CAPITAL STRUCTURE AND PROFITABILITY OF ENERGY AND PETROLEUM COMPANIES LISTED IN NAIROBI SECURITIES EXCHANGE

BY

ABDIAZIZ IBRAHIM HILOWLE

UNITED STATES INTERNATIONAL UNIVERSITY-AFRICA

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Business in Partial Fulfilment of the Requirements for
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SUMMER 2019
STUDENT’S DECLARATION

I, the undersigned, pronounce this is my unique work and has not been submitted to some other institution or university other than to the United States International University-Africa in Nairobi, Kenya for academic credit.

Signed: ___________________________ Date: ___________________________

Abdiaiz I. Hilowle (654548)

This project report has been presented for examination with my approval as the appointed supervisor.

Signed: ___________________________ Date: ___________________________

Dr. Francis Gatumo

Signed: ___________________________ Date: ___________________________

Dean, Chandaria School of Business
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ABSTRACT

The purpose of this study was to establish the effects of capital structure on profitability of Energy and Petroleum companies listed in the Nairobi Securities Exchange. The study was guided by three research questions that focus on addressing the problem intended to be covered. The three research questions include; what is the relationship between debt financing and ROA, followed by what is the relationship between equity financing and ROA and lastly what is the effect of debt-equity combination on ROA.

This study targeted the five listed energy and petroleum firms in the NSE, the firms include; KenolKobil Ltd, Total Kenya Ltd, KenGen Ltd, Kenya Power & Lighting Company Ltd, and Umeme Ltd. The data from the firms were established from published financial statements from the website of NSE. Secondary data of the five energy and petroleum companies was obtained from NSE published financial statements and financial statements of the respective firms. This study adopted a casual research design that attempted to expose the cause and effect relationship between the two variables; independent and dependent variables. The data collected included values of net income, shareholders equity, total assets, total liabilities and total capital. The study used a checklist in gathering the secondary data from the five energy and petroleum companies listed in NSE. Data analysis was done using Statistical Package for Social Sciences (SPSS) software. The data was presented in the form of tables.

A Pearson Correlation Analysis was done to determine the relationship debt to capital financing and ROA of energy and petroleum firms, the results indicated that there was a negative but insignificant correlation between the two variables (R=-.428, p=0.472). A regression analysis done established that 8.9% of the variation in ROA was caused by variations of Debt to Capital the relationship was however not significant. At the same time 91.1% were caused by other factors not considered in this study. The ANOVA analysis between between debt to Capital on ROA revealed that the F value .674 was not significant (0.472).

A Pearson Correlation Analysis was done to determine the relationship equity to capital financing and ROA of energy and petroleum firms indicated that there was a positive but insignificant correlation between the two variables (R=.094, p=0.881). A regression analysis done to determine the relationship between Equity to capital on variables of
profitability (ROA) 32.2% of the variation in ROA was caused by variations of Equity to Capital, the relationship was however not significant. The ANOVA analysis between Equity to Capital on ROA revealed that the F value .026 was not significant (0.881).

For the final objective a Pearson Correlation Analysis was done to determine the relationship debt to equity financing and ROA of energy and petroleum firms, the results indicated that there was a negative but insignificant correlation between the two variables (R=-.660, p=0.226). A regression analysis done to determine the relationship between Debt to Equity on variables of profitability (ROA) established that 24.7% of the variation in ROA was caused by variations of Debt to Equity, the relationship was however not significant. The ANOVA analysis between Debt to Equity on ROA revealed that the F value 2.313 was not significant (0.226).

The study concluded that Debt to Capital Financing had very minimal effect on ROA. The findings presented also showed that with all other variables held at zero, a unit change in debt/capital would lead to 22.768 positive change in ROA. The study concluded that equity to capital financing had some effect on ROA. The study concluded that increase in debt to equity financing financing had a negative effect on the ROA of energy and petroleum firms.

The study recommended that since there is a negative correlation between debt to capital financing and ROA of energy and petroleum firms thus the firms would be in a better position to use long term debt than short term debt in order to minimize the impact on profitability. Borrowing increases risk to the Company and thus influence levels of return to shareholders by consuming the amount of profit available to them. The study recommends that more firms participate in equity financing as a way of raising capital for major expansions, asset growth or acquisitions which may require heavy funding. In this way firms will be assured of improvement in performance as well as high growth. More years should be incorporated to capture the various economic cycles and the impact on return on equity the study recommended that since there was a negative relationship between debt to equity financing and ROA of energy and petroleum firms, the study reiterates the imperatives of financial managers in firms, public and private alike, should strive to select debt financing models that have a high likelihood of optimizing the financial performance of the firm.
ACKNOWLEDGEMENT

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DEDICATION

This thesis is dedicated to my beloved family who showed me the importance of continuing education for personal development and towards a bright future. To all my lecturers at United States International University-Africa who had impacted me with knowledge and abilities during the course of my studies.
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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

Globally, financing decision is regarded to be a key decision function in the field of financial management (Ramjee & Gwatidzo, 2012). Capital structure decisions mainly focus on deciding the amount of equity level and debt level that will be used in attaining the optimal level of capital structure to finance the operations of the firm. The long terms sources of finance forming the capital structure of a firm consists of preference share capital, the debt capital instrument and ordinary share capital (Chadha & Sharma, 2015). The use of each source also comes with a cost, hence, the firm should ensure that the cost is minimized as much as possible.

Throughout the world, the debate over the importance of a company’s choice of capital structure is still unresolved (Liang, 2014). The firm’s choice of capital structure determines the allocation of the operating cash flow each period that is between the holders of the debt and shareholders. In the essence, it mainly concerns the impact on the total value of the market that is the combined value of its equity and debt of splitting the cash flow stream into an equity component and debt component. The financial experts traditionally hold that increasing a firm’s leverage would then increase the value up to a certain desired point. Beyond this point a further increase in leverage would increase the firm’s overall cost of capital and decreasing of its total market value (Yu, 2012). The topic of capital structure decisions is highly debatable especially in regards to the optimal capital structure that can result to maximum value of the company and several theories have been postulated on the same to try contributing to this broad concept.

Modigliani and Miller, for instance challenged the view by arguing that the market value which is the earning power of the firm’s real assets and that if the firm’s capital investment initiative is held fixed and other assumptions are satisfied, the combined value of a firm’s debt and equity is independent of the choice of capital structure (Bhat, 2016). As much as Modigliani and Miller published their famous article in 1958 on capital structure and seemed to be irrelevancy, much attention has concentrated on the reasonableness of the other assumptions that include the absence of bankruptcy costs, absence of taxes and other insignificant imperfections those that exist in the real world (Liang, 2014). Due to these imperfections, a firm’s choice of capital structure without a doubt does affect the firm’s
total market value, however, the extent to which a firm’s choice on capital structure affects its value in the market is debated.

Despite the ratios forming a good way of measuring profitability, its comparison across companies may be difficult since the companies may not be easily comparable (Chadha & Sharma, 2015). Financial data among organizations may not provide logical comparisons since the factors such as the use of various accounting policies and the size of the firm and the use ratios should then consider these kinds of limitations. The key objective of any business is to maximize profits (McCumber, 2015) and every decision pertaining to capital comes along with its own costs which eventually affects the profits targeted by a firm. Scholars have then been able to develop various theories seeking to explain capital structure of a firm as far as the financing of a business is concerned. Hughes (2013), indicates that capital structure can be related to profitability positively, negatively and even have a neutral relationship. Other studies done by Niresh and Velnampy (2014) showed that capital structure and profitability are negatively associated.

The empirical studies carried by Sarkar and Zapatero (2003) on capital structure and profitability also revealed a positive association between capital structure and profitability of the company. Goyal (2013) carried out a research in India with an attempt to investigate the relationship between capital structure and profitability of the firm, his study revealed that there was a positive correlation relationship existing between profitability and short term debt as a part of capital structure used in financing the business.

Capital structure of a firm refers to the combination of debt and equity that a firm uses to finance its business (Stretcher & Johnson, 2011). When it comes to capital structure decisions, managers are then concerned with determining the best financing mix or capital structure to finance the firm. The issue of capital structure has been a major concern in the financial economics since the insights of Modigliani and Miller (1958) indicated that when given homogeneous expectations of the firm, frictionless markets then the capital structure chosen by a company to finance its operations is irrelevant.

Various theories of financial economics seek to determine whether having an optimal capital structure does exist or not, and if it does exist what are the possible determinants (Seppa, 2011). According to Desai, Foley and Hines (2016), capital structure can have two effects whereby firms of the same class of risk can possibly have higher costs of capital as
well as a higher leverage and capital structure may also affect firm’s valuation in comparison with more leveraged companies being even more risker and consequently to be valued at lower value than the less leveraged companies in the industry.

When managers have the shareholder’s wealth maximization as their main objective, then capital structure becomes an important decision since it could lead to an optimal financing combination that maximizes the price per share of the company in its market (Ramjee & Gwatidzo, 2012). Debt and Equity financial instruments are the two major classes of liability, and the holders of debt and equity representing two kinds of investors in the company. Each of them is associated by various levels of risk, benefits and control in the firm. For debt holders the investors seem to exert lower control of the firm, and can a certain fixed rate of return which is protected by contractual obligations in respect to the investment being financed (Tarus & Ayabei, 2016). On the other hand equity holders become the residual claimants who bear most of the risk and have greater control over decisions regarding their financial interest within the firm (McCumber, 2015).

Having an appropriate capital structure for any firm is a critical decision that firms should undertake keenly when it comes to financing of the business operations. Managers in various organizations have many opportunities of exercising their discretion in respect to capital structure decisions (Jiao, 2013). The capital structure deployed in the firm may not necessarily be for value maximization of the company it could also be for protecting the interests of the manager especially in companies where financing decisions are dictated by managers as well as the shares being held in the company (Thiele & Wendt, 2017).

Profitability on the other hand, it refers to the ability of a firm to consistently generate a net income from its operations (Adjapong & Padachi, 2016). One of the key goal of most businesses is profit maximization and managers are constantly making choices that can result to an increase in companies ‘profits and avoid those choices that can have a negative impact on profitability. Profitability of a company is affected by various factors like the capital structure of a firm, the size of the company, competition, the inflation rates and others to just mention a few. Profitability can be measured by the use of ratios that can assist in the summarizing a large volume of financial data into meaningful financial figures (Menicucci, 2016). Many stakeholders compute the profitability ratios in establishing its capacity to generate income which is regarded as an indicator of the company’s performance. Some of the profitability rations include: Return on Equity (ROE) which is
an indication of the return shareholders earn from their funds, Return on Capital Employed (ROCE) determines the ability of the firm to generate the returns for the risk takers of the business (owners) and the gross profit mark up being the net of the revenues and the cost of goods sold (Bryant, 2015).

The Energy and Petroleum Sector in Kenya consist of the companies that are involved in the distribution and marketing of petroleum products and selling of other forms of energy in the Kenyan market. The industry has both the local firms and international corporations driving the sector of energy and petroleum in Kenya, and all of these firm’s are being regulated by the Kenyan Energy Regulatory Commission. The sector is governed by the Kenyan law that covers the operations from importation of crude oil, refining process and retailing of oil products. The sector is dominated by three major players making it more of an oligopoly in nature, the three dominant players command a share of 57% of the total market share which is divided among Total Kenya with highest market share of about 23%, Vivo Energy with 19% and the remaining 15% by KenolKobil according to the report by PIEA (2014), there are other forms of energy such as electricity and the geothermal which are distributed by two players in the Kenyan market that is KPLC and KenGen which qualify as a monopoly in the energy sector. The industry is strongly driven by price control measures, strong taxation structure and common non-differentiated products (NSE, 2016).

