RELATIONSHIP BETWEEN CAPITAL STRUCTURE AND FINANCIAL PERFORMANCE OF EDIBLE PETROLEUM OIL COMPANIES LISTED ON NAIROBI SECURITIES EXCHANGE IN KENYA

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Abstract: The alarming rate at which top performing corporations are becoming bankrupt to liquidation and receivership is alarming and requires to be given attention. The primary objective of the study was to determine if there existed a viable association between the capital components and financial resultant performance of edible petroleum oil companies which are quoted at the Nairobi Securities Exchanges Market. Precisely, the Researcher had an aim of ascertaining if there exists an affiliation between debt equity ratio, debt asset ratio and debt levels as the independent variables and return on equity, return on assets and net profit as the dependent variables. The three theories discussed were Modigiliani and Miller, trade of theory and pecking order theory. Census approach together with descriptive statistics were employed. Required secondary data were extracted from publications in the websites and data was scrutinized using trend analysis and regression analysis. Data was tabulated for comparison. Findings indicated that with an increase in leverage amounts the net profit margins reduced. They also revealed that with a decrease in the debt to equity ratio there was an increase in the return to equity. Further, a decrease in debt asset ratio resulted to an increase in return on assets. Therefore, the leverage level in an organization's capital configuration is influential on the financial performance calling for Petroleum companies to initiate procedures to have an optimal capital structure that maximizes shareholders wealth and minimizes the costs associated.

Keywords: *Capital structure, Financial Performance, Debt, Equity, NSE*

Introduction

Regardless of million efforts by finance managers to effectively and efficiently manage their finances, an optimum balance between debt equity mixtures is paramount in organizations and remains a challenge with this ever changing economic environment. Bankruptcy, liquidation and receivership of companies continues to be the order of the day leaving a large workforce jobless at the end of the day. Part of the downfall of companies can be explained by inexperienced management team, lack of annual audit of books of accounts, rapidly changing market, and high interest rates charged by lenders and commercial banks.

Stephen, Randolph and Bradford (2002) argued that capital constituents is the amalgamation of both or either borrowed funds or internal funds that a firm needs to carry out its operations. Financial performance is measured hand in hand with the accomplishment of financial objectives in a firm. It is also a measure of the overall financial health of a firm over a certain duration. Finance is a critical factor in any organization .Any decision made concerning finances can impact tremendously on the going concern of an organization. Pandey (2005) indicated that financial composition is the method a firm incurs either ordinary shares, bank loans or short term debts. An ideal capital structure is attractive to both current and potential investors. The ultimate goal of all financing decisions is maximization of the wealth of the shareholders and this can be achieved only by measuring the firm's financial performance.

Sohail, Khurram and Muhammad (2014) showed that the balance of debt and equity is fundamental in determining the risk and returns of a company. More debt results to high bankruptcy costs and low debt means a company is not benefiting from the tax shield benefit. High risky ventures yield high returns and the reverse is also true. According to Donald and Ronald, (2004), a firm will encounter both systematic and unsystematic risk. In order to be at a competitive advantage a firm will find ways of minimizing the unsystematic risk. The best performing firms are those that will minimize their risk exposure by engaging effective trade-off between risk and returns. It is therefore a regulatory requirement to have books of accounts audited by an independent external party to assess if there is any issue with the cash flow of a company and whether the going concern is questionable. Finance managers are tirelessly searching for means of improving their performance with a lot of theories being formulated by various scholars. Some of these theories advocated for capital structure to be influencing the financial performance of a firm while others refute this statement. It was on this basis that the Researcher conducted his study.

