample frame work comprises full items forming target population where a sample is taken from. (Kothari, 2014) Refers sample frame as the list of posts where a representative sample is taken for the study. The sampling frame particularly for this research will be the

twelve listed banks institutions in Kenya. This forms the sample frame because it's easy to find their annual reports since listed banks are required to publish their financial statements.

### **3.5 Sample and Sampling Techniques**

A sample represents the portion of the target population which will be investigated through the research. All NSE banks will institute the research sample for this study (Appendix 1). Etikan (2016) defined sampling technique as the method of selecting items from the target population that forms the sample. Sampling techniques enables the researcher to explain how he/she come up with the sample size for his/her study. For this research study, census technique was adopted whereby all the twelve listed banks was studied. Census is where all the units in the population are studied (Kothari, 2014)

### **3.6 Data collection Instruments**

Olaogun (2010) stated that there two data collection sources; primary sources of data collection and secondary source collection. This research study will utilize the secondary data sources when collecting the data that is needed. The required information might be extracted from the institutions annual reports preferably the financial position statement and the statement of income. The information was found from the banks websites, journal articles and central bank manual for the years between 2005 and 2013.

### **3.7 Data collection Procedure**

This research shall utilize the secondary data method, therefore banks secondary information shall be taken from the audited financial statements such income statement, central bank manuals, NSE annual reports, sought and finally analyzed to discover the influence of the capital structure factors on banks' profits

### **3.8 Data processing and Analysis**

Data analysis refers to the way of checking, analyzing, cleaning, converting data with a purpose of discovering important data/information, giving suggestion and making decisions (Etikan, 2016).According to this study, mostly the data that will be collected shall be in the quantitative form. The quantitative information shall be coded and evaluated using

the descriptive statistics. The study shall utilize descriptive statistics where mean, frequency distribution also standard deviation to evaluate the variables. The information collected will be calculated using the SPSS. The study will use regression analysis and correlation where ROE and ROA will be regressed against equity, debt and retained earnings.

The model can be represented mathematically as:

$$Y = B_0 + \beta_1 A_1 + \beta_2 A_2 + \beta_3 A_3 + E$$

Where:

Y= ROE/ ROA,

A1= Debt

A2 = Equity

A3 = Retained earnings

B<sub>0</sub> = Constant

B<sub>1</sub>, B<sub>2</sub>, B<sub>3</sub> = Coefficients regression

E = Error

## CHAPTER FOUR

### DATA ANALYSIS AND DISCUSSION

#### 4.1 Introduction

This Stage pertains data analysis, data is presented with respect to the study objectives. It also contains descriptive statistics, correlation analysis and regression analysis

#### 4.2 Descriptive Statistics

**Table 4. 1 Descriptive statistics**

Variable	Mean	Standard deviation	Min	Max
Debt ratio	0.871647756	0.042524136	0.786091146	0.973570817
Debt to Equity	8.682992773	7.229108771	3.674888314	36.83696275
Retained Earnings/Assets	0.066007	0.038735	0.00969	0.19211
Retained Earnings/Equity	0.511863	0.246278	0.094529	1.435251
Equity Ratio	0.129642	0.041389	0.026429	0.213909
ROA	0.02493	0.012509	0.000122	0.0526
ROE	0.184636	0.069077	0.003017	0.333231

In the Table 4.1 Above indicates the Descriptive statistics. The results show that debt ratio had an average of 0.87165 and Standard deviation of 0.0425, it also had minimum of 0.7861 and maximum of 0. 9736. Debt to equity ratio had a mean of 8.6829 and standard

deviation of 7.2291, minimum of 3.6749 and maximum of 36.8369. On the other hand, retained earnings to total assets had a mean of 0.0660 and standard deviation of 0.0387 and minimum of 0.0097 and maximum of 0.19211. The results go further to show that retained earnings to shareholder equity had an average as well as a standard deviation of 0.511863 and 0.2463 respectively, its minimum of 0.0945 and maximum of 1.435. On the other hand, the results show that equity ratio is associated with a mean and standard deviation of 0.1297 and 0.04139 respectively while its minimum and maximum of 0.0264 and 0.2139 respectively. Finally return on asset as a measure of profitability of the firm had a mean of 0.0249 and standard deviation of 0.0125, its minimum value of 0.00012 and maximum value of 0.0526. Return on equity had a mean value and standard value of 0.1846 and 0.0691 respectively while its associated with a minimum value of 0.0030 and maximum value of 0.3332.