Locally, financial performance of the energy and petroleum sector depend on all the variables that influence profit of a company including the working capital that a firm has in financing its operations. The inability of a company to meet its obligations lead to a disruption of its distribution and marketing activities, hence, leading to losses. The sector is faced by a few challenges and these range from high initial investment and operational costs most of it caused by poor infrastructure in the country, unfavourable regulations from the government, exchange rate volatility, tax administration and the burden of the government (Karani, 2015).

1.2 Statement of the Problem

Capital financing is a global challenge that all firms operating in the business environment face and can only be resolved by having a good combination of debt and equity to finance the operations of the business (Macharia, 2015). In the global context, there is lack of an agreement on the effects of capital structure on profitability both from the theoretical
aspects as well as the empirical studies carried out by scholars. Previous research carried in Kenya have established a positive relationship between capital structure and profitability of listed firms such include; Kiprop (2013) found a positive relationship between capital structure on the value of firm’s listed in the Nairobi Securities Exchange. Similarly Macharia (2015) found a positive relationship between capital structure and profitability of allied firms in Kenya. An empirical study carried out by Nirajini and Priya (2013) showed a positive correlation between capital structure and profitability on listed trading companies in Sri Lanka. Marandu and Sibindi (2016) also revealed a strong relationship exist between profitability and banks specific capital structure determinants that is capital adequacy, credit risk and deposit size in South African Banks.

On the other hand, empirical evidence on the same is proving to be inconsistent and quite varied as much as the effect of capital structure on profitability is concerned. A study done by Myers and Majluf (1984) indicated that there is a negative correlation between capital structure and profitability since companies would rely mostly on retained earnings for expansion operations rather than relying on the external financing which is regarded expensive and costly for most firms regardless their market position in the industry (Adjapong & Padachi, 2016). Regionally studies on capital structure and how it impacts profitability have been conducted, Musah (2017) revealed that short term debt ratio and long term debt ratio are negatively related with profitability of banks in Ghana.

Similarly, other results have also established no significant relationship. For instance, Gichuni (2016) found no relationship between the choice of capital structure and financial performance of the Kenyan listed firms. Based on the findings of Berger and Patti (2006) capital structure used by a firm could be a factor that influence their profitability trend. Based on the contrast in the emperical research the researcher decided to examine the effects of capital structure on profitability of energy and petroleum companies listed in Nairobi Securities Exchange.

1.3 Purpose of the Study

The purpose of this study was to establish the effects of capital structure on Return on Asset (ROA) of energy and petroleum companies listed in the Nairobi Securities Exchange.
1.4 Research Questions

The following questions guided this study.

1.4.1 Is there a link between debt financing and ROA of energy and petroleum firms’ listed at Nairobi Securities Exchange?

1.4.2 What is the relationship between equity financing and ROA of energy and petroleum firms’ listed at Nairobi Securities Exchange?

1.4.3 What is the effect of debt-equity on ROA of energy and petroleum firms’ listed at the Nairobi Securities Exchange?

1.5 Significance of the Study

This study will be significant to the following beneficiaries.

1.5.1 Energy and Petroleum Firms’ listed at NSE

All the five listed energy and petroleum firms in the Nairobi Securities Exchange will benefit from this study as they gain insights on how capital structure can have effects on their profitability as well as being able to determine an ideal combination of debt-equity that enhances their profitability.

1.5.2 Scholars and Academicians

Scholars and academicians that seek to gain knowledge and information on research in the area of capital structure of firms in relation to their profitability, they can rely on the findings of this study and they can also use the findings of this study in testing hypothesis.

1.5.3 Energy and Regulation Authority

The Energy and Petroleum industry can benefit from the findings of this study by formulating financial strategies and policies that will guide their capital structure and determine the ideal combination of debt-equity that can enhance profitability of their firms. The industry will also be able to know the effects of capital structure on profitability as far as their asset financing is concerned in supporting business operations.
1.5.4 Ministry of Petroleum and gas

The ministry of Petroleum and gas will benefit from the findings of this study by formulating policies that will guide the players in the sector enhance profitability of their firms. The ministry will also be able to know the factors affecting the profitability of firms in the sector.

1.6 Scope of the Study

This study sought to examine the effects of capital structure on profitability of the energy and petroleum firms listed in the Nairobi Securities Exchange. This study targeted the five listed energy and petroleum firms in the NSE, the firms include; Kenol Kobil Ltd, Total Kenya Ltd, KenGen Ltd, Kenya Power & Lighting Company Ltd, and Umeme Ltd. The data of this study was drawn from published financial statements of these firms and was obtained from the website of NSE for the study.

The study did not cover all the players in the sector but rather focused on five listed energy and petroleum firms. For the profitability, the main variables for analysis did not include share prices and dividend payment.

The study took place between January and April 2019 and was limited to establish the effects of capital structure on profitability of energy and petroleum companies listed in the Nairobi Securities Exchange.

1.7 Definition of Terms

1.7.1 Capital Structure

Capital structure of a firm refers to the combination of debt and equity that a firm uses to finance its business (Stretcher & Johnson, 2011). Capital structure on the other hand is how a company finances its overall business operations and growth by using different sources of funds (Bhat, 2016).

1.7.2 Energy Industry

According to the Nirajini and Priya (2013) the energy industry refers to the totality of all the firms involved in the production and the sale of energy, including extraction of fuel,
manufacturing, refinery and distribution of energy products. In Kenya however, this is limited to electricity and fuel distribution companies.

1.7.3 Nairobi Securities Exchange (NSE)
The Nairobi Securities Exchange refers to the leading financial market in the East African region that is based in the Kenyan capital Nairobi with a six decade heritage since its establishment supporting the listing of equity and debt securities (NSE, 2016).

1.7.4 Energy and Petroleum Companies Listed in NSE
These are companies that deal with the production and selling of energy including the extraction of fuel, manufacturing, refinery and distribution of energy products and their shares are publicly traded (NSE, 2016).

1.7.5 Return on Asset
Return on assets is a profitability ratio that provides how much profit a company is able to generate from its assets. In other words, return on assets (ROA) measures how efficient a company's management is in generating earnings from their economic resources or assets on their balance sheet (George & Hwang, 2010).

1.7.8 Return on Interest
Return on investment (ROI) is a ratio between the net profit and cost of investment resulting from an investment of some resources. A high ROI means the investment's gains favorably to its cost (Gichuni, 2016).

1.8 Chapter Summary
The background of the study on the effects of capital structure on profitability of energy and petroleum firms in the Kenyan industry has been presented in this chapter. The statement of the problem to which the study seeks to address has been highlighted in the second section of this chapter. The research questions guiding the study, the significance of the study and definition of terms used in the study have also been presented. The next chapter presents literature review. Chapter three provides a discussion of the research methodology that will be employed in the research while chapter four presents the study results and findings. Chapter five is the last chapter of the study and presents the study summary conclusion as well as the recommendations.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction
This chapter covers the literature review on the effects of capital structure on profitability based on the research questions introduced in chapter one. The research questions include; what is the relationship of between debt financing and profitability, followed by what is the relationship between equity financing and profitability and lastly what is the effect of debt-equity combination on financial performance. The chapter ends with a chapter summary highlighting all the major elements covered in the chapter.

2.2 Debt Financing and Return on Assets

2.2.1 Debt Financing and Profitability
Debt financing refers to a form of financing business operation through which a firm raises money for its working capital by selling and offering debt instruments to the individuals and institutional investors that have interest in investing into the business (Githaiga, 2015). In return for lending the money, individual and institutional investors become the creditors to the firms and they receive a promise which is the principal and interest on the debt that will be repaid (Chadha & Sharma, 2015). Business financing is a prior concern for any operating business and its financing is arranged before any business plans are made, hence, companies ought to either take debt financing as an option or equity financing making them major two financing options for most companies. According to Denis and McKeon (2011), debt financing involves borrowing of funds that must be repaid with an interest whereas equity involves raising of funds through selling shareholding interests in the firm.

Debt financing offers the firm to have the desired control over the business (Al-Najjar & Hussainey, 2011). The lenders of the business charge an interest for using the loan, but the lender does not have the mandate of dictating how the company should manage its business using the funds offered. The ownership of the company on the hand, remains completely in hands of the corporate directors and the shareholders of the firm, this means that the lenders will not be entitled to any profits that the business makes from running its operations (Denis & McKeone, 2011) but the borrowing firm is merely supposed to repay the loan within the agreed period of time. According to Cheong (2012), in his article “equity financing and debt financing” he indicates that debt financing is appropriate for firms which
pursue an aggressive growth strategy especially when firms have access to low interest rates. Though a firm might lose some of its assets when it is unable to pay the loan, the firm will not lose its corporate control or the ownership to outsiders. He further indicates that the companies that wish to make the use of debt as an option of financing their operations they should seek appropriate legal advice from professional lawyers and accountants for better informed financing decisions.

Companies use debt in financing their operations, because debt offers them a potential to increase the volume of their business operations and increase the average return on their equity funds, the use of debt has this effect only when the rate of return on the investment is greater than the rate of return on debt (Rashid, 2016). The borrowing company take an opportunity of using debt in the hope that it will elevate the company to a more valuable position, by increasing the turnover, hence, increasing profitability. A company gets a financial leverage opportunity when the rate of interest charged to the firm is lower that the internal rate of return for the company, in which case the company will be making enough to pay the interest charged and the principal repayment and retaining the surplus for the shareholders of the business (Karani, 2015). A firm could also experience a financial leverage risk that the returns of the company are not enough in sustaining the interest charged, this occurs when the rate of interest is higher than the internal rate of return of the company. Avoiding liquidation of the company may be forced to use part of the shareholder’s funds to repay their interest and principal which could lead to an erosion of the equity and eventually collapse of the business (Ebaid, 2013).

Debt financing on the other hand comes with a disadvantage whereby firms are required to pay back not only the principal payment of the loan but also the interest which may pose a financial burden to a firm as the amount requires to take part of the profits made (Denis & McKeone, 2011). This financial obligation of the company must then be treated as a liability on the firms’ statement of financial position. Since, firms will often take the option of borrowing funds to facilitate their business operations, the company may end up committing itself to unexpected large business expenses, hence, forcing it to transfer its holding rights to the creditors (Bhat, 2016). A firm may also be pressured to repay its loans with cash amount that they badly need for other business aspects, failure to that, the company’s operations will suffer posing a negative implication in its profits as well as its market share (McCumber, 2015).
Research conducted by Amjad and Sohail (2006), on the subject “the collision of financial structure on profitability in Pakistan Textile Segment” by the use of jury data from the financial statements of the firms listed on the Stock Exchange of Karachi. The research intend to establish the positive relationship that existed between short-term debt and profitability and the important negative relationship between the long-term debt and capital structure (Hussain, Shahid & Akmal, 2016). The findings of the research are to certain extent consistent to the previous studies as the negative relationship between the long term debt and profitability have the tendency to sport the leading pecking order theory. The relationship of short term debt and profitability on the other hand is in contrast attest with trade-off theory (Hussain, Shahid & Akmal, 2016).

When it comes to debt financing companies are also forced to go through the processing of securing loans. The process of securing a loan may require the company to pledge its properties as collateral for it to secure the loan (Doff, 2011). This remains with the lenders that if a firm fails to repay its loans, the lender can take the properties and sell them on the market with an attempt of recovering the value of the loan obligation. Thus, if a firm pledges its properties as collateral for the loans, and it is unable to pay the creditors back as agreed, then, the business may lose all of its significant corporate assets that generate profits (Yu, 2012). Similarly, if a firm pledges its personal assets like the company properties or a stock portfolio then it may lose them in paying back the business loans.

2.2.2 Debt and Return on Assets (ROA)

According to Doff (2011) funding a firm through debt financing rather than selling the firm’s stocks to attract capital from potential investors, avoids diluting the percentage of stakeholder’s ownership of the company, however, if there is a large capital portion supplied by the stakeholder’s investment, then the company has a better credit profile. When the shareholders of the company assume risk by funding the company with their own capital, a firm is likely to be more conservatively operated (Matemilola & Saini, 2013). If the company finances its operations through debt, the creditors then shoulder the risk, however, when the debt results in increased earnings, the return on shareholder investment become exponential (Ramjee & Gwatidzo, 2012).

