THE IMPACT OF CAPITAL STRUCTURE ON FINANCIAL PERFORMANCE OF COMPANIES LISTED AT THE NAIROBI SECURITIES EXCHANGE IN KENYA

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Abstract

This research sought to analyze the impact that capital structure has on the financial performance of companies listed at the Nairobi Securities Exchange. The population of the study was thirty companies sampled from the agricultural, automobiles and accessories, commercial and services, construction and allied energy and petroleum & manufacturing and allied sectors of the economy. Capital structure (the independent variable) was measured by debt ratio and financial performance (the dependent variable) was measured by earnings per share, return on assets and return on equity. The study hypothesized that there was no relationship between capital structure and earnings per share. The study covered a period of five years. In this study statements of comprehensive income and financial position were analyzed and the extracted data was analyzed using eviews8 statistical software. The study concluded that there is a weak positive relationship between capital structure and financial performance of the listed companies.

Keywords: Capital structure, financial performance, creative accounting, leverage, debt ratio

INTRODUCTION

Capital structure is the composition of a firm's liabilities. A firm can be financed by the shareholders or debt holders or hybrid (Umar, Tanveer, Aslam & Sajid, 2012). If financed entirely by share subscription then the entire profits go to the shareholders. If financed by both then the profit is shared. If the value of the firm can be affected by capital structure or financing decision, a firm would like to have a capital structure which maximizes the market value of the

firm. An optimal capital structure and how to calculate one that maximizes a firm's profits has remained elusive to date. Corporate failure among companies in Kenya has been associated with financing behavior of the firms. Momentous efforts to revive the ailing and liquidating companies have focused on financial restructuring. A great dilemma for management and investors alike is whether there exists an optimal capital structure (Mwangi, Makau & Kosimbei, 2014) and how it influences financial performance.

Financing of all firms is done by equity, debt or hybrid security. In their study on the relationship between capital structure and financial performance of one hundred companies in Pakistan (Umar et al) found out that all the three variables of capital structure, current liabilities to total asset, long term liabilities to total asset, total liabilities to total assets negatively impacts the earnings before interest and taxes, return on assets, earnings per share and net profit margin. One of the most important issues in corporate finance is responding to the question "how do firms choose their capital structure?" Locating the optimal capital structure has for a long time been a focus of attention in many academic and financial institutions that probes in to this area (Nirajini & Priya, 2013).

What is known as financial structure is the product of different factors from inside and outside the company. It is probable that internal factors are affected by outside determinants which can be observable through the companies' leverage similarities within an industry (Nejad & Wasiuzzaman, 2013).

The capital structure decision affects financial risk and hence the value of the company. Modigliani and Miller (1958) proposed that the market value of a company is not affected by the capital structure of the company. This was based on the assumption that there are no taxes & cost of financial distress. Their theory helps us to understand how taxes and financial distress affect a company's capital structure decision.

The capital structure decision can affect the value of the firm either by changing the expected earnings or the cost of capital or both. The existence of an optimum capital structure is not accepted by everyone. There exist two views and a middle position. David Durand identified the two extreme views which are the net income and the net operating approaches. Under the net income approach, the cost of debt and the cost of equity are assumed to be independent of capital structure whereas under the net operating income approach the cost of equity is assumed to increase linearly with leverage.

The traditional view comes in as a compromise between the net income approach and the net operating income approach. According to this view the value of the firm can be increased or the cost of capital can be reduced by the judicious mix of debt and equity.

Statement of the Problem

Many blue chip companies in Kenya are undergoing financial challenges which could have otherwise been avoided if they made wise capital structure decisions. It is important to note that the chief executive officers under whose tenures the decisions were made have also exited the scene. Corporate failure among companies in Kenya has been associated with the financing behavior of the firms. Momentous efforts to revive the ailing and liquidating companies have focused on financial structuring (Mwangi, Makau & Kosimbei, 2014).