### 4.3 Relationship between independent variable and dependent variables

#### 4.3.1 Relationship among debt and Profitability

The figure 4.1 below shows the debt ratio and debt to equity for the period 2005-2007 and 2010 and 2013. The results show a decline trend in the borrowings to equity ratio from the year 2005 to 2013. On the other hand, debt ratio seems to be slightly constant among the years.

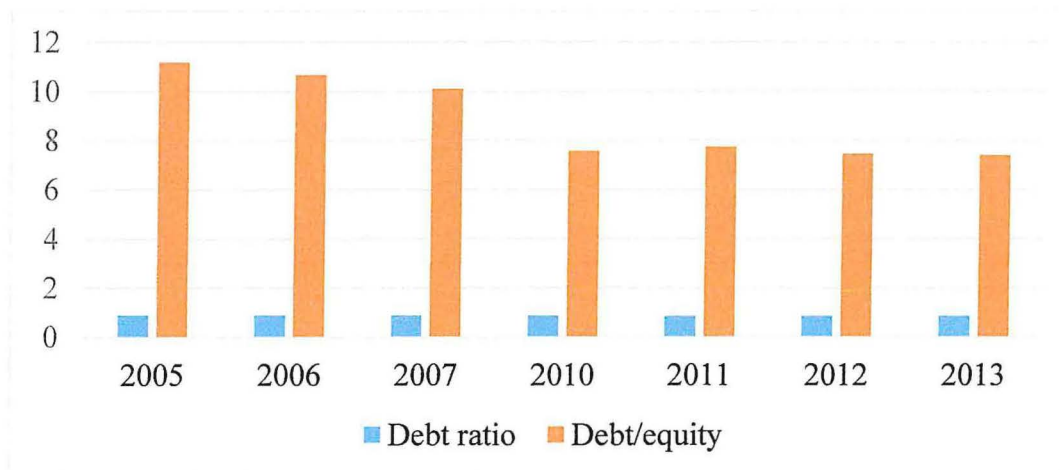


Figure 4. 1 Trend analysis of debt ratio and debt to equity ratio

The Below Table 4.2 show the significance among debt, return on asset and the return on equity. It shows a negative ( $r = -0.863$ ) and positive ( $p\text{-value} = 0.007$ ) significance between debt and return on assets. The results also indicate that debt and return on equity had a negative effect ( $r = -0.12$ ) and insignificantly ( $p\text{-value} = 0.912$ ). Hence the conclusion that debt has a strong relationship with return on asset and also with return on equity.

**Table 4. 2 Correlation matrix for debt and profitability**

Variable	statistics	ROA	ROE	DEBT
Return on asset	Correlation	1		
Return on equity	Correlation	-0.89	1	
Debt	correlation	-0.863	-0.12	1

The Table 4.3 below shows the summary model results for the regression model which shows R-squared for the model to be 0.745(74. 5%). This show the variation of the levels of debt in the firm profitability.