Capital Structure

Boodhoo (2009) indicated that blended mixture of borrowed funds and internal funds sustained in an organization is commonly referred to as capital structure and it indicates if the stakeholders can without strain meet their (current) short term and (non-current) long term liabilities as when they arise. Mwaura (2014) revealed that Leverage ratio is the capital from outside incurred by a firm. A firm can source for funds from internal and external means. Various theories by various scholars have been proposed to explain the optimal capital structure. Niu (2008) posits that the most optimum financial structure has to curtail the capital cost and capitalize on the wealth of shareholders'. Any wrong decisions made in a company can easily lead to financial distress, liquidation and eventually bankruptcy and dissolution. While it could be attractive to use internal funds solely, opportunities arise which force a company to seek external funds. However, a finance manager should be wise while increasing the leverage levels because it could be a boost or put-off for investors. Finance managers and other stakeholders interested in the performance of the company place reliance on financial information when planning their future

activities. Ratio analysis techniques have been adopted by many companies to assist in the benchmarking of their financial performance to assess the healthiness of a firm. Dursun, Cemil and Ali (2013) agreed that the financial strength of a company is designated by various ratio analyses. Ivica and Tamara (2013) indicated that assessing the capacity of a client to settle its dues is key and can only be ascertained by use of ratios. For this case The Researcher only dealt with (ROA), and (ROE) and (NP) as the indicators of financial performance.

Statement of the Problem

Prestigious companies have been witnessed to collapse over the years with the recent ones being Nakumatt chain of supermarkets, Chase Bank and Imperial Bank amongst others. Attempts to revive these companies were almost useless because the damage had gone so far. This calls for finance managers to involve expertise while determining the optimum capital structure that will minimize the financial risks associated as well as maximize the shareholders' wealth at large. Financial planning therefore continues to be a critical function in any given organization especially in the petroleum sector which is a very sensitive sector as it contributes to a great portion of the GDP of our country Kenya (Catherine, 2013). The tax shield incentive enjoyed by firms by incurring debt in their capital structure may prompt them to abuse the usage of debt and borrow exceedingly which introduces bankruptcy costs and hence it becomes a problem. Hence, a firm's excessive borrowing surpasses the tax shield benefit which has been stated in the trade off theory. When a firm does not balance the tax benefits with the bankruptcy costs then it becomes an issue (Dursun, Cemil & Ali, 2013).

High debt levels in the capital structure indicate the company is financing most of its activities on borrowed money and it becomes a put off for potential and even current investors and it also compromises the cash flow. Low debt levels on the other hand is a good sign because it shows a company is relying on its retained earnings to finance its operations although this might also be a put off for risky investors. While some companies have had a history of continuous prolonged performance over the years, we cannot ignore the fact that many well performing companies have collapsed leaving people jobless which also has a negative impact on the Gross Domestic Product of a country (Boodhoo, 2009). Different studies revealed different conclusions on whether financial structure is related to financial performance of a firm. This study therefore aimed at finding out if the capital structure is indeed related to financial activities of petroleum oil firms quoted at the Nairobi Securities Exchange Market.

Objectives of the study

i. To examine the relationship between debt/equity ratio and the financial performance of Petroleum companies listed at NSE.

ii. To determine the relationship between debt/asset ratio and the financial performance of Petroleum companies listed at NSE.

iii. To ascertain the relationship between total debt and the financial performance of Petroleum companies listed at NSE.