The problem of corporate failure in Kenyan companies is real and lethargic and hence there is urgent need to establish whether this is linked to their capital structure models. These companies for example Kenya Airways Limited, Mumias Sugar Company Limited and Uchumi Supermarket Limited directly offer employment opportunities to thousands of Kenyans. They also provide ready market to numerous indigenous farms and firms in the country in addition to paying corporate taxes which is a source of revenue to the government. Various commentators are linking their fall to creative accounting which has not been objectively proved. This therefore leaves a fertile study gap which should be looked into.

Objectives of the Study

1. To analyze the effect of capital structure on financial performance of companies listed at the Nairobi Securities Exchange in Kenya.
2. To assess the relationship between capital structure and earnings per share.
3. To evaluate whether there is a linear relationship between financing mix and earnings before interest and tax.

Research Questions

1. Does capital structure have an effect on the financial performance (ROE) of companies listed at the Nairobi Securities Exchange in Kenya?
2. Does capital structure have an impact on the financial performance (ROA) of companies listed at the Nairobi Securities Exchange in Kenya?
3. Is there a relationship between capital structure and earnings per share?

Hypothesis

H01: There is no relationship between capital structure and financial performance (ROE) of companies listed at the Nairobi Securities Exchange in Kenya.

H02: There is no relationship between capital structure and financial performance (ROA) of companies listed at the Nairobi Securities Exchange in Kenya.

H03: There is no relationship between capital structure and financial performance (EPS) of companies listed at the Nairobi Securities Exchange in Kenya.

Significance of the Study

This study is conducted to ascertain why well financed companies in Kenya are collapsing and if indeed their poor financial performance is related to the financing mix decisions. The outcome of the research will be relayed to the shareholders to help them in making capital structure decisions. The findings will also help potential investors to know where to invest their hard earned money.

Scope of the Study

This study will focus on the companies listed at the Nairobi Securities Exchange in Kenya. It will utilize information obtained from the published financial statements in the NSE website.

Limitations of the Study

This research will be based on the published financial statements of companies listed at the Nairobi Securities Exchange. It is important to underscore the fact that these statements are not immune from creative accounting. This will be mitigated by relying on the audited accounts of the said companies implying that reliability will be anticipated.

LITERATURE REVIEW

Theoretical Review

Capital Structure Theories

Capital structure theories encompass an organized way of financing company projects by mixing equities and liabilities.

The Traditional Theory

According to this theory, a firm should purpose to minimize weighted average cost of capital and maximize the value of its marketable assets. It suggests that the use of debt has a clear and identifiable limit. Any debt capital beyond this point will create company devaluation and unnecessary leverage.

Under this theory it is assumed that the interest rate on debt remains constant during any one period and increases with additional leverage over time. It is also assumed that the expected rate of return from equity also remains constant before increasing gradually with the use of borrowed funds.

Modigliani and Miller's Capital Structure Theories

Modigliani and Miller, studied capital structure theory intensely in 1958 and from their analysis they developed the capital structure irrelevance proposition. They suggested that the relationship between capital structure and cost of capital is irrelevant. This effectively implies that increase in debt level does not have an impact on cost of capital. They further hypothesized that in perfect markets, it does not matter what capital structure a company uses to finance its operations. They theorized that the market value of a firm is determined by its earning power and the risk of its underlying assets, and that its value is independent of the way it chooses to finance its investment or distribute its dividends. However, they posit that for this proposition to hold there will be no taxes charged, no transaction costs and no bankruptcy costs. They further assumed that there will be equivalence in borrowing costs for both companies and directors. Another key assumption they made is that there will be symmetry in information and that there will be no effect of debt on a company's earnings before interest and taxes.

This proposition has some gap as in the real world scenario there are taxes, transaction costs, difference in borrowing costs, information asymmetries and effects of debt on earnings. They later came up with new evidence which pointed to cost of capital having an effect on capital structure hence having an impact on the value of the firm assuming that taxes are also levied. They then concluded the tax shield will reduce the cost of debt thus maximizing the performance of the firm.

Pecking Order Theory

This theory was first suggested by Donaldson in 1961.It starts with asymmetric information as managers know more about their company's prospects, risks and value than outside investors. It postulates that the cost of financing increases with asymmetric information. Financing for the business is known to come from three sources namely internal funds, debt and new equity. Companies prefer using internal funds first before going for debt and will only use equity as the last resort. This theory therefore postulates that companies have a hierarchy of financing sources.