Increased debt on the other hand has a potential of lowering revenues as more money is spent servicing the debt which may be expensive depending on the interest rates offered by
the creditors (Doff, 2011). If the debt acquired is used in increasing the firm’s production and the production leads to significantly increased revenues, the increased debt may then increase the Return on Assets. This depends on whether the burden of the debt is so costly and it cuts into the net income of the firm. If revenues rise due to debt financing of company’s production, but net income falls due to increased expense, then the Return on Assets declines.

Heidal, Khadaffi and Ummah (2016) analyzed the effect of Return On Asset, Return On Equity, Net Profit Margin, Debt To Equity Ratio and Current Ratio toward growth income either simultaneously or partially on automotive companies that were listed in Indonesia stock exchange. Independent variables used in this research were Return On Asset, Return On Equity, Net Profit Margin, Debt To Equity Ratio and Current Ratio and dependent variable in this research was growth incom. The data used in this research was secondary data as 55 samples with purposive sampling. The method used to analyze the relation between independent variable and dependent variable was multiple linear regression and classical assumption test. The findings of this research identified that simultaneously independent variables Return On Asset, Return On Equity, Net Profit Margin, To Equity Ratio and Current Ratio with F test, effected together to growth income significantly 0.000. While the result partially with T test, Return On Asset, Return On Equity, and Net Profit Margin to growth income with significance and positive of each was 0.029, 0.041 and 0.008. While Debt To Equity Ratio and Current Ratio to growth income with significance and negative of 0.008 and 0.001. Companies must be able to demonstrate a good performance, high growth potential, and delivered company information sufficient to investors about the company.

In another study Pradhan and Khadka (2017) examined the effect of debt financing on the profitability of the Nepalese commercial banks. The banks' profitability was measured in terms of return on assets, return on equity and net interest margin and these three are the dependent variables. The independent variables on the other hand included, short term debt to total assets, long term debt to total assets, total debt to total assets, debt to equity ratio and interest coverage ratio and size. The data was collected from various issues of Banking and Financial Statistics and Bank Supervision Report published by Nepal Rastra Bank and annual reports of selected commercial banks. The study was based on 148 observations from 22 commercial banks of Nepal for 2008 to 2014. The regression models estimated to
test the significance and importance of the effect of debt financing on profitability of Nepalese commercial banks showed a positive relationship of banks' profitability with short term debt to total assets, interest coverage ratio and size of the banks. This indicated that increase in short term debt to total assets, interest coverage and size lead to increase in bank profitability. However, profitability was negatively related to long term debt to total assets, total debt to total assets and debt to equity ratio. The regression result shows that beta coefficients were positive and significant for short term debt to total assets, interest coverage ratio and size of the banks with profitability. Whereas the beta coefficients were negatively significant for long term debt to total assets, total debt to total assets and debt to equity ratio with profitability.

Omollo, Muturi and Wanjare (2018) examined the effects of debt configurations namely short-term, long-term and total debt on firm financial performance measured as return on assets and return on equity of listed firms in Kenya. The study utilized a panel econometric techniques named pooled ordinary least squares (OLS), fixed effects (FE) and random effects (RE) to analyze the effects of debt on financial performance of 40 non-financial firms listed on the Nairobi Securities Exchange between 2009 and 2015. Empirical results indicated that short-term, long-term and total debt had a negative and statistically significant effects on returns on assets across OLS and RE. However, the debt measures had no significant effects on returns on equity across all estimation methods. It was concluded that financial managers should adjust debt levels to ensure that they operate at the optimum points. On the other hand, credit institutions should only finance businesses up to the point where profitability is maximized to mitigate against default risks associated with overleveraging

2.3 The Relationship between Equity Financing and Return On Asset

2.3.1 Equity Financing and Profitability

Equity financing is another option of funding the operations of the business through issuing of shares to potential investors with an attempt of supporting a firm’s business operations (Cheong, 2012). This method of financing is crucial during the initial stages of setting up the business whereby investors make gains when the company’s share price increases as well as through dividends distribution by the business in which investors have purchased a stake (Adjapong & Padachi, 2016). Equity financing gives businesses an alternative of
obtaining funding besides arranging for debt that can be obtained through banks or other financial companies.

Equity financing is offered by the owners of the company and it is the risk bearing finance. The holders of this funding option own portion of the company dominated in shares and they are entitled to dividend (González, 2014). However, it is not a mandate to pay dividends to the owners of the business all the times since the company can retain profits to finance its expansion strategy operations. Equity owner of any firm share the risks associated with the business and they are the last to benefit when a business is wound up after paying the debt holders (Ebaid, 2013).

A firm may use funds from business investors when it starts its business operations to cover up the initial costs of investment. The business may the use the cash flow from its business operations to directly grow the organization or to diversify into other areas. In response to this factor that is the investors tend to take a long-term view, and typically don’t expect an immediate return on their investment which allows the company to retain more money on hand to expand the business rather than having to pay a portion of their profits in repaying loans (Denis & McKeone, 2011). For that reason, equity financing is considered to be less risky than debt financing since the company do not have to pay pack its shareholders with principal and interests, it also makes it a good option when a business cannot afford to take on more debt (K’Akumu, 2016).

Equity financing helps companies in conferring legitimacy, through enabling firms in tapping into the networks of investors, hence, enhancing the credibility of the organization (Jiao, 2013). This funding option also offers additional advantages in terms of managing the business, some investors could be able to offer valuable business assistance that a firm may not be able to provide for itself. Prospective investors offer invaluable business assistance in the form of management expertise, business ideal contacts and other sources of capital (Matemilola & Saini, 2013). There is always a considerable number of investors and Venture Capitals that can assume the role of business advisors or even coming on board as fully part of the management team to drive the vision the organization has, especially in the initial start-up stage of the business (McCumber, 2015).

According to González (2014) the financial literature do not predict a clear impact of equity investments on the firm’s profitability since the portiflio theory indicates that investments
in equity is riskier than debt investments, those firms that increase the proportion of their investments in equity securities they can expect their portfolio in bringing up profits at a higher risk. The mere reference to the large variance of return on equity investments has been regraded as evidence of its incremental impact upon the firm’s portfolio. Based on this idea, various regualtors from different countries have justified that the regualtion sepabetes banking from trade as a tool in reducing the instability in the banking systems and the propbablity of the banking criris (Yu, 2012).

Apart from a simple substitution of debt for more risky properties in the banks’ asset portfolio, the presence of a commercial bank in the ownership of the borrowing company can modify the firm’s investment decision and give rise to additional increases on the expected returns and the risk of the bank as suggested by portfolio theory (González, 2014). Park (2012) take into the account the agency conflicts that takes place between the bank’s ownership of a commercial firm which may increase the bank’s risk and profitability. He further indicates that, the consequences of a progress in the company’s investment efficiency once the issues of under-investment and over-estimate of the company have been reduced, would then increase the banks’ profitability. The consequence of having a higher bank’s incentive on the other hand allow the company to undertake risky investments which would mean an increase in the risk of the bank. The participation in the earnings expected from risky investments can change the initial position that the bank would have in avoiding funds transfer when it is only a company’s creditor (Chadha & Sharma, 2015).

**2.3.2 Equity Financing and Return On Asset**

Tailab (2014) empirically sought to analyze the effect of capital structure on financial performance. Two main sets of variables were used for profitability, this include return on assets (ROA) as the ratio of net income to total assets, and return on equity (ROE) as the ratio of net income to total shareholders’ equity were adopted as a proxy for financial performance; and to indicate capital structure, short-term debt, long-term debt, total debt, debt to equity ratio, and firm’s size were used. A sample of 30 Energy American firms for a period of nine years from 2005 – 2013 was considered. Secondary data were collected from financial statements which were taken from Mergent online. The data were analyzed by using Smart PLS (Partial Least Square) version 3. Multiple regressions indicated that 10% of ROE and 34% of ROA were predicted by the independent variables. Findings also presented that the total debt had a significant negative impact on ROE and ROA, while size
in terms of sales had a significant negative effect only on ROE of the American firms. However, a short debt significantly had a positive influence on ROE. An insignificant either negative or positive relationship was observed between long term debt, debt to equity and size in terms of total assets and profitability. A generalization of the results was limited because of the small sample size.

Ahmad (2015) investigated the effect of capital structure on the financial performance of the 17 nonfinancial companies listed in the Bahrain Bourse. The investigation was performed using 5 years data for the period from 2009 to 2013. The impact of some key macroeconomic variables (gross domestic product growth and inflation rate) on the performance of the firm was also considered in this study. Multiple regressions represented by ordinary least squares (OLS) were used to examine the effect of the independent variables (capital structure, inflation rate and GDP growth) on the financial performance measures used (ROA, ROE, EPS, and Dividend Yield)). Capital structure is encapsulated by total liabilities to total assets (TLTOTA) and total equity to total assets (EQTOTA). The results indicate that capital structure, represented by total liability to total assets, has a significantly positive impact on the performance of the firm represented by ROE, but not by ROA, EPS, and DIYILD. The results also indicate that lagged performance measures of ROA, ROE, EPS, and DYIELD had a significantly positive influence on the current year’s performance measures of the firm. Moreover, the results indicate that lagged macroeconomic variables of inflation had a significant negative relationship with certain performance measures (ROA, ROE, and EPS). Furthermore, the results indicate that gross domestic product growth (GDGP) had a significantly negative relationship with financial performance measured by EPS, but not those measured by ROA, ROE and DYIELD.

Rosikah, Dwi, Dzulfikri, Muh and Miswari (2018) research study sought to Identify and analyze the effect of the Return on Assets to firm value, identify and analyze the influence of Return on Equity to firm value, identify and analyze the influence of Earning Per Share on firm value. And identify and analyze the effect of ROA, ROE, EPS simultaneously on firm value. The population in this study were 114 companies listed on the Indonesia Stock Exchange (BEI) in 2006-2010. While the selection of samples was done by using purposive sampling method with the purpose of obtaining representative samples in accordance with specified criteria, Based on the mentioned criteria then the amount of the final sample had complete data in this study a total of 32 companies were selected. Primary data were
processed using multiple regression analysis to measure the effect of independent variables consisting of: ROA, ROE, EPS indicator of the value of the firm with Tobin's Q. The findings indicated that Return on Asset had a positive and significant effect on firm value, Return on Equity had a positive but not significant effect on firm value. In addition, Return on Assets, Return on Equity, Earnings Per Share simultaneous significant effect on firm value.

Sorana (2015), research aimed to establish the relationship between capital structure and financial performance in 196 Romanian companies listed on the Bucharest Stock Exchange and operating in the manufacturing sector, over a period of eight-years (2003-2010). The analysis was based on cross sectional regressions. The capital structure indicators refered to long-term debt, short-term debt; total debt and total equity, while return on assets and return on equity are the performance proxies. Results indicated that performance in Romanian companies is higher when they avoid debt and operate based on equity. However, it seems that manufacturing companies do not have sufficient internal funding to undertake profitable investments and do not use their assets effectively. During times of increased taxes and inflation profitable companies divest part of their assets reducing their costs. There is an indication of risk-taking behavior across manufacturing companies. This show a preference for debt when they are in financial difficulties and they face high business risks, or when they cannot settle their debts due to a lack of cash. Due to missing data regarding long-term debt ratios, those regression results are not statistically significant. Moreover, the regression models referring to return on equity explain a reduced proportion of its variation.