Conceptual Framework
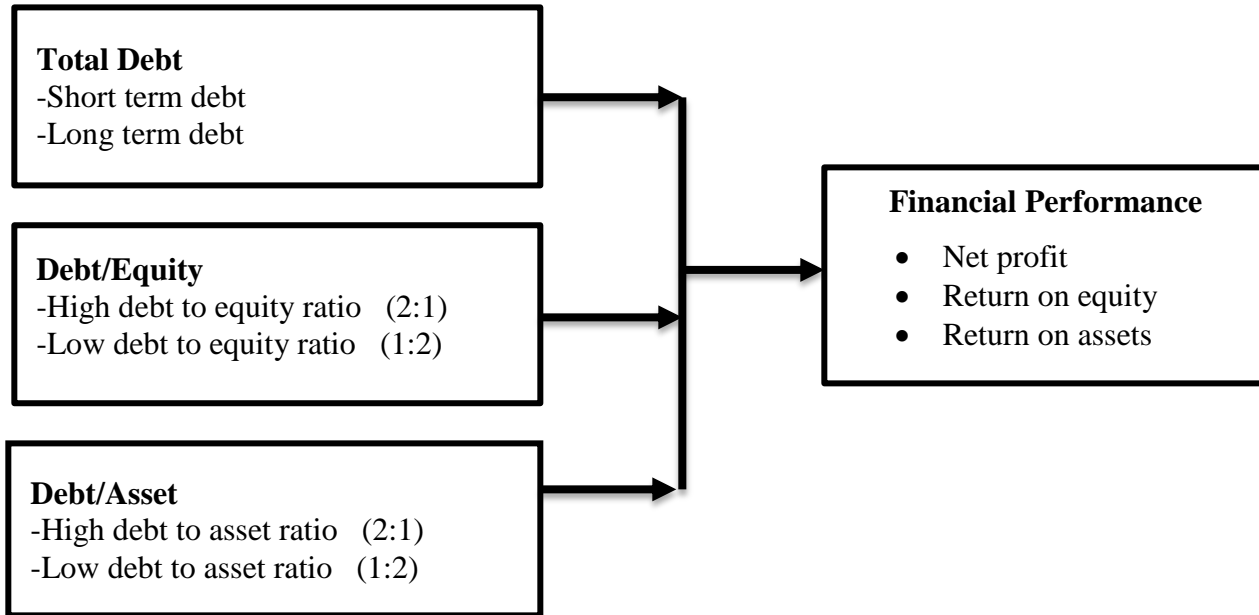
Independent variable   **Dependent variable**

Figure 2.1: Conceptual framework

Research Methodology

The study adopted a descriptive research   design. Secondary data collected from the capital markets authority was used for analysis. The data collected was analyzed through Statistical Package for Social Sciences version 22. The method adopted to achieve the objectives was a regression analysis where univariate regression models were established. The following regression Models were adopted:

Findings

Effect of Debt Equity on Return on Equity

The first objective of the study was to examine the relationship between debt/equity ratio and the financial performance of Petroleum companies listed at NSE. A univariate regression model was used to determine the relationship. Table 1 shows the model summary.

Table 1: Debt Equity Ratio and Return on Equity (Model Summary)

Company name	R	R squared	Adjusted R squared	Std Error of the Estimate
Total Kenya plc	(0.726)	0.528	0.434	0.541
Kenol Kobil Ltd	(0.632)	0.399	0.279	0.845

The findings showed that the R value was (0.726) and (0.632) for Total Kenya Plc and Kenol Kobil Ltd respectively. It was observed that there was a strong negative relationship as indicated in column R between debt equity ratio and ROE for both companies under this study. The coefficient of determination illustrates degree to which the experimental component could be described by independent variable. In this case, 52.8% and 39.9% for Total Kenya Ltd and Kenol Kobil Limited respectively of a change in return on assets could be explained by a change in debt equity ratio. A further 47.2% and 60.1% for Total Kenya Limited and Keno, Kobil Limited of return on assets s is attributable to other factors not included in this study. This was contrary to Thomas (2014) for financial structure and financial results of manufacturing organizations quoted on NSE, he found out little degree of correlation amid debt equity ratio and ROE and only 12.3% of the experimental component could be explained by the independent variable. Velnampy (2012) also contradicted this study by concluding that debt equity ratio and ROE are positively related. The ANOVA findings are indicated in Table 2.

Table 2: Debt Equity Ratio and Return on Equity (ANOVA)

	Model	Sum of squares	Degrees of freedom	Mean square	F	Sig
Total Kenya plc	Regression	1.6407	1	1.6407	5.595	0.0643
	Residual	1.4660	5	0.2932		
	Total	3.1068	6			
Kenol Kobil Ltd	Regression	2.3715	1	2.3715	3.3201	0.1280
	Residual	3.5713	5	0.7142		
	Total	5.9428	6			

The ANOVA in table 2 showed that the model does not predict the outcome variable significantly well. This is shown in the last column in the significance test which is 0.0643 and 0.1280 respectively for both companies which are above 0.05 to mean that the statistical confidence is not applicable. Thomas (2014) concluded that regression model does not predict the product variable significantly well which is in line with our findings.

