

Financial Leverage and Performance of the Energy and Petroleum Sector Companies Listed in the Nairobi Securities Exchange

Jephania Chemosit¹, Gerald Atheru²

¹School of Business, Kenyatta University, Kenya

²Department of Accounting and Finance, Kenyatta University, Kenya

ABSTRACT

Financial leverage and financial performance are fundamental issues in corporate finance. In Kenya, some companies listed at the Nairobi Securities Exchange have had performance improvement. However, most of them have experienced declining fortunes which has been attributed to the fact that corporate managers another practitioner lack adequate guidance required to attain optimal financing decisions. Financial leverage comprises of loans and other forms of debts where the proceeds from these loans are reinvested to earn higher return than the cost of loans. Financial use is the company's capacity to utilization of settled money related charges to amplify the impacts of changes in the profit before premium and duty on the company's income per share. The extent of obligation to value is a vital decision for corporate supervisors. The poor performance of Energy and Petroleum sector companies is of great concern. Financial leverage ranges from debt ratio, debt/equity ratio and interest coverage ratio which are vital since they directly affect the financial performance of firms. The general objective as to determine the effect of financial leverage on the financial performance of energy and petroleum sector companies listed in the NSE. While the specific objectives were; to establish the effect of debt ratio, debt -equity ratio and interest coverage ratio on financial performance of energy and petroleum sector companies recorded in the NSE. The research was anchored on the following theories: Modigliani-Miller theorem, Pecking Order Theory and Trade-off Theory. The empirical literature review was based on the three objectives of the study and gaps established. The study adopted a descriptive research design. Management of all the 5 energy and petroleum companies listed with the NSE was involved in the study which mainly used secondary data to conclude. Data was analyzed using regression analysis. Analyzed data was presented using tables. Confidence interval of 95% was used by the researcher. The study adopted a multiple regression model ($Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$). The findings indicate that the independent variables Debt ratio, Debt to Equity ratio and interest cover ratio affected the financial performance of the firms in the Energy and petroleum sector. Their effect was up to 75.4%. Debt ratio and Debt to Equity ratio had a positive relationship whereas Interest cover ratio had a negative relationship to the firms in the Energy and petroleum sector listed in the NSE. This study recommends that the firms handle their capital structure decisions prudently as the changes in the factors like Debt ratio, Debt to Equity ratio and Interest cover ratio enhance profitability of firms when prudently employed and hence affect the performance of Energy and petroleum firms listed at the Nairobi Securities Exchange. This study also recommends that firms control the amount of interest expense since an increase in interest expense has an effect in that it reduces the financial performance of firms in the Energy and petroleum sector listed in the NSE.

Key Words: Financial Leverage, Equity Funding, Debt Financing

DOI: 10.35942/ijcfa.v3i2.208

Cite this Article:

Chemosit, J., & Atheru, G. (2021). Financial Leverage and Performance of the Energy and Petroleum Sector Companies Listed in the Nairobi Securities Exchange. *International Journal of Current Aspects in Finance, Banking and Accounting*, 3(2), 113-128.

1.0 Introduction

The health and survival of any organization points to management's ability to efficiently and effectively use the company's resources which contribute to the country's economy (Naser & Mokhtar, 2004). Therefore, owing to the implications that financial performance has on these organizations, firm's financial performance has raised a lot of interest and concerns to the management and other stakeholders of all organizations. Measuring financial performance of a firm assists the firm's management obtain information about the use of finances and funds flow within and outside the organization. Besides, the managers can make best decisions from the information on firm's performance (Almajali *et al.*, 2012). Globally, the achievements of organizations are of vital importance for its continuation. Salman and Yazdanfar (2012) forward that the performance of firms is primarily affected by several features, one of the significant one is capital structure. Similarly, Chadha and Sharma (2015) assert that capital structure is among the top most important decisions taken by an organization as its sole purpose is ascertaining the perfect capital structure for the organization. Hasan, Ahsan, Rahaman and Alam (2014) put forward that capital structure comprises of retained earnings.

According to Almajali *et al.*, (2012), financial report related factors are the focus of financial performance. These focus on the financial structure of firms. These are factors relating to liquidity, leverage and equity of a firm. Shubita & Alsawalhah (2012) noted that it is difficult to determine the optimal financial structure of a firm as this entails analysis of their risk and profitability among other factors. Almajali *et al.*, (2012) studied financial performance of Jordanian Insurance Companies listed at Amman Stock Exchange during period (2002 – 2007). The results showed that the leverage, size and liquidity have a positive statistical effect on the financial performance of Jordanian Insurance Companies. The financing decisions are also affected by the environments within which the firms operate, and which exhibit high degree of instability. The study period starting 2007 was characterized with harsh economic climate because of the financial crisis that faced the world. Past studies on financial structure relationship with financial performance have concentrated on investigating the direct relationship between financial structure and financial performance of companies and mainly investigating one component of financial structure at a time. However, authors documented different results and explained various rationales in this respect. Some authors found (Abor, 2010) positive leverage-performance relationship, while others believe conversely and described debt as negative connotation. Mwangi *et al.*, (2014) concluded that increased financial leverage has a negative effect on performance.

The worldwide money related emergency has affected the capital structure of two or three organizations around the world, to a great extent to a great degree turned organizations independent of the disparity in the tremendousness of the effect because of the distinctions in monetary market creation and different components (Zarebski and Dimovski, 2012). They demanded that most firms were very fluid amid the monetary blast, prompting high rates of guaranteeing, loaning and renegotiating by money related establishments. This was ended by the land advertise disintegrate in the US which caused the loss of such a significant number of advantages, making the exceedingly turned organizations to bomb in paying their obligations (Zarebski and Dimovski, 2012). Iqbal and Kume, (2014) found that the aggregate use proportions were low after the emergency and high before the emergency in Germany, UK and France.