In Kenya, Maina (2014) study sought to establish the effect of capital structure on financial performance of small and medium enterprises in dairy sector in Kiambu County. Causal research design was used to carry out this study. The population of study was all the 71 dairy SMEs in Kiambu County as at 31st December 2013. Probability sampling techniques was employed in this research to select a sample of 50 (70%). The study used secondary data from the SMEs annual reports and newsletters. The study used multivariate regression and correlation analysis for data analysis and results presented in tables. The independent variable was capital structure (debt equity ratio; debt asset ratio and liquidity) while dependent variable was dairy SMEs financial performance (ROA).The results indicate that Debt equity ratio was significant at 5% level of significance (0.009). The estimate of
coefficient value for Debt equity ratio was -0.179; Debt asset ratio was significant at 5% level of significance (0.006) with estimate of coefficient value of 0.195 whereas liquidity ratio was significant at 5% level of significance (0.01) with coefficient value of 0.012 which indicates that the three factors are predictors of financial performance of small and medium enterprises in dairy sector in Kiambu County.

Saeedi and Mahmoodi (2011) study examined the relationship between capital structure and firm performance. The study used four performance measures (including return on assets, return on equity, earning per share, and Tobin's Q) as dependent variable and three capital structure measures (including long-term debt, short-term debt and total debt ratios) as independent variable. The investigation was performed using panel data procedure for a sample of 320 listed companies in the Tehran Stock Exchange (TSE) over the period 2002-2009. The results indicate that firm performance, which is measured by EPS and Tobin's Q, was significantly and positively associated with capital structure, while reporting a negative relation between capital structure and ROA. Moreover, there was no significant relationship between ROE and capital structure. Altogether, the research offered evidence that indicated that the firm performance was either positively or negatively related to capital structure.

2.4 Debt-Equity Structure and Profitability

2.4.1 Debt Equity and Profitability

The relationship between capital structure and profitability is actually on of the most puzzling phenomenon in the field of corporate finance (Brounen & Eichholtz, 2015). The concept of capital structure is generally described as the combination of equity and debt making the total capital that is used in financing the firm’s operations. According to Desmond and John (2013), the amount of debt to that of equity seem to be a strategic choice for various corporate managers within the company, since, decisions concerning capital structure is crucial as the profitability of a company is directly affected by such kind of decisions, hence, calling for proper care and the attention to be given in the capital structure determining decisions. Since, the affairs regarding the statements of any firms are vital, the position of the firm regarding all kinds of liabilities, assets, and capital tend to be vital part of the company’s statements (Desai, Foley & Hines, 2016).
The debt-equity combination of a company is generally a combination of the equity shares, preference shares (Chadha & Sharma, 2015). Attention should then be given as long as the combinations of capital structure is concerned, without a planned ideal capital structure, companies might fail to utilize the allocated funds. Consequently, it is being realized that a company should always plan its capital structure in order to maximize the use of allocated capital and enable it to adapt more easily to the business turbulent environment (Pandey, 2013). A study carried out by Ebaid (2013) on the relationship between the different combinations of debt-equity with a firm’s financial performance, a multiple regression analysis technique was used in finding out the impact of debt policy on firm’s performance whereby findings revealed that short-term debt and total debt are negatively related by Return on Assets of the company. Capital structure with inclusive of total debt is not significantly related with Return on Equity and the Gross Profit Margin. The findings also revealed that return on assets and the company’s financial performance are negatively related.

Capital structure plays an important role in determining the company’s future growth, sustainability and its financial performance (Hussain, Shahid, & Akmal, 2016). It is observed that the investors are highly concerned in the profits of listed in the securities exchange. The empirical evidence is giving little indication of identifying the causes of the relationship between capital structure of the firm and its profitability, despite, the belief that transactions and bankruptcy (Agrawal & Nagarajan, 1990) costs are playing a critical role in the choice of debt to equity financing. The debt or equity ratio is commonly used to measure capital structure while other ratios such as earning per share, operating profit margin, return on equity are used as the proxies for firm performance. These ratios are used in studying the relationship between capital structure and profitability in the context of large private firms in Pakistan (Rafique, 2011).

Another study conducted by Madan (2017) with the aim of investigating the relationship between capital structure and the overall financial performance of Indian firms which also assessed the capital structure. The study further analysed how various debt-equity combinations play a significant role in the firm’s financial performance as well as the expansion strategy. The findings of the study revealed that higher and lower gearing ratios are not enviable for the companies. Firms that operate at a break-even point use debt in capital structure in insuring profitability, Indian companies use 30 percent out of 70 percent
or 40 percent out of 60 percent of debt and equity combination which is fulfilled through the reserves and surplus and capital.

Recent studies have collaborated Modigliani and Miller theory indicating that indeed capital structure of the firm is relevant in performance determination of any firm (Njeri & Kagiri, 2013). Modigliani and Miller modified the earlier capital structure irrelevance theory whereby they argue that capital structure do not matter in determining the value of a company (Chadha & Sharma, 2015). The theory based on the argument that the use of debt tend to offer a tax shield, based on this notion, companies could choose for an all-debt capital structure to finance their business operations. Brigham and Gapenski (2012), they argued that the Miller-Modigliani theory hold to be true only in theory, however, in practice, bankruptcy costs exist and are likely to even increase more when equity is traded off for debt.

According to Halov and Heider (2012) a standard pecking order can be a special case of the adverse selection. When there is adverse selection about the value of the company, companies prefer to issue debt over equity and the standard picking order model is applied. But there is information asymmetry about the risk involved, when adverse selection arguments for debt are applied companies prefer to issue equity over debt, that is adverse selection can lead to a preference for an external debt or external equity depending on whether problems associated with information asymmetry value risk. Pecking order theory presents the ideology that companies will initially rely on the internal generated funds that is undistributed earnings, where there is no existence of information asymmetry and then will turn to debt when additional funds are needed, eventually issuing equity being the last option to cover any capital remaining requirements (Njeri & Kagiri, 2013). The order of preference in capital financing reflects relative costs of the various financing choices a firm has (Hughes, 2013).

According to Menicucci (2016) a firm would borrow the amount up to the point where its marginal value of tax shields on the additional debt is offset through an increase in the present value of the possible costs associated with financial distress. Trade off theory attempts to explain the friction that occurs between costs of financial distress and the tax deductibility of finance costs (Njeri & Kagiri, 2013). It suggests that companies’ trade-off is based on several aspects among them being offsetting these considerations by the tax benefits encouraged by debt use of the firm and the final capital structure adopted by the
company will be a trade-off between the tax benefits and the costs associated with bankruptcy and agency (Brounen & Eichholtz, 2015).

The trade-off theory is significant to the study as it indicates that there is a target or the optimal debt-equity ratio for a company which varies only as the benefits and costs alter over time (Karani, 2015). The main advantage of debt is the tax benefit of interest deductibility, primary costs on the other hand are those that come along with financial distress and the personal tax expense bondholders incurred when interest income is received (Sarkar & Zapatero, 2003). The trade-off theory of the capital structure therefore attempts to forecast that companies will choose their mix of debt and equity financing to balance costs and advantages of the debt. The tax benefit associated with debt and control of free cash flows issues tend to push companies in using more debt to finance their operations while bankruptcy costs and agency problems can provide firms with incentives of using less (Bhat, 2016). The trade-off theory has received criticism on the basis that it is not adequately descriptive in observing capital structure (Ebaid, 2013).

Modigliani and Miller (1958) on the hand, indicate that the attractiveness of debt will decrease with personal tax on the interest income. A company experiences financial distress when it is unable of coping up with the debt funders’ obligations. If the company continues in failing to make payments to the debt holders, the company can be forced into insolvency (Al-Najjar & Hussainey, 2011). This can be explained better by the costs of financial distress and agency costs, because in reality costs associated with bankruptcy can be quite onerous and can be brought not only when bankruptcy proceedings are in the firm but also when bankruptcy threats are imminent (Ramjee & Gwatidzo, 2012). Companies that experience bankruptcy problems seem to have high legal and accounting related expenses, potential loss of customers, and ad cost of debt covenants causing an inability to conduct business. The trade-off theory then tries to incorporate the costs of financial distress into the capital structure of the firm. The relationship between financial leverage and financial performance, he found out that there exist a positive correlation between debt equity ratio and return on assets and an inverse relationship between debt equity ratio and the net profit margin, return on equity and earnings per share (Rehman, 2013).

With an effort of validating Modigliani and Miller theory in the Kenyan context, a research was carried out by Maina and Kondogo (2013) to investigate the effect of debt-equity ratio and financial performance of companies listed in the Nairobi Securities Exchange. A census
was done by taking a sample of all the firms listed at NSE from the year 2002-2011. The study revealed a negative relationship between the capital structures that is debt to equity ratio with all the measures of performance.

2.5 Chapter Summary
This chapter presented the literature review based on the research questions with its first section covering the relationship that exist between debt financing and profitability, followed by the relationship of equity financing and profitability and lastly the effect of equity-debt combination on financial performance. The next chapter presents the research methodology of this study.
CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction
This chapter presents the research methodology that was used in conducting the study. The chapter discusses the research design adopted, population of the study, sampling frame, sampling technique and the sample size. The chapter discusses data collection tools that will be used, research procedures, data analysis and presentation methods that was used in the study.

3.2 Research Design
Research design refers to the framework or a plan of gathering and examining proof that makes it feasible in answering the research questions of the study (Janes, 2015). According to McGrath and O’Toole (2012) research design is an approach that is used in providing answers to the research problem. A research design of a study integrates all the parts of the research process from the moment point of interest of the information gathering to the choice procedures of data analysis.

This study adopted a Causal research design that assisted the researcher to establish and measure the correlation between capital structure and profitability (Simpson, 2014). Burns and Bush (2006) explains that causal studies focus on an analysis of a situation or a specific problem to explain the patterns of relationships between variables. Experiments are the most popular primary data collection methods in studies with causal research design. The presence of cause-and-effect relationships can be confirmed only if specific causal evidence exists.

Burns and Bush (2006) adds that causal studies may play an instrumental role in terms of identifying reasons behind a wide range of processes, as well as, assessing the impacts of changes on existing norms, processes etc. Causal studies usually offer the advantages of replication if necessity arises. This type of studies are associated with greater levels of internal validity due to systematic selection of subjects.
3.3 Population and Sampling Design

3.3.1 Population

According to Asogwa (2014) population is defined as the aggregate collection of measurements, objects or individuals that constitute the total of all the possible metrics within the scope of the study. The population of this study was made up of five (5) firms listed under the sector of Energy and Petroleum in the Nairobi Securities Exchange that include KenolKobil Ltd, Total Kenya Ltd, KenGen Ltd, Kenya Power & Lighting Ltd and Ummeme Ltd. The items of interest from these firms included net income, shareholders equity, total assets, total liabilities and total capital.

3.3.2 Sampling Design

Sampling design is the procedure that the researcher uses in selecting the elements or units from the target population that will form the sample of the study (Lavrakas, 2011).

3.3.2.1 Sampling Frame

Sampling frame refers to the complete list or device that defines the population of interest in the study (Copeland, 2017). Sampling frame defines the elements from which a researcher is able to draw a sample from. The sampling frame for this study was all the five Energy and Petroleum firms listed in Nairobi Securities Exchange. These firms are KenolKobil Ltd, Total Kenya Ltd, KenGen Ltd, Kenya Power & Lighting Ltd and Ummeme Ltd as listed in the Nairobi Security Exchange (NSE).

3.3.2.2 Sampling Technique

Sampling technique is the method used in ensuring that all the groups or objects of the target population are well represented in the final selected sample (Salkind, 2012). This study used a census technique to make sure that all the five energy and petroleum firms listed in NSE are well represented in the final sample. The study adopted a census technique since the target population was small, this is the appropriate method since the census technique is less compelling when the study population is small and there is high variability within the target population (Cooper & Schindler, 2014).
3.3.2.3 Sample Size
Sample size is the smallest unit of elements or items that represents the entire target population and the researcher can draw inferences from it (Cooper & Schindler, 2014). Since the study uses census technique, all the five (5) Energy and Petroleum firms listed in NSE was used as a sample. The Nairobi Securities Exchange provided the list of energy and petroleum firms listed.