Effect of Debt Asset Ratio on Return on Assets

The second objective of the study was to determine the relationship between debt/asset ratio and the financial performance of Petroleum companies listed at NSE. The model Summary was presented in Table 3.

Table 3: Debt asset Ratio and Return on Assets (Model Summary)

Company name	R	R squared	Adjusted R squared	Std Error of the Estimate
Total Kenya Plc	(0.823)	0.677	0.613	0.019
Kenol Kobil Ltd	(0.518)	0.268	0.122	0.094

The second goal was to ascertain the significant change in ROA with a change in debt asset ratio of quoted Petroleum companies at the NSE. The correlation co efficient as indicated in column R was (-0.823) and (-0.518) which implied a strong adverse association amid debt asset ratio and ROA for both Total Kenya Ltd and Kenol Kobil Limited. R squared represented the co efficient of determination and it implies that 67.7% and 26.8% for Total Kenya Ltd and Kenol Kobil Limited respectively of a change in return on assets could be explained by a change in debt asset ratio. A further 32.3% and 39.9% for Total Kenya Limited and Kenol Kobil Limited of return on assets is attributable to other factors not included in this study. This calls for more study to be done to assess if there exists a relationship between debt asset ratio and ROA. The model fitness was also established and presented in Table 4.

Table 4: Debt Asset Ratio and Return on Assets (ANOVA)

	Model	Sum of squares	Degrees of freedom	Mean square	F	Sig
Total Kenya plc	Regression	0.00364	1	0.00364	10.496	0.0229
	Residual	0.00173	5	0.000346		
	Total	0.00537	6			
Kenol Kobil Ltd	Regression	0.01624	1	0.01624	1.8308	0.2339
	Residual	0.04435	5	0.00887		
	Total	0.06060	6			

The ANOVA in table 4 above for Kenol Kobil showed the model does not predict the product variable considerably well. This means that statistical significance of the regression model is not applicable. Here the significance level was 0.2339 which is above 0.05.For Total Kenya Ltd the regression model predicts the outcome significantly well thus the statistical significance of the regression is applicable. The significance level was 0.0229 which is below 0.05.

Effect of Debt Levels on Net Profits

Table 5: Debt Levels and Net profits (Model Summary)

Company name	R	R squared	Adjusted R squared	Std Error of the Estimate
Total Kenya plc	(0.577)	0.333	0.199	3724110.7485
Kenol Kobil Ltd	(0.136)	0.019	0.178	11532347.4363

In the table above, R value was (0.58) and (0.14) for Total Kenya Plc and Kenol Kobil Ltd respectively. It indicates that in Total Kenya plc a relatively strong negative association exists between the components in the study while in Kobil there is a weak negative relationship R squared, which is the coefficient of determination for Total Kenya Plc and Kenol Kobil Ltd was 0.33 and 0.02 respectively. R squared explained how much of the net profit can be explained by the debt levels. In this case only 33% and 1.9% could be explained. According to Amenya (2015) Firm performance has negative correlation with leverage as a slight rise in financial leverage will result to decline in net profits of a company. Catherine (2013) similarly showed that a negative correlation exists between long term debt and financial results of agricultural firms listed at NSE. She also found out that there is a statistical significant since the significance level was below 0.05.this implied the error rate was low and thus recommendations from the findings would enhance the financial performance of the companies. Thomas (2014) concluded that increased leverage /borrowed funds will lead to decreased profitable of a firm. It is therefore necessary. For finance mangers to be very critical when it comes to incurring leverage in their capital structures. The model fitness is established in Table 6.