In Africa, the impact of money related use on organizations' esteem contrasts cross nations as a result of the dissimilarities in expense sections and assessment laws (Obradovich and Gill, 2012). Mireku, Mensah and Ogoe, (2014) found that a high level of organizations in Ghana

favoured obligations that are here and now to obligations that are long haul as a point of supply of pay to fund their creation and resources. Then again Enekwe *et al.* (2014) inferred that money related use has no critical effect on pharmaceutical organizations' execution in Nigeria. Adesina, Nwidobie and Adesin (2015) recommended that administration of some cited banks in Nigeria always use value and obligation as a type of improving profit, a flag of a significant relationship among money related execution and capital structure of organizations. Firms in South Africa are recognized by proprietorship structures where the proprietor of the organization is at the highest point of the pyramid which is otherwise called the best down level of leadership (Fosu, 2013). He included that the above sort of structure demonstrates the kind of organisational issues experienced by South African organizations from different nations because of the way that they exist among greater part and minority top administration. The best down structure depends on value as methods for money and obligation contracts may just be used as a proportion of mitigating the issues of the Agency (Fosu, 2013).

In Kenya, recorded firms have been described as poor money related execution. Yegon, Cheruiyot and Cheruiyot (2014) in their exploration shown that the linkage existing between long haul obligation and firm productivity is negative and the linkage between an association's fleeting obligation and its gainfulness is certain. They pointed the finger at it on the way that fleeting obligation is more reasonable than long haul obligation. Along these lines, expanded productivity is an aftereffect of here and now an obligation. All things considered, adding up to obligation has no essential effect on the organization's execution due to the exceptional highlights of here and now and long-haul obligations (Yegon *et al.*, 2014).

1.1 Statement of the problem

Financial leverage and financial performance are fundamental issues in corporate finance (Mule & Mukras, 2015). As per the pecking order theory, an optimal structure of capital is derived a tough balancing of the costs that are related to debt financing and tax advantage benefit for use of debt finance. Jensen and Meckling (1976) purports that financial leverage affects the firm's capital structure in that it has an impact on managers' financial decisions and that these resolutions have a consequent effect the corporate performance (Ku & Yen, 2013). However, the Modigliani and Miller (1958) proposition argues that the value of the firm is only determined by the level of real assets and not equity and debt in their capital structure (Al-Tally, 2014). Thus, there is no generally agreed theoretical underpinning on the effect of leverage and corporate performance hence an unresolved puzzle (Ku & Yen, 2013). In Kenya, some companies listed at the Nairobi Securities Exchange have had performance improvement. However, most of them have experienced declining fortunes which has been attributed to the fact that corporate managers another practitioner lack adequate guidance required to attain optimal financing decisions (Ayako, Kungu & Githui, 2015). According to Mwangi, Makau and Kosimbei (2014), most collapse of many petroleum and energy firms or firms in Kenya has been due to financing issues or behavior of firms in general.

The connection between leverage and performance of firms in terms of finance has been examined by several authors. Empirical studies by Olayinka and Taiwo (2012) studied the impact of leverage on firm profitability of Nigerian firms. The study revealed that leverage had a negative effect thus low debt ratios enhance firm profitability. Akbarian (2013) explored the influence of leverage on firms' performance in Tehran stock exchange and found that there exist an inverse linkage between leverage and free cash flow per share but the study also found a significant positive relationship with return of equity. Another study by Barakat (2014) examined the effect of financial leverage and profitability in Saudi industrial firms and established an insignificant inverse relationship between financial leverage and share value. The above studies show that little has been done concerning financial performance and

financial leverage of petroleum and energy sector firms recorded in the NSE. Previous studies were mostly centered on other countries and other sectors rather than Kenya and the energy and petroleum sectors respectively. This study therefore attempted to elaborate the relation between financial leverage and performance of the energy and petroleum sector companies in the NSE.

1.2 Objectives of the study

To determine the effect of financial leverage on the financial performance of energy and petroleum sector companies listed in the NSE.

The study was guided by the following objectives:

- i. To determine the effect of debt ratio on financial performance of energy and petroleum sector companies listed in the NSE, Kenya.
- ii. To determine the effect of debt-equity ratio on financial performance of energy and petroleum sector companies listed in the NSE, Kenya.
- iii. To determine the degree to which interest coverage ratio affect financial performance of energy and petroleum sector companies listed in the NSE, Kenya.

2.0 Literature Review

2.1 Theoretical Framework

The theories that support the link between the independent and dependent variables are covered in this section. They are resource dependence theory, modigliani-miller theorem, trade-off theory as well as pecking order theory.

2.1.1 Modigliani-Miller Theorem

Modigliani-Miller propounded the theory in 1958. The theory maintains that the value of market of a company is determined by the danger identified through the hidden assets of the company and on the firm's capacity to earning. Additionally, the theory states that the company's market value is not influence by the decisions of distributing the dividends or the choice of financing the investments. The three different ways that an organization can back the speculations are reinvesting the benefits, obtaining outside capital, and issuing the offers. The hypothesis expressed that it has no effect under some market suspicions regardless of whether the firm speculations are financed with value or obligation. The Modigliani-Miller hypothesis is regularly alluded to as the capital structure unimportance guideline. This suggests the estimation of an association isn't vital to the organization's capital structure. Modigliani and Miller in 1963 states that a firm doesn't matter to its esteem whether it is very utilized, or it has brought down obligation part in the financing blend. Modigliani and Miller Approach also opine that the esteem or an organization's market is affected by its prospect's development later on beside the threats related with the financing. The hypothesis states the organization's esteem does not rely upon the financing choice or decision of capital structure of the organization. Companies with high growth prospects have higher market value and consequently, its prices of stock would be high. The value of market of a firm would be poor if people willing to invest do not see encouraging growth prospects in a company. According to Miller. (1977), capital structure does not have an influence on the evaluation of a firm base on the predictions of this theory on no taxes. This means that leveraging the firm will not increase the company's market value. Equally split earnings is a priority commonly shared by equity shareholders and debt holders in a company. Because of the current study, this theory's advocates maintain that cost of equity is in direct potion with financial. Therefore, in return, a higher return is expected by the shareholders, hence the cost of equity is increased. The theory asserts that as far as claim on earnings is concerned debt holders have an upper hand therefore debt cost reduces.