3.4 Data Collection Methods
Data collection can be defined as the systematic process that the researcher uses in gathering either primary or secondary information from the target respondents (Lavrakas, 2011). This study used secondary data in addressing the research problem in manner that is logic and coherent to aid significant decision-making. Secondary data of the five energy and petroleum companies was obtained from NSE published financial statements and financial statements of the respective firms. The items data collected included net income, shareholders equity, total assets, total liabilities and total capital. The study used a checklist in gathering the secondary data from the five energy and petroleum companies listed in NSE and this was aimed at collecting data on Debt, Equity capital and ROA.

3.5 Research Procedures
Since the study relies on the secondary data sources, the researcher tested the data with an attempt of validating the effectiveness of the data obtained from the five energy and petroleum firm listed in NSE. Any weaknesses identified in the data collection tool, changes was made to make sure that is sufficient in collecting secondary data. The researcher sought authority form the Nairobi Securities Exchange to allow for the conducting the study based on its published information on the five energy and petroleum listed companies. A checklist was used in gathering data from the audited financial statements of the five energy and petroleum from the NSE. The data was keyed into the Statistical Package for Social Sciences (SPSS) software to analyse data on capital structure and profitability.

3.6 Data Analysis Methods
Data analysis refers to the process through which the researcher converts raw data that has been gathered from the respondents into a meaningful information that answers the research questions of the study (Cooper & Schindler, 2014). This study made use quantitative data. Quantitative data collected was coded and evaluated by using descriptive statistics by
documenting the mean and standard deviation among the variables in the study. Inferential statistics was also be used in documenting correlation and regression analysis between study variables. Data was presented in tables and figures.

The dependent and independent variables was presented in the following formula.

\[ Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + e \]

Where;

\[ \begin{align*} Y &= \text{ROA} \\
X_1 &= \text{Debt to Capital} \\
X_2 &= \text{Equity to Capital} \\
X_3 &= \text{Debt to Equity} \end{align*} \]

\( \beta_0, \beta_1, \beta_2, \beta_3 \) = Coefficients representing to Debt financing, Equity financing, and Debt equity.

3.7 Chapter Summary

Chapter three has presented the research methodology that guides the researcher on how to carry out the study. The chapter has presented the research design for the study, the study population and sampling design covering the sampling frame, sampling technique and the sample size of five energy and petroleum companies listed in NSE. Data collection methods, research procedures and data analysis methods have been presented in this chapter. The next chapter presents the results and findings of this study.
CHAPTER FOUR

4.0 RESULTS AND FINDINGS

4.1 Introduction

This chapter presents the research findings on the effects of capital structure on ROA of energy and petroleum companies listed in the Nairobi Securities Exchange.

4.2 General Information

4.2.1 Descriptives Statistics for Kenol Kobil

A review of the descriptive Statistics for Kenol Kobil indicated that ROA was distributed with a mean of 9.54 and standard deviation of 0.866 and was negatively skewed (1.673). While the capital was distributed with a mean of 1308477 and standard deviation of 12747172. And was negatively skewed (1.1146) and the results are shown in Table 4.1

Table 4.1: Descriptives Statistics for Kenol Kobil

<table>
<thead>
<tr>
<th>Year</th>
<th>ROA</th>
<th>DEBT</th>
<th>EQUITY</th>
<th>CAPITAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>9.96</td>
<td>4,464,496</td>
<td>8,555,639</td>
<td>2,044,142</td>
</tr>
<tr>
<td>2016</td>
<td>8.55</td>
<td>7,013,213</td>
<td>9,865,151</td>
<td>3,612,920</td>
</tr>
<tr>
<td>2017</td>
<td>10.11</td>
<td>7,162,987</td>
<td>7,525,627</td>
<td>-1,731,630</td>
</tr>
<tr>
<td>Mean</td>
<td>9.54</td>
<td>6213565</td>
<td>8648806</td>
<td>1308477.333</td>
</tr>
<tr>
<td>SD</td>
<td>0.860639</td>
<td>1516589</td>
<td>1172541</td>
<td>2747172.283</td>
</tr>
<tr>
<td>skew</td>
<td>-1.67305</td>
<td>-1.71307</td>
<td>0.355299</td>
<td>-1.118637947</td>
</tr>
</tbody>
</table>

4.2.2 Descriptives Statistics for Total Kenya

A review of Total Kenya limited data revealed that the Mean ROA value was 7.13 and a standard deviation of 0.9824. The data was negatively skewed (0.364). Similarly, the Debt for the research period had a mean of 4347198 and was spread with a standard deviation value of 723358.89. Debt and Equity were the only variables that recorded positive skewness as shown in Table 4.2
Table 4.2: Descriptives Statistics for Total Kenya

<table>
<thead>
<tr>
<th>Year</th>
<th>ROA</th>
<th>DEBT</th>
<th>EQUITY</th>
<th>CAPITAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>8.07</td>
<td>4,069,010</td>
<td>17,599,746</td>
<td>8,053,205</td>
</tr>
<tr>
<td>2016</td>
<td>6.11</td>
<td>3,804,232</td>
<td>19,349,290</td>
<td>9,945,438</td>
</tr>
<tr>
<td>2017</td>
<td>7.21</td>
<td>5,168,353</td>
<td>21,417,219</td>
<td>11,222,836</td>
</tr>
<tr>
<td>Mean</td>
<td>7.13</td>
<td>4347198.333</td>
<td>19455418.33</td>
<td>9740493</td>
</tr>
<tr>
<td>SD</td>
<td>0.982446</td>
<td>723358.924</td>
<td>1910948.048</td>
<td>1594723.176</td>
</tr>
<tr>
<td>skew</td>
<td>-0.364</td>
<td>1.474646144</td>
<td>0.249145695</td>
<td>-0.56876367</td>
</tr>
</tbody>
</table>

4.2.3 Descriptives Statistics for KenGen

A review of the ROA for KenGen limited revealed the ROA had a mean of 0.1567 and was evenly spread with a standard deviation of 0.0058. Results show that only Debt and Capital had a positive skew value. The findings also show that ROA and Equity were negatively skewed as shown in Table 4.3

Table 4.3: Descriptives Statistics for KenGen

<table>
<thead>
<tr>
<th>Year</th>
<th>ROA</th>
<th>DEBT</th>
<th>EQUITY</th>
<th>CAPITAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>0.15</td>
<td>137191309</td>
<td>141594091</td>
<td>-1111000</td>
</tr>
<tr>
<td>2016</td>
<td>0.16</td>
<td>126149009</td>
<td>172742682</td>
<td>3726361</td>
</tr>
<tr>
<td>2017</td>
<td>0.16</td>
<td>127884286</td>
<td>183162785</td>
<td>9546172</td>
</tr>
<tr>
<td>Mean</td>
<td>0.156666667</td>
<td>130408201.3</td>
<td>165833186</td>
<td>4053844.333</td>
</tr>
<tr>
<td>SD</td>
<td>0.005773503</td>
<td>5938072.817</td>
<td>21628567.48</td>
<td>5336128.068</td>
</tr>
<tr>
<td>skew</td>
<td>-1.732050808</td>
<td>1.567136052</td>
<td>-1.290864121</td>
<td>0.275129183</td>
</tr>
</tbody>
</table>

4.2.4 Descriptives Statistics for Umeme

A review of the ROA for Umeme limited revealed ROA had a mean of 1.28 and distributed with a standard deviation of 0.072. A review of the skewness show that ROA and Debt were positively skewed as indicted in Table 4.4
Table 4.4: Descriptives Statistics for Umeme

<table>
<thead>
<tr>
<th>Year</th>
<th>ROA</th>
<th>DEBT</th>
<th>EQUITY</th>
<th>CAPITAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>1.36</td>
<td>477160</td>
<td>149178</td>
<td>1723</td>
</tr>
<tr>
<td>2016</td>
<td>1.22</td>
<td>578416</td>
<td>624276</td>
<td>-70483</td>
</tr>
<tr>
<td>2017</td>
<td>1.26</td>
<td>460960</td>
<td>617669</td>
<td>-284080</td>
</tr>
<tr>
<td>Mean</td>
<td>1.28</td>
<td>505512</td>
<td>463707.7</td>
<td>-117613</td>
</tr>
<tr>
<td>SD</td>
<td>0.072111</td>
<td>63654.18</td>
<td>272410.7</td>
<td>148616.3</td>
</tr>
<tr>
<td>skew</td>
<td>1.15207</td>
<td>1.606697</td>
<td>-1.7309</td>
<td>-1.28355</td>
</tr>
</tbody>
</table>

4.2.5 Descriptives Statistics for Kenya Power and Lighting

A review of the ROA for Kenya power limited revealed that ROA had a mean of 0.739 and a standard deviation of 0.0399. At the same time, ROA, Debt and Capital had a positive skewness as shown in Table 4.5

Table 4.5: Descriptives Statistics for Kenya Power

<table>
<thead>
<tr>
<th>Year</th>
<th>ROA</th>
<th>DEBT</th>
<th>EQUITY</th>
<th>CAPITAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>0.78</td>
<td>99289403</td>
<td>59204080</td>
<td>20463293</td>
</tr>
<tr>
<td>2016</td>
<td>0.73</td>
<td>105017783</td>
<td>65615837</td>
<td>-763644</td>
</tr>
<tr>
<td>2017</td>
<td>0.71</td>
<td>111075216</td>
<td>69961655</td>
<td>-9971873</td>
</tr>
<tr>
<td>Mean</td>
<td>0.739</td>
<td>105127467.3</td>
<td>64927191</td>
<td>3242592</td>
</tr>
<tr>
<td>SD</td>
<td>0.0399</td>
<td>5893672.031</td>
<td>5411749</td>
<td>15608084</td>
</tr>
<tr>
<td>skew</td>
<td>1.1767</td>
<td>0.08372</td>
<td>-0.5634</td>
<td>1.07895</td>
</tr>
</tbody>
</table>

4.3 Debt Financing and ROA of Energy and Petroleum Firms

4.3.1 Descriptive Statistics of Debt Financing

A review of the debts held by the firms in the period 2015-2017 revealed that KenGen had the highest mean while Umeme had the least. A review of the skewness values indicated that all companies had a positive skew values except Kenol Kobil which was negatively skewed.
Table 4.6: Descriptive Statistics of Debt Financing

<table>
<thead>
<tr>
<th>Company</th>
<th>KenolKobil Ltd</th>
<th>Total Kenya</th>
<th>KenGen</th>
<th>Umeme</th>
<th>Kenya Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>6,213,565.33</td>
<td>4,347,198.33</td>
<td>130,408,201.3</td>
<td>505,512.</td>
<td>105,127,467.3</td>
</tr>
<tr>
<td>Median</td>
<td>7013213.00</td>
<td>4069010.00</td>
<td>127884286.00</td>
<td>477160.00</td>
<td>105017783.00</td>
</tr>
<tr>
<td>Mode</td>
<td>4464496.00</td>
<td>3804232.00</td>
<td>126149009.00</td>
<td>460960.00</td>
<td>99289403.00</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>1516588.51</td>
<td>723358.89</td>
<td>5938072.82</td>
<td>63654.18</td>
<td>5893672.03</td>
</tr>
<tr>
<td>Skewness</td>
<td>-1.713</td>
<td>1.475</td>
<td>1.567</td>
<td>1.607</td>
<td>.084</td>
</tr>
</tbody>
</table>

a. Multiple modes exist. The smallest value is shown

4.3.2 Descriptive Statistics of Debt to Capital

A review of the debts/capital held by the firms in the period 2015-2017 revealed that Umeme had the highest mean while Kenya power had the least. At the same time, KenolKobil, Kengen and Kenya Power had negative values as shown in Table 4.7.