This theory was modified popularized by (Myers & Majluf, 1984) where they argued that equity is a less preferred means to raise capital because when managers issue new equity, investors believe that managers think that the firm is overvalued and they are taking advantage of this overvaluation. As a result, investors will place a lower value to the new equity issuance. (Fama & French, 2002) found that some features of the data are better explained by the pecking order than by the trade off theory.(Goyal & Frank, 2003), showed that pecking order theory fails

where it should hold namely, for small firms where information asymmetry is presumably an important problem.

Trade Off Theory

It is an extension of the MM theory. It hypothesizes that the firm's optimal capital structure results from the trade off from the influences of firms and personal taxes, agency and bankruptcy costs. Companies must therefore, choose the level of debt that maximizes the benefits from the tax shield.

It is anchored on the idea that a company chooses how much debt finance and how much equity finance it should use by balancing the costs and the benefits. (Kraus & Litzenberger, 1973) after considering a balance between the dead weight costs of bankruptcy and the tax saving benefits of debt developed a classical version of the hypothesis. This theory states that there is an advantage to financing with debt and there is also a cost of financing with debt, the cost of financial distress and non bankruptcy cost. The empirical relevance of trade off theory has often been challenged. (Miller,1977), for example compared this balancing as akin to the balance between horse and rabbit content in a stew of one horse and one rabbit.

Agency Theory

This theory was postulated by Jensen and Meckling.It talks about conflict of interest between shareholders and managers. These parties have always different objectives which they often pursue. The managers focus on their personal agenda rather than maximizing shareholders' dividends. The main interest of the shareholders is to ensure that managers do not invest free cash in non profit making initiatives. On the other hand increase in debt with prudent management will ensure that the firm works more efficiently.

Empirical Review

Since the publication of the MM theory, many scholars have explored the effect that capital structure has on firm performance. Some have found out a positive relationship while others have found capital structure having a negative relationship with the performance of firms. A study that was done by (Nassar, 2016) on the impact of capital structure on financial performance of firms listed at the Istanbul Stock Exchange found that there is a negative significant relationship between capital structure and firm performance. He analyzed a total of one hundred and thirty six firms over a period of eight years from 2005 to 2012. The capital structure variable was measured by the debt ratio and financial performance variables were return on assets, return on equity and earnings per share.

Another study by (Mujahid & Akhtar, 2014) which sought to evaluate the impact of capital structure on firms' financial performance and shareholders' wealth in the textile sector of Pakistan established that capital structure positively impacts on the firms' financial performance and shareholders' wealth. This study sampled one hundred and fifty five textile firms in Pakistan for six years from 2006 to 2011. The dependent variable was financial performance which was measured by return on assets, return on equity and earnings per share. The independent variable was capital structure which was measured by debt to equity ratio.

After exploring the effect of capital structure on the financial performance of listed companies in Bahrain bourse, Gharaibeh (2015) revealed that capital structure represented by total liabilities to total assets, has a significantly positive impact on the performance of the firm represented by return on equity.

Summary of Literature and Research Gaps

After reviewing literature on the relationship between capital structure and financial performance of companies, it has been noted that the most recent study was done in 2016 by Nassar in Istanbul, Turkey which covered the period beginning 2005 to 2012. This study only focused on the aforementioned countries and therefore there is need to replicate the same in Kenya to see the impact that capital structure has on financial performance. It is also of concern that an attempt to explore this important topic was done in Turkey and other Arab nations like Bahrain.

Kenya too is a dynamic economy with investors who need to be updated regularly on this important and timely topic.