2.1.2 Pecking Order Theory

This theory was first initiated by Donaldson in 1961 and was improved later in 1984 by Myers and Majluf. The theory opines that firms make sources of financing their priority in accordance to the financing cost, using raise of equity as a means of financing last resort. Thus, internal money is used and exhausted, debt is issued, and equity is issued when it is not sensible to issue any more debt. The pecking order theory states that the three available sources of funding firms are: equity, retained earnings and debt (Myers, 1994).

The pecking order theory doesn't adopt the best capital structure as the origin, instead it establishes the verifiable fact that companies display clearly that they prefer to adopt interior fund (as held income or overabundance fluid resources) over outer back. Firms might get outer financing if interior assets are insufficient to fund speculation openings and on the off chance that they do, they will pick among the diverse outside back sources in a way that will diminish additional expenses of uneven data. The last-made reference to costs mirror the "lemon premium" (Akerlof, 1970) that financial specialists from outside request the likelihood of disappointment for the standard organization in the market. Coming up next are the emerging pecking structure of financing: share financing, inside produced supports first and pursued by separately generally safe obligation financing. In 1984 Myers and Majluf display expresses that, speculators from outside legitimately deduct the organization's stock cost when the board gives value instead of obligation without hazard. The executives avoid value in each conceivable method to maintain a strategic distance from this decrease. The Myers and Majluf display estimates that a pecking request will be trailed by the executives, spending unsafe obligation, at that point inner assets and utilizing value at last. Firms keep up benefits and develop budgetary slack without speculation chances to abstain from raising future outer fund.

The market-to-book is respected by the pecking request hypothesis proportion as an appraisal of speculation openings. Because of this clarification, Myers in 1984 and Fama and French in 2000 acclaimed that a contemporary relationship among the market-to-book proportion and capital structure is difficult to incorporate with the settled pecking request demonstrate. Accentuation on the settled form likewise suggests that high venture periods openings will push use upward toward obligation limit. It will get to the dimension that expanded past market-to-book truly compares with past venture that is high; results anyway show that particular periods are equipped for pushing influence lower. The pecking request hypothesis theorizes that the objective of capital structure is missing. Because of ominous determination, organizations pick inner to outside fund. Firms incline toward obligation to value when assets from outside are vital because of little data costs identified with issues of obligation. This hypothesis guaranteed that organizations comply with a request of financing cause and when accessible favor inner financing and obligation is picked instead of value if outer financing is fundamental (value would mean giving offers which implies embracing outside possession into the firm). Subsequently, the sort of obligation an organization embraced can go about as a sign that it needs outer back (Myers, 2001).

2.1.3 Trade-Off Theory

This theory was propounded by Myers (1984). The hypothesis alludes to the possibility that a firm decides how much obligation fund and how much value back to use by striking a harmony among advantages and cost. Myers in 1984 expressed that exchange off hypothesis of capital structure includes adjusting the obligation cost against the obligation advantage. The Trade-off hypothesis considers distinctive corporate fund decisions that a partnership encounters. Diverse specialists have utilized the term exchange off hypothesis to depict a group of speculations that are related. A person that decides against running a company analyzes the different benefits and costs of other leverage plans. Frequently there is an assumption that an interior solution is

acquired for the balance of marginal costs and marginal benefits. A relevant function of the trade-off theory of capital structure is to describe the fact that corporations are normally financed partly with debt and equity respectively. (Kraus & Litzenberger, 1973). In this study the theory indicates that the main sources of financing are debt and equity.

2.1.4 Agency Cost Theory

This theory by Jensen and Meckling (1976) is concerned with the diverging interest when the firm ownership and management are separated. The theory argues about the relationship between the agent (manager), and the principal (shareholders). The agency theory is based on the notion that managers will not always act in the best interest of the shareholders. Jensen and Meckling (1976) further elaborate on this concept by identifying two main conflicts between parties to a company, firstly, between the managers and shareholders, and secondly, between the shareholders and the creditors. In the first instance, managers are tempted to pursue the profits of the firms they manage to their gain at the expense of the shareholders. In the latter instance, debt provides shareholders with the incentive to invest sub-optimally. Harris and Raviv (1991) argue that if an investment yield returns higher than the face value of the debt, the benefits accrue to the shareholders. Conversely, if the investment fails, the shareholders enjoy limited liability by exercising their right to walk away. This leaves the debt holders with a firm whose market value is less than the face value of the outstanding debt.

The major assumption of this theory is that the separation of ownership and management creates conflicts among principals and agents. The main argument behind the agency theory is that the corporate managers act in their interest. They are looking for job security, prerequisites, in the worst cases getting hand on assets and cash flows. The ethics of the free cash flow theory has been built due to the agency cost approach. Managers have incentives to decrease the firm value unless the free cash flow distributes between stakeholders. Jensen (1986) argues that the problem is how to motivate managers to disgorge the cash rather than investing it below the cost of capital or wasting it on organization inefficiencies. One solution to this problem is to apply more debt in capital structure to confine the managers. This strategy would force the firm to limit its spending or perks to avoid the default risk. Also the agency cost theory does not offer an operable solution on dealing with agency problem between firm managers and shareholders. For instance, investors would like to reward effort, commitment, and good decisions, but these inputs are imperfectly observable. Even if good performance on these dimensions were observable by some informed monitor, the performance would not be verifiable. A contract offering a bonus for, say, good decisions investment decisions made by firm managers would not be enforceable, because the decisions could not be evaluated by a disinterested outsider or by a court of law. In other words, "complete contracts" cannot be written (Myers, 2011).

2.2 Empirical Literature Review

This section stipulates the three objectives which include debt ratio, debt-equity ratio and interest coverage ratio and their influence on financial performance of a firm.