Table 4.7: Descriptive Statistics of Debt to Capital

<table>
<thead>
<tr>
<th>Company</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>KenolKobil</td>
<td>2.184044</td>
<td>1.941148</td>
<td>-4.13656</td>
<td>-0.00379</td>
</tr>
<tr>
<td>Total Kenya</td>
<td>0.505266</td>
<td>0.38251</td>
<td>0.460521</td>
<td>0.449432</td>
</tr>
<tr>
<td>KenGen</td>
<td>-123.485</td>
<td>33.85314</td>
<td>13.39639</td>
<td>-25.4117</td>
</tr>
<tr>
<td>Kenya Power</td>
<td>0.023318</td>
<td>-0.75744</td>
<td>-0.04623</td>
<td>-0.26012</td>
</tr>
<tr>
<td>Umeme</td>
<td>276.9356</td>
<td>-8.20646</td>
<td>-1.62264</td>
<td>89.03549</td>
</tr>
</tbody>
</table>

4.4 Equity Financing and ROA of Energy and Petroleum

4.4.1 Descriptive Statistics of Equity Financing

A review of the equity held by the firms in the period 2015-2017 revealed that Kenol Kobil and Umeme recorded the highest equity in 2016 respectively. On the other hand, Total Kenya, Kengen and Kenya Power recorded the highest equity in 2017 respectively. A review of the means indicated that on average 2017 had the highest equity value, and the figure was incremental over the years as shown in Table 4.8. The findings also show that all the variables had a positive skewness and Kurtosis.
### Table 4.8: Descriptive Statistics of Equity Financing

<table>
<thead>
<tr>
<th>Company</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>KenolKobil Ltd</td>
<td>8,555,639.00</td>
<td>9,865,151.00</td>
<td>7,525,627.00</td>
</tr>
<tr>
<td>Total Kenya</td>
<td>17,599,746.00</td>
<td>19,349,290.00</td>
<td>21,417,219.00</td>
</tr>
<tr>
<td>KenGen</td>
<td>141,594,091.00</td>
<td>172,742,682.00</td>
<td>183,162,785.00</td>
</tr>
<tr>
<td>Umeme</td>
<td>149,178.00</td>
<td>624,276.00</td>
<td>617,669.00</td>
</tr>
<tr>
<td>Kenya Power</td>
<td>59,204,080.00</td>
<td>65,615,837.00</td>
<td>69,961,655.00</td>
</tr>
<tr>
<td>Mean</td>
<td>45,420,546.80</td>
<td>53,639,447.20</td>
<td>56,536,991.00</td>
</tr>
<tr>
<td>standard deviation</td>
<td>58356344.15</td>
<td>71118961.46</td>
<td>75790494.24</td>
</tr>
<tr>
<td>Skew</td>
<td>1.525820682</td>
<td>1.642585532</td>
<td>1.624001035</td>
</tr>
<tr>
<td>kurtosis</td>
<td>1.941322832</td>
<td>2.466421331</td>
<td>2.387449243</td>
</tr>
</tbody>
</table>

### 4.4.2 Descriptive Statistics of Equity to Capital

A review of the equity to capital held by the firms in the period 2015-2017 revealed that Umeme had the highest mean while Kengen had the least. At the same time, Kenya power and Kengen had negative values as shown in Table 4.9.

### Table 4.9: Descriptive Statistics of Equity to Capital

<table>
<thead>
<tr>
<th>Company</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>KenolKobil</td>
<td>4.185443</td>
<td>2.73052</td>
<td>-4.34598</td>
<td>0.856661</td>
</tr>
<tr>
<td>Total Kenya</td>
<td>2.185434</td>
<td>1.945544</td>
<td>1.908361</td>
<td>2.013113</td>
</tr>
<tr>
<td>KenGen</td>
<td>-127.447</td>
<td>46.35694</td>
<td>19.18704</td>
<td>-20.6345</td>
</tr>
<tr>
<td>Kenya Power</td>
<td>0.00729</td>
<td>-0.8175</td>
<td>-0.06194</td>
<td>-0.29072</td>
</tr>
<tr>
<td>Umeme</td>
<td>86.58038</td>
<td>-8.85711</td>
<td>-2.17428</td>
<td>25.183</td>
</tr>
</tbody>
</table>

### 4.5 Effect of Debt-Equity on ROA of Energy and Petroleum Firms

#### 4.5.1 Descriptive Statistics of Debt to Equity on ROA

A review of the debts to equity held by the firms in the period 2015-2017 revealed that Umeme highest had the highest mean while Total Kenya had the least. A review of the skewness values indicated that all companies had a positive skew values except Kenol Kobil which was negatively skewed.
Table 4.10: Descriptive Statistics of Debt Financing

<table>
<thead>
<tr>
<th>Company</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>KenolKobil</td>
<td>0.521819</td>
<td>0.710908</td>
<td>0.951813</td>
<td>0.72818</td>
</tr>
<tr>
<td>Total Kenya</td>
<td>0.231197</td>
<td>0.196608</td>
<td>0.241318</td>
<td>0.223041</td>
</tr>
<tr>
<td>KenGen</td>
<td>0.968906</td>
<td>0.730271</td>
<td>0.6982</td>
<td>0.799126</td>
</tr>
<tr>
<td>Kenya Power</td>
<td>3.198595</td>
<td>0.926539</td>
<td>0.74629</td>
<td>1.623808</td>
</tr>
<tr>
<td>Umeme</td>
<td>2.19865</td>
<td>1.93265</td>
<td>0.7514</td>
<td>1.627567</td>
</tr>
</tbody>
</table>

4.6 Inferential Statistics

4.6.1 Correlation of Debt to Capital on ROA

A Pearson correlation was done to determine the relationship debt to capital financing and ROA of energy and petroleum firms, the results indicated that there was a negative but insignificant correlation between the two variables (R= -.428, p=0.472).

Table 4.11: Correlation of Debt to Capital on ROA

<table>
<thead>
<tr>
<th>Debt/Capital</th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-.428</td>
<td>.472</td>
<td>5</td>
</tr>
</tbody>
</table>

4.6.1.1 Regression of Debt to Capital on ROA

A regression analysis was done to determine the relationship between debt to capital on variables of profitability (ROA) as shown in Table 4.12. On analysis, the adjusted R square value was .089 and therefore implied that 8.9% of the variation in ROA was caused by variations of Debt to Capital the relationship was however not significant. At the same time 91.1% were caused by other factors not considered in this study.

Table 4.12: Model Summary of Debt to Capital on ROA

<table>
<thead>
<tr>
<th>Model</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of Estimate</th>
<th>R Square Change</th>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.428a</td>
<td>.183</td>
<td>.089</td>
<td>4.4594780</td>
<td>.183</td>
<td>.674</td>
<td>1</td>
<td>.472</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Debt/capital
The ANOVA analysis between between debt to Capital on ROA revealed that the F value .674 was not significant (0.472) this implies that there was no linear relationship between debt to capital ratio on ROA as indicated in Table 4.13

Table 4.13: Anova of Debt to Capital on ROA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>13.395</td>
<td>1</td>
<td>13.395</td>
<td>.674</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>59.661</td>
<td>3</td>
<td>19.887</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>73.056</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROA
b. Predictors: (Constant), Debt/Capital

The regression equation illustrated in Table 4.14 established that all other factors held constant ROA increased by 5.632 units. The findings presented also showed that with all other variables held at zero, a unit change in debt to capital would lead to 4.539 negative unit change in ROA. All variables were insignificant (p>0.05), therefore debt to capital is not significant in determining ROA.

Table 4.14: Coefficient of Debt to Capital on ROA

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>5.632</td>
<td>3.021</td>
<td>1.864</td>
</tr>
<tr>
<td></td>
<td>Debt/Capital</td>
<td>-4.539</td>
<td>5.530</td>
<td>-.428</td>
</tr>
</tbody>
</table>

The resulting equation was ROA = 5.632-4.539X1

4.6.2 Correlation of Equity to Capital on ROA

A Pearson correlation was done to determine the relationship debt to capital financing and ROA of energy and petroleum firms, the results indicated that there was a positive but insignificant correlation between the two variables (R=.094, p=0.881).
Table 4.15: Correlation of Equity to Capital on ROA

<table>
<thead>
<tr>
<th></th>
<th>ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity/capital</td>
<td>Pearson Correlation</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

4.6.2.1 Regression of Equity to Capital on ROA

A regression analysis was done to determine the relationship between Equity to capital on variables of profitability (ROA) as shown in Table 4.16. On analysis, the adjusted R square value was .322 and therefore implied that 32.2% of the variation in ROA was caused by variations of Equity to Capital, the relationship was however not significant. At the same time 67.8% were caused by other factors not considered in this study.

Table 4.16: Model Summary of Equity to Capital on ROA

<table>
<thead>
<tr>
<th>Model</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>R Square Change</th>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.094</td>
<td>.009</td>
<td>-.322</td>
<td>.009</td>
<td>.026</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Equity/Capital

The ANOVA analysis between between Equity to Capital on ROA revealed that the F value .026 was not significant (0.881) this implies that there was no linear relationship between equity to capital ratio on ROA as indicated in Table 4.17

Table 4.17: Anova of Equity to Capital on ROA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>.640</td>
<td>1</td>
<td>.640</td>
<td>.026</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>72.417</td>
<td>3</td>
<td>24.139</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>73.056</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROA  
b. Predictors: (Constant), Equity/Capital

The regression equation illustrated in Table 4.18 established that all other factors held constant ROA increased by 4.365 units. The findings presented also showed that with all other variables held at zero, a unit change in equity to capital would lead to 1.230 negative
unit change in ROA. All variables were insignificant (p>0.05), therefore equity to capital is not significant in determining ROA.

Table 4.18: Coefficient of Equity to Capital on ROA

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>4.365</td>
<td>4.269</td>
</tr>
<tr>
<td>Equity/Capital</td>
<td>-1.230</td>
<td>7.557</td>
</tr>
</tbody>
</table>

The resulting equation was \( \text{ROA} = 4.365 - 1.230X_2 \)

**4.6.3 Correlation of Debt to Equity on ROA**

A Pearson correlation was done to determine the relationship debt to equity financing and ROA of energy and petroleum firms, the results indicated that there was a negative but insignificant correlation between the two variables (\(R=-.660, p=0.226\)).

Table 4.19: Correlation of Debt to Equity on ROA

<table>
<thead>
<tr>
<th>Debt to Equity</th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>-0.660</td>
<td>0.226</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
</tr>
</tbody>
</table>

**4.6.1.1 Regression of Debt to Equity on ROA**

A regression analysis was done to determine the relationship between Debt to Equity on variables of profitability (ROA) as shown in Table 4.20. On analysis, the adjusted R square value was .247 and therefore implied that 24.7% of the variation in ROA was caused by variations of Debt to Equity, the relationship was however not significant. At the same time 64.3% were caused by other factors not considered in this study.
The ANOVA analysis between between Debt to Equity on ROA revealed that the F value 2.313 was not significant (0.226) this implies that there was no linear relationship between debt to equity ratio on ROA as indicated in Table 4.21.

The regression equation illustrated in Table 4.22 established that all other factors held constant ROA increased by 4.365 units. The findings presented also showed that with all other variables held at zero, a unit change in equity to capital would lead to 1.230 negative unit change in ROA. All variables were insignificant (p>0.05), therefore equity to capital is not significant in determining ROA.

The resulting equation was ROA = 8.380 - 4.614X3
4.6.4 Multiple Regression Analysis

A multi regression analysis was done to determine the relationship between debt to equity, debt/capital, equity to capital on variables of profitability (ROA) as shown in Table 4.23. On analysis, the adjusted R square value was .861 and therefore implied that 86.1% of the variation in ROA was caused by variations of debt to equity, debt/capital, equity to capital however not significant. At the same time 13.9% were caused by other factors not considered in this study.