**Table 4. 3 Model summary for impact of debt on Firm profitability**

R	R-squared	Adjusted R-square	Standard. Error
-.863	0.745	0.734	0.00121

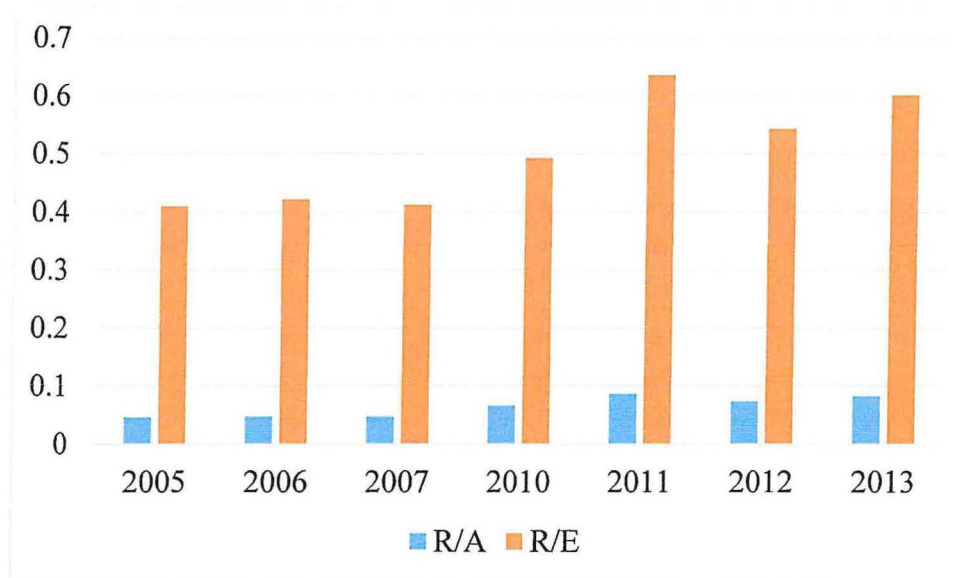
Using the regression model, it was found out that measuring return on asset debt is negatively ( $\beta = -0.18$ ) and significantly ( $p\text{-value} = 0.007$ ) as shown in table 4.4 below. This results are matching the finding of Gleason et al (2000).

**Table 4. 4 Regression model on Effect of debt on profitability**

	$\beta$	Standard Error	t	Sig.
constant	0.18	0.015	7.814	0.004
debt	-0.18	0.02	-7.000	0.006

### 4.3.2 Relationship between retained earnings and profitability

The figure 4.2 below show the trends among retain earnings to the equity ratios also among retained earnings to the total assets. Its observed that there was a consistent rise for the retain earnings to the total asset, also for retain earnings to stockholder's equity.



**Figure 4. 2 Trend analysis for Retained earnings to assets and shareholder's equity**

The Table 4.5 below shows that there exists a positive relationship among retained earnings to assets and return earnings to shareholder's equity, return on equity as well as return on asset. This is due to the positive correlation coefficient among the variables.

**Table 4. 5 Retained earnings and profitability**

variable	statistics	ROA	ROE	Retained earnings to total asset	Retained earnings to stockholder's equity
ROA	Correlation	1.00			
ROE	Correlation sig	0.562	1.00		
Retained earnings to total asset	Correlation sig	0.545 0.312	-0.521 0.345	1.00	

Retained earnings to stakeholder equity	Correction Sig	0.500 0.375	-0.50 0.371	.872 0.005	1.00
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The Table 4.6 below shows the regression model summary result that R square was found to be 0.322 indicating that 32.2% is made up of retained earnings.