2.2.1 Debt ratio and financial performance of firms in energy and petroleum sector

Mahnour (2010) did a study on impact of financial leverage on firms' performance in Fuel and Energy sector in Iraq. The study applied DR as a proxy to measure financial leverage and ROA/ROE as a proxy to measure firms' performance. Through application of least squares method, the study results showed that debt ratio has positive significant influence on the firms' performance financially. The research was based on Energy companies in Iraq. The current research will be based on recorded Petroleum and Energy Firms listed on the NSE, Kenya. Hamza Khaled (2012) did research on how capital structure influence financial performance of

firms recorded in Libya. The research analyzed the connection between total debt, short-term debt and long-term debt to financial performance and equity return. The study showed that total debt measured using debt ratio (DR) significantly affected financial performance and return on equity. However, the study focused on listed firms in Libya unlike this study which will focus on listed Petroleum and Energy Firms listed on the NSE, Kenya.

Abegunde Orimogunje (2012) researched the connection between corporate financial performance and capital structure of companies in Nigerian energy sector. Using regression model the study showed that debt ratio statistically and negatively affects return on assets. The study also concluded that there is no significant difference between firms with low debt ratio and high debt ratio in their financial performance. However, the study was centered on the Energy sector of Nigeria. Akhatar, *et al* (2012) studied the link between firm performance and financial leverage for Fuel and Energy sector in Pakistan. Research results showed that debt ratio positively affect financial performance (ROA) and return on equity (ROE) of companies in fuel and energy sector in Pakistan. In general the study showed that most of financial performance indicators have a positive relationship with the financial leverage indicators. Similarly, the study was based on performance of Fuel and Energy sector in Pakistan. In filling this gap, the current study will be conducted in the context of Kenya.

Mikhailov (2013) studied the effects of financial leverage and corporate governance on financial value of petroleum sector companies in Russia. The study used data for the year between 2009 and 2011. The study concluded that debt ratio (DR) positively affect financial performance (ROA) and financial value of Russian. In general the study concluded that large board size negatively affects the value of Russian firms while financial leverage, firm size and financial performance positively affects the value of Russian firms. The current study will be carried out in the Kenyan context. Hoi Seon Yoon (2013) researched the connection between financial performance and financial leverage of petroleum firms recorded in Kuwait. Findings of the research indicated that a productive relationship exist between debt ratio (DR) and financial performance (ROA) and sales growth of these firms. The study concluded that financial leverage positively affect financial performance of listed petroleum firms in Kuwait. However, the research was conducted in the context of Kuwait. The current research will be conducted in the context of Kenya.

Mahmoudi (2014) researched to examine the effect of leverage on profitability of companies recorded in Tehran Stock exchange between the years 2008 to 2011. In the study he measured leverage using debt ratio (DR) while profitability was measured using financial performance (ROA) and return on equity (ROE). In the study Mahmoudi also studied part of the energy sector companies in Tehran stock exchange. The study showed that there is a significant negative relationship between debt ratio and financial performance and return on equity. Mustafa Zuthimalim *et al* (2015) studied effect of financial leverage on financial performance of fuel and energy sector companies in Algeria. Using multiple regression analysis, the study found out that debt ratio (DR) has insignificant negative connection with financial performance (ROA). The research focused on Energy companies in Algeria, therefore the findings cannot be extended to Energy firms in Kenya. This is attributed largely to the different economic conditions across countries.

Amenophis Hanbal (2015) researched the connection between financial leverage and financial performance of petroleum and mining sectors firms in Egypt. The study used debt ratio and Debt equity ratio as proxy to measure financial leverage and financial performance (ROA) / return on equity (ROE) as the proxy to assess financial performance. The study results showed that no significant relationship that exist between debt ratio (DR) and return on asset (ROA) / return on equity (ROE). Zulaika (2016) researched the influence of financial leverage on

financial performance fuel and petroleum sector companies in Angola. In his research he analyzed the financial statements of these firms from the year 2011-2015. The study results showed debt ratio (DR) has a negative relationship with return on asset ratio (ROA). Similarly, that research was conducted in the context of Angola. The current research will be conducted in the context of Kenya.

2.2.2 Debt Equity Ratio and financial performance of firms of firms in energy and petroleum sector

Mahnoor (2010) did a study on impact of financial leverage on firms' performance in Fuel and Energy sector in Iraq. The study applied debt equity ratio (DER) as a proxy to measure financial leverage and return on asset (ROA) / return on equity (ROE) as a proxy to measure firms' performance. Through application of least squares method, the study results showed that debt equity ratio has insignificant positive impact on the firms' financial performance. Interestingly, the study was carried out in Iraq unlike this study which will focus on Kenya. Shehla, Benish, Atiya and Haleema (2012) established that in measuring financial performance the study used several variables including: Financial performance (ROA), return on equity (ROE), dividend cover ratio (DCR), net profit margin, and earnings per share (EPS) among others. The study found out that debt equity ratio (DER) is negatively related to financial performance (ROA) and positively related to return on equity (ROE). The study concluded that financial leverage is positively correlated to financial performance. The current research will be conducted in Kenya.

Hoi Seon Yoon (2013) studied the linkage between leverage and financial performance of petroleum firms listed in Kuwait. In the study DER and DR were used as the measure for financial leverage while financial performance (ROA) was used to measure financial performance of these companies. Research results showed a strong relationship amongst debt equity ratio (DER) and financial performance (ROA) and sales growth of petroleum firms listed in Kuwait. The study concluded that financial leverage positively affect financial performance of listed Petroleum firms in Kuwait. In addressing this contextual gap, this study will focus on Kenya. Mustafa Zuthimalim *et al* (2015) studied effect of financial leverage on financial performance of fuel and energy sector companies in Algeria. The study used debt ratio, debt equity ratio and interest coverage ratio as proxy to measure financial leverage and return on asset as a proxy to measure financial performance. The study found an insignificant negative relationship between debt equity ratio and return on asset ratio, thus concluding that DER is not an important determinant of financial performance of pharmaceutical firms. The research was focused on the Energy sector of Algeria. This research will be focusing on the Petroleum and Energy Sector in Kenya. Amenophis Hanbal in 2015 researched the relation between financial leverage and financial performance of petroleum and mining sectors firms in Egypt. The study found out that significant bad relationship exists amongst DER and ROA/ROE. Unlike like Petroleum and Mining Sectors in Egypt, the current study will be based on Petroleum and Energy Firms listed on the NSE, Kenya.