**Table 4.23: Model Summary of Debt to Equity, Debt/Capital, Equity to Capital on (ROA)**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of Estimate</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.982a</td>
<td>.965</td>
<td>.861</td>
<td>.15929088</td>
<td>9.264</td>
<td>3</td>
<td>1</td>
<td>.236</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Debt to Equity, Debt/Capital, Equity to Capital

The ANOVA analysis between Debt To Equity, Debt/Capital, Equity To Capital on ROA revealed that the F value 9.264 was not significant (0.236) this implies that there was no linear relationship between Debt To Equity, Debt/Capital, Equity To Capital on ROA as indicated in Table 4.24

**Table 4.24: ANOVA between Debt to Equity, Debt/Capital, Equity to Capital on ROA**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>70.519</td>
<td>3</td>
<td>23.506</td>
<td>9.264</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>2.537</td>
<td>1</td>
<td>2.537</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>73.056</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: ROA
b. Predictors: (Constant), Debt to Equity, Debt/Capital, Equity to Capital

As per the coefficient Table 4.25, the equation \( Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 \) becomes:

\( Y = 28.884 + 22.768 X_1 + 35.432 X_2 - 17.309 X_3 \)

Where;

\( Y \) = ROA

\( X_1 \) = Debt to Equity

\( X_2 \) = Debt/Capital

\( X_3 \) = Equity to Capital
The regression equation illustrated in Table 4.25 has established that all other factors held constant ROA increased by 28.884 units. The findings presented also showed that with all other variables held at zero, a unit change in debt/capital would lead to 22.768 positive change in ROA, and a unit change in equity to capital would lead to 35.432 rise in ROA. Moreover, the study also showed that a unit change in debt to equity would result in 17.309 decline in ROA. All variables were insignificant (p<0.05).

Table 4.25: Coefficient of Debt to Equity, Debt/Capital, Equity to Capital

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>28.884</td>
<td>5.642</td>
<td>5.119</td>
<td>.123</td>
</tr>
<tr>
<td>Debt/capital</td>
<td>22.768</td>
<td>7.267</td>
<td>2.148</td>
<td>.197</td>
</tr>
<tr>
<td>Equity to Capital</td>
<td>35.432</td>
<td>9.665</td>
<td>-2.695</td>
<td>.170</td>
</tr>
<tr>
<td>Debt to Equity</td>
<td>-17.309</td>
<td>3.853</td>
<td>-2.475</td>
<td>.139</td>
</tr>
</tbody>
</table>

4.7 Chapter Summary

This chapter has highlighted results and findings. The first section provided an analysis of general information of the secondary data in form of the descriptives statistics. The second section, third and the fourth section have analysed data using inferential statistics meant at establishing a link between debt financing, equity financing and debt-equity on profitability of energy and petroleum firms listed at the Nairobi Securities Exchange. In chapter five this results will be discussed and relevant conclusions and recommendations made with regard to profitability of energy and petroleum companies.
CHAPTER FIVE

5.0 DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This section offers the discussion, conclusions and recommendations arrived at based on the general purpose aiming to establish the effects of capital structure on Return on Asset (ROA) of energy and petroleum companies listed in the Nairobi Securities Exchange. The study was guided by the following research questions: Is there a link between debt financing and ROA of energy and petroleum firms listed at Nairobi Securities Exchange? What is the relationship between equity financing and ROA of energy and petroleum firms listed at Nairobi Securities Exchange? What is the effect of debt-equity on ROA of energy and petroleum firms listed at the Nairobi Securities Exchange?

5.2 Summary

The purpose of this study was to establish the effects of capital structure on profitability of Energy and Petroleum companies listed in the Nairobi Securities Exchange. The study is guided by three research questions that focus on addressing the problem intended to be covered. The three research questions include; what is the relationship between debt financing and ROA, followed by what is the relationship between equity financing and ROA and lastly what is the effect of debt-equity combination on ROA.

This study targeted the five listed energy and petroleum firms in the NSE, the firms include; KenolKobil Ltd, Total Kenya Ltd, KenGen Ltd, Kenya Power & Lighting Company Ltd, and Umeme Ltd. The data from the firms were established from published financial statements from the website of NSE. Secondary data of the five energy and petroleum companies was obtained from NSE published financial statements, journal articles and from any relevant credible published sources as well as financial statements of the respective firms. This study adopted a casual research design that attempted to expose the cause and effect relationship between the two variables; independent and dependent variables. The study used a checklist in gathering the secondary data from the five energy and petroleum companies listed in NSE. The dependent variable was aimed at collecting data on ROA.
A review of the debts held by the firms in the period 2015-2017 revealed that KenGen had the highest mean while Umeme had the least. A review of the skewness values indicated that all companies had a positive skew values except Kenol Kobil which was negatively skewed. A review of the debts/capital held by the firms in the period 2015-2017 revealed that umeme had the highest mean while Kenya power had the least. At the same time, kenolkobil, Kengen and kenya power had negative values. A Pearson correlation was done to determine the relationship debt to capital financing and ROA of energy and petroleum firms, the results indicated that there was a negative but insignificant correlation between the two variables (R=-.428, p=0.472). A regression analysis done established that 8.9% of the variation in ROA was caused by variations of Debt to Capital the relationship was however not significant. At the same time 91.1% were caused by other factors not considered in this study. The ANOVA analysis between between debt to Capital on ROA revealed that the F value .674 was not significant (0.472).

A review of the equity held by the firms in the period 2015-2017 revealed that Kenol Kobil and Umeme recorded the highest equity in 2016 respectively. On the other hand, Total Kenya, Kengen and Kenya Power recorded the highest equity in 2017 respectively. A review of the means indicated that on average 2017 had the highest equity value, and the figure was incremental over the years. The findings also show that all the variables had a positive skewness and Kurtosis. A review of the equity to capital held by the firms in the period 2015-2017 revealed that umeme had the highest mean while Kengen had the least. At the same time, Kenya power and Kengen had negative values while a Pearson correlation analysis done to determine the relationship debt to capital financing and ROA of energy and petroleum firms indicated that there was a positive but insignificant correlation between the two variables (R=.094, p=0.881). A regression analysis done to determine the relationship between Equity to capital on variables of profitability (ROA) 32.2% of the variation in ROA was caused by variations of Equity to Capital, the relationship was however not significant. The ANOVA analysis between Equity to Capital on ROA revealed that the F value .026 was not significant (0.881).

A review of the debts to equity held by the firms in the period 2015-2017 revealed that Umeme highest had the highest mean while Total Kenya had the least. A review of the skewness values indicated that all companies had a positive skew values except Kenol Kobil which was negatively skewed. A Pearson correlation was done to determine the
relationship debt to equity financing and ROA of energy and petroleum firms, the results indicated that there was a negative but insignificant correlation between the two variables ($R = \cdot660, p=0.226$). A regression analysis done to determine the relationship between Debt to Equity on variables of profitability (ROA) established that 24.7% of the variation in ROA was caused by variations of Debt to Equity, the relationship was however not significant. The ANOVA analysis between Debt to Equity on ROA revealed that the F value 2.313 was not significant (0.226).

A multi regression analysis was done to determine the relationship between debt to equity, debt/capital, equity to capital on variables of profitability (ROA) as shown in Table 4.23. On analysis, the adjusted R square value was .861 and therefore implied that 86.1% of the variation in ROA was caused by variations of debt to equity, debt/capital, equity to capital. However it was not significant. At the same time 13.9% were caused by other factors not considered in this study.

5.3 Discussion

5.3.1 Effect of Debt Financing on ROA

A Pearson correlation was done to determine the relationship debt to capital financing and ROA of energy and petroleum firms, the results indicated that there was a negative but insignificant correlation between the two variables. This implied that with every increase in debt to capital, there was a decline in ROA. According to Doff (2011) funding a firm through debt financing rather than selling the firm’s stocks to attract capital from potential investors, avoids diluting the percentage of stakeholder’s ownership of the company, however, if there is a large capital portion supplied by the stakeholder’s investment, then the company has a better credit profile. When the shareholders of the company assume risk by funding the company with their own capital, a firm is likely to be more conservatively operated (Matemilola & Saini, 2013). If the company finances its operations through debt, the creditors then shoulder the risk, however, when the debt results in increased earnings, the return on shareholder investment become exponential (Ramjee & Gwatidzo, 2012).

Increased debt on the other hand has a potential of lowering revenues as more money is spent servicing the debt which may be expensive depending on the interest rates offered by the creditors (Doff, 2011). If the debt acquired is used in increasing the firm’s production and the production leads to significantly increased revenues, the increased debt may then
increase the Return on Assets. This depends on whether the burden of the debt is so costly and it cuts into the net income of the firm. If revenues rise due to debt financing of company’s production, but net income falls due to increased expense, then the Return on Assets declines.

A regression analysis done established that 8.9% of the variation in ROA was caused by variations of Debt to Capital. In another study Pradhan and Khadka (2017) examined the effect of debt financing on the profitability of the Nepalese commercial banks. The banks' profitability was measured in terms of return on assets, return on equity and net interest margin and these three are the dependent variables. The regression models estimated to test the significance and importance of the effect of debt financing on profitability of Nepalese commercial banks showed a positive relationship of banks' profitability with short term debt to total assets, interest coverage ratio and size of the banks. This indicated that increase in short term debt to total assets, interest coverage and size lead to increase in bank profitability. debt to total assets, total debt to total assets and debt to equity ratio with profitability.

The findings presented showed that with all other variables held at zero, a unit change in debt/capital would lead to 22.768 positive change in ROA. Similar results have been reported, for instance Heidal, Khadaffi and Ummah (2016) analyzed the effect of Return On Asset, Return On Equity, Net Profit Margin, Debt To Equity Ratio and Current Ratio toward growth income either simultaneously or partially on automotive companies that were listed in Indonesia stock exchange. The findings of this research identified that simultaneously independent variables Return On Asset, Return On Equity, Net Profit Margin, To Equity Ratio and Current Ratio with F test, effected together to grow income significantly.

The correlation done to determine the relationship debt to capital financing and ROA of energy and petroleum firms showed a negative correlation. Similarly, a study by Omollo, Muturi and Wanjare (2018), examined the effects of debt configurations namely shortterm, long-term and total debt on firm financial performance measured as return on assets and return on equity of listed firms in Kenya. Empirical results indicated that short-term, long-term and total debt had an negative and statistically significant effects on returns on assets. It was concluded that financial managers should adjust debt levels to ensure that they
operate at the optimum points. On the other hand, credit institutions should only finance businesses up to the point where profitability is.

5.3.2 Effect of Equity Financing on ROA

A Pearson correlation was done to determine the relationship equity to capital financing and ROA of energy and petroleum firms indicated that there was a positive correlation between the two variables. This compares to previous studies done, Tailab (2014) empirically sought to analyze the effect of capital structure on financial performance. Two main sets of variables were used for profitability, this include return on assets (ROA) as the ratio of net income to total assets, and return on equity (ROE) as the ratio of net income to total shareholders’ equity were adopted as a proxy for financial performance; and to indicate capital structure, short-term debt, long-term debt, total debt, debt to equity ratio, and firm’s size were used. Multiple regressions indicated that 10% of ROE and 34% of ROA were predicted by the independent variables. However, a short debt significantly had a positive influence on ROE. An insignificant either negative or positive relationship was observed between long term debt, debt to equity and size in terms of total assets and profitability. A generalization of the results was limited because of the small sample size.