**Table 4. 6 Model summary for the impact of retained earnings**

R	R Square	Adjusted R square	Standard Error
0.562	0.322	0.081	0.00421

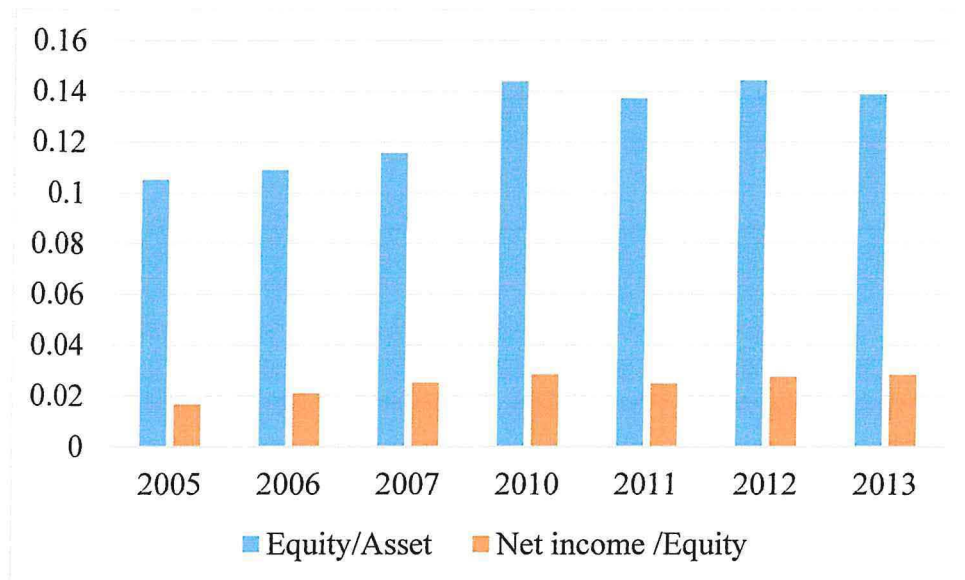
From the regression model in the Table 4.7 below shows that retained earnings had a positive ( $\beta=0.14$ ) and an insignificant ( $p\text{-value}=0.312$ ) when related to the profitability of the firm as examined using return on asset. This results match with the finding of Kanwal (2012) where he discovered that retained earnings had a positive and significant relationship with firm profitability.

**Table 4. 7 Impact of retained earnings on profitability**

	B	Standard Error	t	Sig
Constant	0.022	0.01	2.41	0.1
Retained earnings to assets	0.14	0.12	1.06	0.3

### 4.3.3 Relationship between Equity and Profitability

The Figure 4.3 below show that the equity ratio had a slightly increasing trend through the years. There was a decline in both ratios in the year 2011 and an arise from the year 2012 to 2013. There was a negative and significant impact on the firm profitability by the arise in equity ratio.



**Figure 4.3 Equity ratio Trend analysis**

From the table 4.8 below, shows a positively ( $R=.922$ ) and a significantly ( $p\text{-value}=0.005$ ) the relationship among equity to return on asset. Also results indicate that there was a positive ( $r=0.10$ ) and insignificant ( $p\text{-value}=0.900$ ) relationship among equity and return on asset. Hence from the result, we can say that there exists a strong relationship among equity, return on asset and return on equity.

**Table 4.8 Correlation matrix for Equity on Profitability**

Variable	statistics	Return on asset	Return on equity	Equity
ROA	Correlation	1.00		
ROE	Correction		1.00	
Equity	Correlation	.922	0.10	1.00
	Sig.	0.005	0.900	

The Table 4.9 shows the summary of the regression model where R-squared was found to be 0.962 indicating that 96.2% to the equity level.

**Table 4. 9 Summary for impact of equity on profitability**

R	R squared	Adjusted R square	Standard Error
0.922	0.850	0.918	0.0012

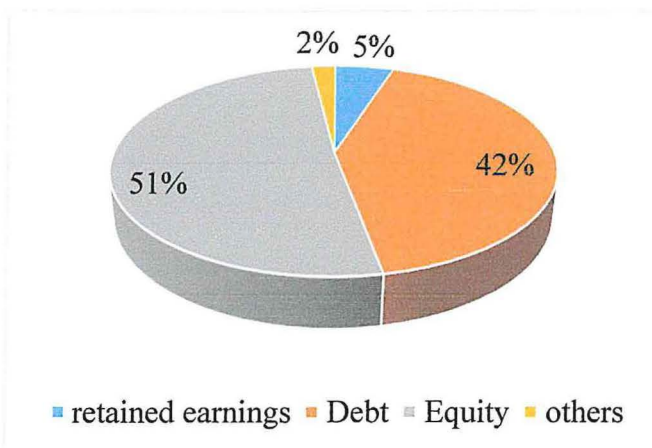
The Table 4.10 below show that equity has a negative ( $\beta = -0.0049$ ) and significant ( $p\text{-value} = 0.002$ ) to the firm profitability when examined using return on assets