2.2.3 Interest Coverage Ratio and financial performance of firms in energy and petroleum sector

Mustafa Zuthimalim *et al* (2015) considered the job of money related use on monetary execution of fuel and vitality division organizations in Algeria. The examination utilized obligation proportion, obligation value proportion and intrigue inclusion proportion as intermediary to quantify monetary use and profit for resource as an intermediary to gauge money related execution. The outcomes demonstrated that there is unimportant positive connection between intrigue inclusion proportion and profit for resource. Likewise, the investigation depended on the fuel and vitality part of Algeria. Tasneem (2016) did a study on

the responsiveness of financial leverage on profitability of energy sector in South Africa. The study results showed that ICR has negative relationship with ROA and ROI. The current study will be based on the Petroleum and energy sector in Kenya thereby addressing the research gap.

Zulaika (2016) did a study on the influence of financial leverage on financial performance fuel and petroleum sector in Angola. In his study he analyzed the financial statements of these firms from the year 2011-2015. The study results showed that ICR has an insignificant positive relationship with ROA however these firms didn't use ICR in making financing decisions. The study was on fuel and petroleum firms in Angola. This study will be on Petroleum and energy companies recorded on the NSE Kenya. Research conducted by Adongo in 2012 to examine the impact of financial leverage on profitability and profitability of firms listed at the NSE Kenya. An easygoing exploration configuration was embraced for the examination. Populace comprised of fifty-eight organizations out of which thirty organizations were inspected. The example avoided 15 recorded organizations under banks and protection because these organizations are managed and are to meet certain liquidity and use proportions. The examination secured a multi year time frame January 2007 to December 2011. The discoveries uncovered an immaterial connection between returns balanced by hazard and money related use. This negated with the theory of the examination which had anticipated a positive connection between budgetary use, productivity and danger of recorded firms.

2.2.4 Financial Performance

There exists many empirical and theoretical explanation of how leverage and firm's performance are related. Theoretically, the pecking order hypothesis which contends that companies got an order of preference as far as financing is concerned. The order of financing is based on cost related to such finance types and their availability (Mule and Mukras, 2015). The Modigliani and Miller theory (1958) affirms that in a perfect market, value of the firm is not affected by the capital structure mix of debt and equity. A Trade-off theory proposes that an ideal structure of capital is only reached when the cost of debt financing is balanced with the debt benefits to the firm (Raza, 2014). Agency theory supports that the leverage can be used as a solution to any agency problem that might arise (Jensen and Meckling, 1976). Numerous analysts have contemplated firm particular and full scale monetary determinants from various dreams and in various ways. Concentrates that bargain with inward determinants abuse factors, for example, measure, substantial quality, development and obligation to value proportion.

The level of which different monetary, legitimate and different factors, for example, defilement influence budgetary execution is emphatically identified with firm size (Bhutta and Hasan, 2013). The span of an organization is essentially identified with capital proportions (Goddard, Molyneux, and Wilson, 2004; Bikker and Hu, 2002). The development openings are estimated regarding the portion of a company's esteem spoken to for by resources set up; the littler the extent of a company's esteem described by resources set up, the bigger are the company's development openings (Myers, 1977). The organizations with development openings have reasonably greater improvement ventures, new product offerings, acquisitions of different organizations and fix and substitution of existing resources. Additionally, development openings and firm size are emphatically identified with money related execution (Abor, 2005). Those organizations with low development openings shelter demonstrate high budgetary execution and firms amidst the development openings grade to affirm little monetary execution (Myers, 1977).

2.3 Conceptual Framework

The conceptual framework of the study shows the link between the study variables. The independent variables which are debt ratio, debt to equity ratio and Interest Coverage Ratio are proposed to affect the dependent variable as denoted by ROE AND ROA.

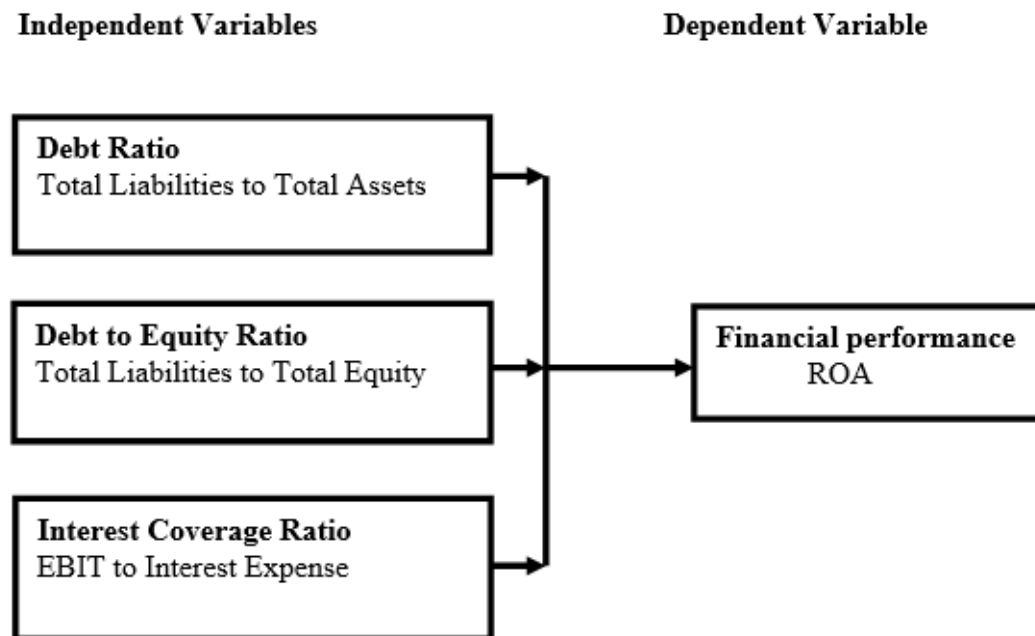


Figure 1: Conceptual Framework

Source: Researcher (2018)