A regression analysis done to determine the relationship between Equity to capital on variables of profitability (ROA) 32.2% of the variation in ROA was caused by variations of Equity to Capital. Ahmad (2015) investigated the effect of capital structure on the financial performance of the 17 nonfinancial companies listed in the Bahrain Bourse. The investigation was performed using 5 years data for the period from 2009 to 2013. The impact of some key macroeconomic variables (gross domestic product growth and inflation rate) on the performance of the firm was also considered in this study. Multiple regressions represented by ordinary least squares (OLS) were used to examine the effect of the independent variables (capital structure, inflation rate and GDP growth) on the financial performance measures used (ROA, ROE, EPS, and Dividend Yield). The results indicate lagged performance measures of ROA, ROE, EPS, and DYIELD had a significantly positive influence on the current year’s performance measures of the firm.

The multiple regression results revealed that a unit change in equity to capital would lead to a rise in ROA. Rosikah, Dwi, Dzulfikri, Muh and Miswari (2018) research also shared the same sentiments, the study sought to identify and analyze the effect of the Return on
Assets to firm value, identify and analyze the influence of Return on Equity to firm value, identify and analyze the influence of Earning Per Share on firm value. And identify and analyze the effect of ROA, ROE, EPS simultaneously on firm value. The findings indicated that Return on Asset had a positive and significant effect on firm value, Return on Equity had a positive but not significant effect on firm value. In addition, Return on Assets, Return on Equity, Earnings Per Share simultaneous significant effect on firm value.

The multiple regression results of equity to capital on ROA indicated that the p values were not significant. Saeedi and Mahmoodi (2011) study examined the relationship between capital structure and firm performance. The study used four performance measures (including return on assets, return on equity, earning per share, and Tobin's Q) as dependent variable and three capital structure measures (including long-term debt, short-term debt and total debt ratios) as independent variable. The investigation was performed using panel data procedure for a sample of 320 listed companies in the Tehran Stock Exchange (TSE) over the period 2002-2009. The results indicate that firm performance, which is measured by EPS and Tobin's Q, was significantly and positively associated with capital structure, while reporting a negative relation between capital structure and ROA.

5.3.3 Effect of Debt-Equity on ROA

A Pearson correlation was done to determine the relationship debt to equity financing and ROA of energy and petroleum firms, the results indicated that there was a negative but insignificant correlation between the two variables. Desmond and John (2013), the amount of debt to that of equity seem to be a strategic choice for various corporate managers within the company, since, decisions concerning capital structure is crucial as the profitability of a company is directly affected by such kind of decisions, hence, calling for proper care and the attention to be given in the capital structure determining decisions. Since, the affairs regarding the statements of any firms are vital, the position of the firm regarding all kinds of liabilities, assets, and capital tend to be vital part of the company’s statements (Desai, Foley, & Hines, 2016).

The debt-equity combination of a company is generally a combination of the equity shares, preference shares (Chadha & Sharma, 2015). Attentions should then be given as long as the combinations of capital structure is concerned, without a planned ideal capital structure, companies might fail to utilize the allocated funds. Consequently, it is being realized that a company should always plan its capital structure in order to maximize the use of allocated
capital and enable it to adapt more easily to the business turbulent environment (Pandey, 2013).

A regression analysis done to determine the relationship between Debt to Equity on variables of profitability (ROA) established that 24.7% of the variation in ROA was caused by variations of Debt to Equity, the relationship was however not significant. This finding is supported by previous studies although in other research the relationship has been found to be positive. The relationship between capital structure and profitability is actually one of the most puzzling phenomenon in the field of corporate finance (Brounen & Eichholtz, 2015). The concept of capital structure is generally described as the combination of equity and debt making the total capital that is used in financing the firm’s operations. According to a study carried out by Ebaid (2013) on the relationship between the different combinations of debt-equity with a firm’s financial performance, a multiple regression analysis technique was used in finding out the impact of debt policy on firm’s performance whereby findings revealed that short-term debt and total debt are negatively related by Return on Assets of the company. Capital structure with inclusive of total debt is not significantly related with Return on Equity and the Gross Profit Margin. The findings also revealed that return on assets and the company’s financial performance are negatively related.

The regression coefficient for Moreover debt to equity on ROA indicated that a unit change in debt to equity would result in 17.309 decline in ROA. This implied that Capital structure plays an important role in determining the company’s future growth, sustainability and its financial performance (Hussain, Shahid, & Akmal, 2016). It is observed that the investors are highly concerned in the profits of listed firms in the securities exchange. The debt or equity ratio is commonly used to measure capital structure while other ratios such as earning per share, operating profit margin, return on equity are used as the proxies for firm performance. These ratios are used in studying the relationship between capital structure and profitability in the context of large private firms in Pakistan (Rafique, 2011).

Recent studies have collaborated Modigliani and Miller theory indicating that indeed capital structure of the firm is relevant in performance determination of any firm (Njeri & Kagiri, 2013). Modigliani and Miller modified the earlier capital structure irrelevance theory whereby they argue that capital structure do not matter in determining the value of
a company (Chadha & Sharma, 2015). The theory based on the argument that the use of debt tend to offer a tax shield, based on this notion, companies could choose for an all-debt capital structure to finance their business operations. Brigham and Gapenski (2012), they argued that the Miller-Modigliani theory hold to be true only in theory, however, in practice, bankruptcy costs exist and are likely to even increase more when equity is traded off for debt.

According to Halov and Heider (2012) a standard pecking order can be a special case of the adverse selection. When there is adverse selection about the value of the company, companies prefer to issue debt over equity and the standard picking order model is applied. But there is information asymmetry about the risk involved, when adverse selection arguments for debt are applied companies prefer to issue equity over debt, that is adverse selection can lead to a preference for an external debt or external equity depending on whether problems associated with information asymmetry value risk. Pecking order theory presents the ideology that companies will initially rely on the internal generated funds that is undistributed earnings, where there is no existence of information asymmetry and then will turn to debt when additional funds are needed, eventually issuing equity being the last option to cover any capital remaining requirements (Njeri & Kagiri, 2013). The order of preference in capital financing reflects relative costs of the various financing choices a firm has (Hughes, 2013).

According to Menicucci (2016) a firm would borrow the amount up to the point where its marginal value of tax shields on the additional debt is offset through an increase in the present value of the possible costs associated with financial distress. Trade off theory attempts to explain the friction that occurs between costs of financial distress and the tax deductibility of finance costs (Njeri & Kagiri, 2013). It suggests that companies’ trade-off is based on several aspects among them being offsetting these considerations by the tax benefits encouraged by debt use of the firm and the final capital structure adopted by the company will be a trade-off between the tax benefits and the costs associated with bankruptcy and agency (Brounen & Eichholtz, 2015).
5.4 Conclusions

5.4.1 Effect of Debt Financing on ROA

The study concluded that increase in debt to capital financing had a negative effect on the ROA of energy and petroleum firms in addition the regression analysis indicated that only 8.9% of the variation in ROA was caused by variations of Debt to Capital Financing. Thus Debt to Capital Financing had very minimal effect on ROA. The findings presented also showed that with all other variables held at zero, a unit change in debt/capital would lead to 22.768 positive change in ROA.

5.4.2 Effect of Equity Financing on ROA

The study concluded that increase in equity to capital financing had a positive effect on the ROA of energy and petroleum firms in addition the regression analysis indicated that 32.8% of the variation in ROA was caused by variations of equity to capital financing. Thus equity to capital financing had some effect on ROA. The findings presented also showed that with all other variables held at zero a unit change in equity to capital would lead to 35.432 decline in ROA.

5.4.3 Effect of Debt-Equity on ROA

The study concluded that increase in debt to equity financing had a negative effect on the ROA of energy and petroleum firms. The study also concluded that 24.7% of the variation in ROA was caused by variations of debt to equity financing. Thus debt to equity financing had some effect on ROA. The findings presented also showed that with all other variables held at zero, a unit change in debt to equity would result in 17.309 decline in ROA.

5.5 Recommendations

5.5.1 Recommendation for Improvement

5.5.1.1 Effect of Debt Financing on ROA

The study recommended that since there is a negative correlation between debt to capital financing and ROA of energy and petroleum firms thus the firms would be in a better position to use long term debt than short term debt in order to minimize the impact on
profitability. Borrowing increases risk to the company and thus influence levels of return to shareholders by consuming the amount of profit available to them.

5.5.1.2 Effect of Equity Financing on ROA

The study recommended that equity financing is important to any firm if the proceeds are used to invest in projects which eventually bring growth to a firm. The study recommends that more firms participate in equity financing as a way of raising capital for major expansions, asset growth or acquisitions which may require heavy funding. In this way firms will be assured of improvement in performance as well as high growth. More years should be incorporated to capture the various economic cycles and the impact on return on equity.

5.5.1.3 Effect of Debt-Equity on ROA

The study recommended that since there is a negative relationship between debt to equity financing and ROA of energy and petroleum firms, the study reiterates the imperatives of financial managers in firms, public and private alike, should strive to select debt financing models that have a high likelihood of optimizing the financial performance of the firm. In particular, financial managers should adjust debt levels to ensure that they operate at the optimum point that enhances firm value while avoiding the negative trajectory as predicted by the trade-off theory. On the other hand, credit institutions should judiciously consider the effects and risks of overleveraging on firm performance and only finance businesses up to where profitability is maximized as the risk of credit default is likely to increase with overleveraging.

5.5.2 Recommendation for Further Studies

To improve on this study, it is suggested that a similar study should be carried out over a longer period of time so as to obtain effects of capital structure on Return on Asset (ROA) of energy and petroleum companies listed in the Nairobi Securities Exchange. More studies should be undertaken on firms not in the energy and petroleum sector.


## APPENDIX

### APPENDIX I: CHECKLIST

<table>
<thead>
<tr>
<th>Company/Year</th>
<th>Variable</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>KenolKobil Ltd</td>
<td>ROA</td>
<td>9.96</td>
<td>8.55</td>
<td>10.11</td>
</tr>
<tr>
<td></td>
<td>D/E Ratio</td>
<td>2.01</td>
<td>2.15</td>
<td>2.91</td>
</tr>
<tr>
<td></td>
<td>Debt</td>
<td>4,464,496.00</td>
<td>7,013,213.00</td>
<td>7,162,987.00</td>
</tr>
<tr>
<td></td>
<td>Equity</td>
<td>8,555,639.00</td>
<td>9,865,151.00</td>
<td>7,525,627.00</td>
</tr>
<tr>
<td></td>
<td>Capital</td>
<td>17,166,306</td>
<td>23,889,451</td>
<td>28,215,610</td>
</tr>
<tr>
<td>Total Kenya Ltd</td>
<td>ROA</td>
<td>8.07</td>
<td>6.11</td>
<td>7.21</td>
</tr>
<tr>
<td></td>
<td>D/ E ratio</td>
<td>0.94</td>
<td>0.87</td>
<td>0.77</td>
</tr>
<tr>
<td></td>
<td>Debt</td>
<td>4,069,010.00</td>
<td>3,804,232.00</td>
<td>5,168,353.00</td>
</tr>
<tr>
<td></td>
<td>Equity</td>
<td>17,599,746.00</td>
<td>19,349,290.00</td>
<td>21,417,219.00</td>
</tr>
<tr>
<td></td>
<td>Capital</td>
<td>32,980,408</td>
<td>34,758,938</td>
<td>36,672,909</td>
</tr>
<tr>
<td>KenGen Ltd</td>
<td>ROA</td>
<td>0.15</td>
<td>0.16</td>
<td>0.16</td>
</tr>
<tr>
<td></td>
<td>D/ E ratio</td>
<td>1.42</td>
<td>1.13</td>
<td>1.06</td>
</tr>
<tr>
<td></td>
<td>Debt</td>
<td>137,191,309.00</td>
<td>126,149,009</td>
<td>127,884,286</td>
</tr>
<tr>
<td></td>
<td>Equity</td>
<td>141,594,091</td>
<td>172,742,682</td>
<td>183,162,785</td>
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<td>Capital</td>
<td>164,074,064</td>
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<td>2.57</td>
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<td>Debt</td>
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