Table 6: Debt levels and Net profits (ANOVA)

	Model	Sum of squares	Degrees of freedom	Mean square	F	Sig
Total Kenya plc	Regression	3.46^13	1	3.46^13	2.497	0.175
	Residual	6.93^13	5	1.38^13		
	Total	1.04^14	6			
Kenol Kobil Ltd	Regression	1.26^13	1	1.26^13	0.095	0.770
	Residual	6.65^14	5	1.33^14		
	Total	6.78^14	6			

The ANOVA in table 6 above for Kenol Kobil showed the model does not predict the product component considerably well. This means that statistical significance of the model is not applicable. Here the significance level was 0.770 which is above 0.05 at 95% confidence degree level. For Total Kenya Ltd the situation is the same as the significance level is 0.175 which is also above 0.05 at 95% confidence level

Conclusions

The study concluded that debt inclusion in financial component of any given company is inevitable however it has its drawbacks as much as a company benefits from tax shield. Debt equity ratio was found to be negatively correlated to the return on equity for both Total Kenya plc and Kenol Kobil Ltd. Debt equity was statistically immaterial in explaining the ROE in the petroleum companies listed at NSE. A unit change in debt equity ratio only causes 1.96% and 2.92% change in return on equity in Total Kenya and Kenol Kobil respectively as indicated by the regression co efficient. Therefore, debt equity ratio variable is statistically insignificant in explaining

changes in return on equity among petroleum companies listed at NSE in Kenya. These results are in concurrence with Thomas (2014) who concluded that a high leverage equity quotient indicates increased risk of going bankrupt and the reverse is also true. From these research findings, debt equity ratio in overall impacts negatively on return on equity among petroleum companies listed at nse.it is evident that an increase in the debt to equity ratio leads to decrease in return on equity of a firm. Therefore, it is right to conclude that the two variables are negatively correlated.

The study also concluded that debt asset ratio is negatively correlated to return on assets for both companies. Debt asset ratio for Total Kenya plc was found to be statistically insignificant in explaining the return on assets. Debt asset ratio for Kenol Kobil Ltd was found to be statistically significant in explaining the return on assets. A unit change in debt asset ratio only causes 0.16% and 0.20% change in return on assets in Total Kenya and Kenol Kobil respectively as indicated by the regression co efficient. Therefore, debt asset ratio variable is both statistically significant and insignificant in explaining changes in return on equity among petroleum companies listed at NSE in Kenya. From these research findings, debt asset ratio in overall has an impact on return on assets among petroleum companies listed at NSE. However, the impact is not as significant as in debt equity and return on equity relationship. Debt to asset ratio and return on assets are negatively related as indicated in the trend analysis which was backed up by the regression analysis in the prior chapter.

Another conclusion by the study was that on average a decrease in the debt asset ratio leads to an increase in the return on assets for the Petroleum companies. Statistical analysis indicated that debt levels are negatively correlated with the net income of the petroleum companies listed at NSE. However, there was an exception again in 2012 where a decrease in debt asset led to a decrease in return on assets for both Total and Kenol Kobil. However the other years return on assets increased with a decrease in the debt asset ratio. Velnampy (2012) concluded that an increment in leverage levels goes hand in hand with a negative direction of net profit levels. Thomas (2014) also concluded that short term debt attracts high profit levels while long term debt attracts low profit levels.

Research findings presented in chapter four indicated that net profits are negatively related to debt levels. Increase in debt levels result to decrease in net profits and the reverse is also true. High loans increase the interest expense which reduces the net income. It can be concluded that other than financial composition, several other factors can be said to have an impact on the financial profits of a corporate which cause the financial performance to deteriorate even with a decrease in the leverage levels in the capital composition.

Recommendations

Leverage is inevitable in any given organization and it is therefore paramount for finance managers to come up with strategies to maximize on benefits and minimize on the costs. It is recommended that firms should choose a debt equity mixture that minimizes their costs and maximized their benefits. They should take into account the pecking order theory of first exhausting the cheaper sources of capital before opting for the expensive sources of capital not forgetting trade off theory of maximizing their tax shield and minimizing the bankruptcy costs associated. The study recommends that finance managers should minimize usage of leverage as it has been observed that leverage reduces the financial performance of companies. They should only use it when they have no other alternative sources of funds. It is recommended that the government to intervene and put interest rate caps to financial institutions when lending funds to companies taking note that most companies place reliance on debt to conduct their business. The cap would reduce the interest burden carried by the company.

Conflict of Interest

No potential conflict of interest was reported by the authors

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