3.0 Research Methodology

Descriptive research design was utilized to study the research problem. Cooper & Schindler in 2009 stated that, the main objective of a descriptive study is finding out a phenomenon's how, what and where. Therefore, the current research is fit to generalize the discovery to all the activities. This method involved the extreme appraisal of situations that require problem solving and the problems are important to the research problem. The study targets the influence of financial leverage on the financial performance of energy and petroleum companies recorded in the NSE. The highlighting concept was to place many cases that are targeted, where a thorough analysis distinguishes the practicable substitute for answering the research questions on the premise of the existing explanation tested in some chosen case study. The study seeks to give details on a subject frequently by establishing a profile of some problems (Cooper & Schindler, 2006).

Mugenda & Mugenda in 2013 states that a total set of people, cases or objects with a few accepted noticeable features is defined as population, 5 firms that are currently listed with the NSE from the energy and petroleum sector in Kenya were the study population (NSE, 2019). These firms are Kenol Kobil, Kenya Power Limited Company Ltd, Total Kenya Ltd, Umeme and KenGen. Sampling techniques gives a variety of ways that aids the reduction of the number of needed data to gather by acknowledging data only from a mini-class instead of other likely elements or instances. Due to a small target population, all the companies listed with the NSE from energy and petroleum sector were included in the study to provide information on financial leverage and allow access to secondary data within the firms' financial statements.

The study made use of both primary and secondary data in respect to the duty of financial leverage on financial performance of energy and petroleum firms listed with the Kenyan NSE. Primary data collection was aided by a questionnaire. Kombo and Tromp (2006), assert that questionnaires enable collection of information from a large sample and diverse regions. They comprised both open-ended and closed-ended questions. Secondary data entails collecting and analyzing of materials that are published and information from sources which includes annual reports or data that is published. Secondary data from the company's financial statements was collected for the research. The secondary data are usually gotten from the NSE website company reports.

Data collection procedures are the steps carried out by the researcher while collecting data using data collection instruments (Ng'anga, 2012). Secondary data was sourced from Capital Market Authority from years 2011 to 2015. Descriptive statistics was used to analyze the quantitative data collected using SPSS (Version 22) and was presented through frequencies, percentages, standard deviations and means. This was carried out by computing percentages of variations in response, computing up results as obtained, explaining, and interpreting the data in agreement with the objectives of the research and speculation through utilizing the SPSS (Version 22) to convey findings of the research. Data that is qualitative or characteristics of the data gathered from the open-ended questions was tested by content analysis. The study in addition carried out a multiple regression analysis. $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \epsilon$, Where; Y = Financial performance of energy and petroleum firms listed with the NSE, B0 - constant, ϵ - error term, X1 - Debt Ratio, X2 - Debt-Equity Ratio, X3 - Interest coverage ratio, β_1 - β_3 =coefficients.

4.0 Research Findings

In addition to descriptive analysis, the study conducted a cross-sectional OLS multiple regression on several firm characteristics over the period 2011–2015.

Table 1: Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.868 ^a	.754	.719	.23437

a. Predictors: (Constant), IRC, DR, DER

Source: Research Findings

The correlation and the coefficient of determination of the dependent variables (financial performance of listed Energy and oil firms when all the three independent variables Debt ratio, Debt to equity ratio and Interest cover ratio are combined was measured and tested. From the findings 75.4% of the Energy and petroleum firms performance at the NSE were attributed to the independent variables investigated in this study. This indicates that about 75.4% of Debt to Equity ratio, Interest Cover and Debt ratio is explained by the variability in performance, the other 24.6% is not explained by the model. This indicates that financial performance is very much affected by these factors.

Table 2: Anova

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	3.540	3	1.180	21.483	.000 ^b
1 Residual	1.154	21	.055		
Total	4.694	24			

a. Dependent Variable: FP

b. Predictors: (Constant), IRC, DR, DER

Source: Research Findings

From the data findings in table 3 above, the sum of squares due to regression is 3.540 while the mean sum of squares is 1.180 with 3 degrees of freedom. The sum of squares due to residual is 1.154 while the mean sum of squares due to residual is 0.055 with 21 degrees of freedom. The value of F calculated is 21.483 and the significance value is 0.005. The p value is 0.000. Since the p value is less than 0.05 it implies that the relationship is significant at 95% level of significance; the model is therefore significant for the study and prediction.

Table 3: Correlation Analysis

		FP	DR	D	IRC
FP	Pearson Correlation	1	.808**	.064	-.089
	Sig. (2-tailed)		.000	.759	.672
	N	25	25	25	25
DR	Pearson Correlation	.808**	1	-.095	-.058
	Sig. (2-tailed)	.000		.652	.784
	N	25	25	25	25
DER	Pearson Correlation	.064	-.095	1	.827**
	Sig. (2-tailed)	.759	.652		.000
	N	25	25	25	25
IRC	Pearson Correlation	-.089	-.058	.827**	1
	Sig. (2-tailed)	.672	.784	.000	
	N	25	25	25	25

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

Source: Research Findings

The findings show positive correlation between financial performance and debt ratio with a correlation coefficient of 0.808. This implies that the firms listed under energy and petroleum sector at the Nairobi securities exchange can improve their performance by improving on their Debt ratio. The findings also show a positive correlation between performance with Debt-to-Equity ratio with a correlation of 0.064. This implies a very low correlation between Debt to Equity ratio and performance this can firm growth.

The study shows a negative correlation between performance and Interest cover ratio with correlation of -.089. This implies that decreasing the Interest cover ratio can significantly increase a firm's performance of the firms listed under energy and petroleum sector at the Nairobi securities exchange. These findings illustrate the results obtained from correlation analysis for the sampled firms for the period of study at 0.05 percent level of significance.