**Table 4. 10 Regression model on impact of equity on profitability**

	$\beta$	Standard Error	t	Sig
Constant	0.071	0.004	19.00	0
Equity	-0.0049	0.001	-9.5	0.001

#### 4.3.4 Variable levels significance

The figure 4.4 below shows the impact of each variable over the years (2005-2013). Where Equity had 51% making it being the preferred variable, debt followed with a 42%, retained earnings with 5% and other factors adding up to 2%



**Figure 4. 4 Significance variable levels**

## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS.

#### 5.1 Introduction

This chapter highlights the findings for this study, the conclusion and the limitation for the research as well as the recommendations according to the objective of this research.

#### 5.2 Summary of the finding

##### 5.2.1 Debt and Profitability

The objective was to check the significance of debt on the banks profitability in Kenya. From the data analysis for this research, it's clearly seen that debt and ROA have a negative and significant relationship. The results also show a positively and insignificant relation among long term borrowings and ROE. On the other hand, debt and return on equity is established to have a negatively and insignificant relationship. By use of the model regression to scrutinize the significances of debt and banks profitability by use of return asset, it was found that debt impacts negatively and significant the bank's profitability.

##### 5.2.2 Retained Earnings and Profitability

The key objective of assessing the impact of retain earnings on the profits of the bank listed in Kenya. Results of correlation analysis done revealed that retained earnings to total asset and also retained earnings to stakeholder equity had a positive and insignificant relationship. However, retain earnings ratio was found to have an insignificant relation with profitability

##### 5.2.3 Equity and Profitability

Correlation analysis results showed that equity and return on assets had a positive relation and significant relations. Also it was seen that return on equity and equity had a positively

but insignificant relationship. It was observed from the regression analysis that equity is negatively and significantly related to profitability.

### **5.3 Conclusion**

In conclusion, since debt negatively impact the financial performance of a firm, hence a reduction in debt by the company may result to increase in its profits. Also it was found that retain earnings had a positive relationship with firm profitability, thus it's said that retained earnings have no significant impact on profitability of the company. Finally, since equity impacts the financial performance of a firm negatively, thus when a firm uses more equity than the required portion, may lead to reduction in its profitability.

### **5.4 Limitation**

When carrying out this research, there are some of the limitations encountered. First during the data collection, it was experienced that I couldn't find the financial reports for some banks which made it hard to analyze the particular banks annual reports for the missing years.

### **5.5 Recommendations**

This research observed various impact of each variable on the firm profitability thus its recommended that firms should not use the capital structure variables beyond optimal levels. Also since retained earnings is positively related to financial performance, managers should use minimum of the retained earnings.

### **5.6 Suggestion for further studies**

There are other factors that affects the profitability of a firm, this research only dealt with capital structure as a factor. Further studies can be done to determine the impact of other factors such as size, operating costs and ownership on banks profitability

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## **APPENDIX 1: Sample**

Banking firms listed on the Nairobi securities Exchange as at 31/12/2017

- 1) Barclays Bank Ltd
- 2) Stanbic Holdings Ltd
- 3) I&M Holding Ltd
- 4) Diamond Trust Bank Kenya Ltd
- 5) HF Group Ltd
- 6) KCB Group Ltd
- 7) National Bank of Kenya Ltd
- 8) NIC Group PLC
- 9) Standard Chartered Bank Ltd
- 10) Equity Group Holdings
- 11) The Co-operative Bank of Kenya Ltd
- 12) BK Group PLC

Source: NSE

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