Table 4: Coefficients of Determination

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.017	.072		.242	.811
1 DR	2.519	.329	.833	7.656	.000
DER	.234	.081	.561	2.906	.008
IRC	-.007	.003	-.505	-2.623	.016

a. Dependent Variable: FP

Source: Research Findings

According to the model the Debt ratio variable is significant with a significance value that is less than 0.05. The other variables (Debt to Equity ratio and Interest cover ratio) are also significant. The Debt ratio and Debt to Equity ratio are positively correlated with financial performance while Interest cover ratio is negatively correlated with performance. From the model, taking all factors (Debt ratio, Debt to Equity ratio and Interest cover ratio) constant at zero, financial performance had an autonomous value of 0.017. The data findings analyzed also showed that taking all other independent variables at zero, a unit increase in Debt will lead to a 2.519 increase in performance. A similar increase in debt will also lead to a 0.234 increase in financial performance. A unit increase in Interest cover ratio will lead to a 0.007 decrease in firm performance. This indicates that Debt ratio and Debt to Equity ratio have a positive effect to the performance of the listed Energy and petroleum firms at the NSE while the Interest Cover ratio had a negative contribution on the performance on the Energy and petroleum firms listed on the NSE. The coefficient table above was used in coming up with the model: Financial performance = $0.017 + 2.519X_1 + 0.234 X_3 - 0.007$.

5.0 Conclusions and Recommendations

5.1 Conclusions of the Study

From the analysis, it can be noted that the three independent variables (Debt ratio, Debt to Equity ratio and Interest cover ratio) had varying degrees of influence on the Return of Equity ROE and Return on Assets of firms in the Energy and petroleum sector listed on the NSE. The study concludes that Debt ratio influences the financial performance of the Energy and petroleum firms listed at the NSE positively. The study also deduced that Debt ratio taking into consideration of the total equity negatively influenced the financial performance of firms in the Energy and petroleum sector listed at the NSE. The results are similar to the work of studies in the past, which suggests a relationship between capital structure decisions and financial performance of firms. Kiprop (2013) suggested that firms that use sound capital structure set them on sound financial standing hence promoting the profitability of those firms

The study also revealed that financial leverage generally influences financial performance of the listed Energy and petroleum firms listed at the NSE. These findings are consistent with the works of Muema (2013) who stated that capital structure decisions are useful to firms both as an instrument to promote sound capital structure and as a means of promoting profitability. Muema (2013) further stated that capital structure decisions are attractive as instrument for firms' use as a means of enhancing financial performance. The study therefore concludes that working financial leverage is a very sensitive area in the field of financial management which involves the decision of the amount and composition of Debt ratio, amount liabilities a firm should possess and other capital structure decisions factors that inform, firm financing need to greatly taken into consideration by firm managers. Furthermore, the total amount assets owned by firm largely affects its growth and profitability.

5.2 Recommendations

There is need for a more comprehensive sector wise study on the relationship between capital structure or financial leverage and financial performance of all the Energy and petroleum firms including those not listed at the NSE. This could be necessary since the firms that are not listed at the NSE not enjoy similar benefits as those that are listed in terms of access to various forms of firm financing. Another study is also recommended that would consider the macroeconomic factors such as inflation and prevailing interest rates which would be more representative of the real business environment. This study established that Debt ratio, Debt to Equity ratio and Interest cover ratio play a key role on the financial performance of the Energy and petroleum firms listed at the NSE. This study therefore recommends that the firms handle their capital

structure decisions prudently as the changes in the factors like Debt ratio, Debt to Equity ratio and Interest cover ratio enhance profitability of firms when prudently employed and hence affect the performance of Energy and petroleum firms listed at the Nairobi Securities Exchange. This will ensure stability at the NSE which promotes fair trade. This study also established that Debt ratio and Debt to Equity ratio were positively correlated with the financial performance of the Energy and petroleum firms listed at the NSE while Interest cover ratio negatively influenced financial performance. This study therefore recommends that firms control the amount of interest expense since an increase in interest expense has an effect in that it reduces the financial performance of firms in the Energy and petroleum sector listed in the NSE.


References

- Abor, J. (2005). The effect of capital structure on profitability: an empirical analysis of listed firms in Ghana. *The journal of risk finance*.
- Abor, J., & Biekpe, N. (2009). How do we explain the capital structure of SMEs in sub-Saharan Africa? Evidence from Ghana. *Journal of Economic Studies*.
- Abu-Tapanjeh, A. M. (2006). An empirical study of firm structure and profitability relationship: The case of Jordan. *Journal of Economic and Administrative Sciences*.
- Adongo, J. (2012). *The effect of financial leverage on Profitabilty and risk of firms listed at the Nairobi securities exchange* (Doctoral dissertation).
- Adongo, J. (2012). *The effect of financial leverage on Profitabilty and risk of firms listed at the Nairobi securities exchange* (Doctoral dissertation).
- Agrawal, A., & Nagarajan, N. J. (1990). Corporate capital structure, agency costs, and ownership control: The case of all-equity firms. *The Journal of Finance*, 45(4), 1325-1331.
- Ahmad, Z., Abdullah, N. M. H., & Roslan, S. (2012). Capital structure effect on firms performance: Focusing on consumers and industrials sectors on Malaysian firms. *International review of business research papers*, 8(5), 137-155.
- Akhtar, S., & Oliver, B. (2009). Determinants of capital structure for Japanese multinational and domestic corporations. *International review of finance*, 9(1-2), 1-26.
- Al-Najjar, B. (2011). The inter-relationship between capital structure and dividend policy: empirical evidence from Jordanian data. *International Review of Applied Economics*, 25(2), 209-224.
- Al-Najjar, B., & Taylor, P. (2008). The relationship between capital structure and ownership structure: New evidence from Jordanian panel data. *Managerial Finance*.
- Al-Sakran, S. A. (2001). Leverage determinants in the absence of corporate tax system: the case of non-financial publicly traded corporations in Saudi Arabia. *Managerial Finance*.
- Baskin, J. (2002). An empirical investigation of the pecking order hypothesis. *Financial management*, 26-35.
- Bhunia, A. (2012). Leverage impact on firms investment decision: A case study of Indian pharmaceutical companies. *Contemporary Business Studies*.
- Cheng, M. C., & Tzeng, Z. C. (2011). The effect of leverage on firm value and how the firm financial quality influence on this effect. *World Journal of Management*, 3(2), 30-53.
- Cooper, D. R., & Schindler, P. S. (2008). *Business research methods*. Boston: McGraw-Hill Irwin.
- Daskalakis, N., & Psillaki, M. (2008). Do country or firm factors explain capital structure? Evidence from SMEs in France and Greece. *Applied financial economics*, 18(2), 87-97.
- Dittmar, A. (2004). Capital structure in corporate spin-offs. *The Journal of Business*, 77(1), 9-43.

- Eunju, Y. & SooCheong, J. (2005). The effect of financial leverage on profitability and risk of restaurant firms, *The Journal of Hospitality Financial Managements*, 13,200-210
- Fama, E. F., & French, K. R. (2002). Testing trade-off and pecking order predictions about dividends and debt. *The review of financial studies*, 15(1), 1-33.
- Frank, M. Z., & Goyal, V. K. (2011). *Trade-off and pecking order theories of debt, handbook of empirical corporate finance: Empirical Corporate Finance*. Elsevier, 135–202
- Gu, Z. (1993). Debt use and profitability: A reality check for the restaurant industry. *Foodservice Research International*, 7(3), 135-147.
- Harris, M., & Raviv, A. (1990). Capital structure and the informational role of debt. *The Journal of Finance*, 45(2), 321-349.
- Hussain, J., & Matlay, H. (2007). Financing preferences of ethnic minority owner/managers in the UK. *Journal of Small Business and Enterprise Development*.
- Kale, A. A. (2014). *The impact of financial leverage on firm performance: the case of non financial firms in Kenya* (Doctoral dissertation, University of Nairobi).
- Kayo, E. K., & Kimura, H. (2010). Hierarchical determinants of capital structure. *Journal of banking & finance*, 35(2), 358-371.
- Kraus, A., & Litzenberger, R. H. (1973). A state-preference model of optimal financial leverage. *The journal of finance*, 28(4), 911-922.
- Miller, M. H. (1977). Debt and taxes. *the Journal of Finance*, 32(2), 261-275.
- Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *The American economic review*, 48(3), 261-297.
- Modigliani, F., & Miller, M. H. (1963). Corporate income taxes and the cost of capital: a correction. *The American economic review*, 53(3), 433-443.
- Myers, S. C. (1984). The capital structure PuzzleThe journal ofcapital structure puzzle. *J. Finance*, 39(3).
- Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of financial economics*, 13(2), 187-221.
- Myers, S.C. (1982). Determinants of capital borrowing, *Journal of Finance Economics*, 5, 5147-5175.
- Nduati, M. (2010). The relationship between leverage and financial performance of companies quoted at the Nairobi stock exchange, Unpublished MBA Project, University of Nairobi.
- Padrón, Y. G., Apolinario, R. M. C., Santana, O. M., Martel, M. C. V., & Sales, L. J. (2005). Determinant factors of leverage: An empirical analysis of Spanish corporations. *The Journal of Risk Finance*.
- Pearson, K. (1907). *On further methods of determining correlation* (Vol. 16). Dulau and Company.
- Pouraghajan, A., Malekian, E., Emamgholipour, M., Lotfollahpour, V., & Bagheri, M. M. (2012). The relationship between capital structure and firm performance evaluation measures: Evidence from the Tehran Stock Exchange. *International journal of Business and Commerce*, 1(9), 166-181.
- Rafique, M. (2011). Effect of profitability & financial leverage on capital structure: A case of Pakistan's automobile industry. *Available at SSRN 1911395*.
- Rehman, S. S. F. U. (2013). Relationship between financial leverage and financial performance: Empirical evidence of listed sugar companies of Pakistan. *Global Journal of Management and Business Research*.
- Shyam-Sunder, L., & Myers, S. C. (1999). Testing static tradeoff against pecking order models of capital structure. *Journal of financial economics*, 51(2), 219-244.
- Singh, Y. K., & Nath, R. (2010). *Research methodology*. New Delhi: Publishing Corporation

- Soumadi, M. M., & Hayajneh, O. S. (2012). Capital structure and corporate performance empirical study on the public Jordanian shareholdings firms listed in the Amman stock market. *European Scientific Journal*, 8(22).
- Subaii, B. (2012). The relationship between financial leverage and return on investment in Kuwaiti public shareholding companies.
- Suhaila, A. M. (2014). *The effect of liquidity and leverage on financial performance of commercial state corporation sin the tourism industry in Kenya* (Doctoral dissertation, University of Nairobi).
- Tale, N. W. (2014). *Relationship between capital structure and performance of non financial firms listed at the Nairobi securities exchange* (Doctoral dissertation, University of Nairobi).
- Upneja, A., & Dalbor, M. C. (2001). An examination of capital structure in the restaurant industry. *International Journal of Contemporary Hospitality Management*.
- Vasiliou, D., Eriotis, N., & Daskalakis, N. (2009). Testing the pecking order theory: the importance of methodology. *Qualitative Research in Financial Markets*.
- Wainaina, J. N. (2014). *The relationship between leverage and financial performance of top 100 small and medium enterprises in Kenya* (Doctoral dissertation, University of Nairobi).
- Wainaina, J. N. (2014). *The relationship between leverage and financial performance of top 100 small and medium enterprises in Kenya* (Doctoral dissertation, University of Nairobi).

This is an open-access peer reviewed article published and distributed under the terms

and conditions of the  **[Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/)** of United States unless otherwise stated. Access, citation and distribution of this article is allowed with full recognition of the authors and the source. Copyright, content ownership and liability for content herein remain with the authors.