Table 1: Conceptual Framework

Capital Structure		Financial Performance
.Debt Ratio	→	.Return on Assets .Return on Equity .Earnings per Share
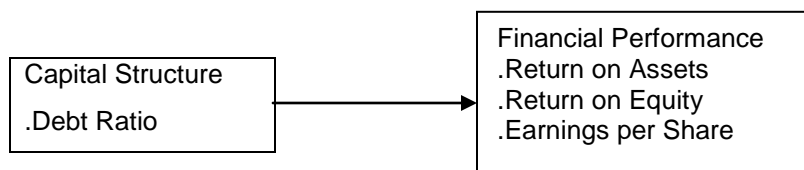
METHODOLOGY

Research Design & Data

The research carried out a causal study which sought to understand the impact that capital structure has on financial performance. The study used secondary data downloaded from statements of financial position (balance sheet) and comprehensive income obtained from published financial statements got from the Nairobi Securities Exchange website. The

population of the study was obtained from the listed companies at the NSE excluding those in the banking and insurance sectors. The companies in these sectors were excluded because their capital structure is predetermined and regulated by the Central Bank of Kenya & Insurance Regulatory Authority respectively.

The study picked on a total of thirty companies spanning across the agricultural ,automobile & accessories , commercial and services , construction and allied and energy and petroleum sectors. The companies are as listed hereunder:-

1. Eaagads Limited.
2. Kapchorua Tea Company Limited.
3. Kakuzi Limited.
4. Limuru Tea Company Limited.
5. Rea Vipingo Plantations Limited.
6. Sasini Tea Limited.
7. Williamson Tea Kenya Limited.
8. Car and General (K) Limited.
9. Uchumi Supermarket Limited.
10. BOC Kenya Limited.
11. Longhorn Kenya Limited.
12. Carbacid Investments Limited.
13. ARM Cement Limited.
14. Bamburi Cement Limited.
15. Kenya Power & Lighting Co.Ltd.
16. BAT Kenya Limited.
17. Sameer Africa Limited.
18. Marshals (E.A) Limited.
19. Express Kenya Limited.
20. Kenya Airways Limited.
21. Nation Media Group Limited.
22. Standard Group Limited.
23. TPS Eastern A. (Serena) Limited.
24. Scangroup Limited.
25. Crown Paints Kenya Limited.
26. E.A Cables Limited.
27. E.A Portland Cement Limited.
28. Kenol Kobil Limited.
29. Total Kenya Limited.
30. KenGen Limited.

This study covered a five year period beginning from the financial year ending 2008 to 2012. The independent variable was capital structure which was measured by the debt ratio. The dependent variable was financial performance which was measured by earnings per share, return on equity and return on assets.

Debt ratio = Total debt/Total assets x 100 (Simiyu, 1994)

Earnings per share = Total Earnings/No. of ordinary shares (Jennings, 2006)

Return on equity = Net Income/Equity (Nassar, 2016)

Return on assets = Net Income/Assets (Nassar, 2016)

Research Philosophy

This research is empirical in nature and it therefore embraced positivism paradigm. Positivists believe that reality is stable and can be observed and described from an objective viewpoint

(Levin, 1988), i.e. without interfering with the phenomena being studied. They contend that phenomena should be isolated and that observations should be repeatable.

Empirical Model

This research has one independent variable i.e. debt ratio and three dependent variables which are return on assets, return on equity and earnings per share. It was guided by the following empirical model:

$$Y=\beta_0+\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+\alpha$$

Where,

Y=debt ratio

β_0=gradient of the equation α=error

X_1=return on assets β=coefficient of the dependent variables

X_2=return on equity

X_3=earnings per share

Operationalization and Measurement of Variables

Table 2: Operationalization & Measurement of Variables

Variable	Type	Operationalization	Measurement	Hypothesized direction
Capital structure – Debt ratio	Independent	Ratio of total long term and short term debt to total assets.	Total debt /Total assets	Influenced by the dependent variables.
Firm performance (ROA)	Dependent	Ratio of net operating profit to the firms' total assets recorded in the statement of financial position	Net Income /Assets	Has a relationship with capital structure.
Firm performance (ROE)	Dependent	Amount of net income returned as a percentage of shareholders' equity.	Net Income /Equity	Has a relationship with capital structure.
Earnings per share	Dependent	The portion of profit allocated to each outstanding share.	Total Earnings/No. of ordinary shares.	Has a relationship with capital structure.

Target Population

The target population in this research study comprised of thirty listed companies in the Nairobi Securities Exchange. These companies are divided into agricultural, automobile & accessories,

commercial & services, construction & allied and energy and petroleum sectors. Banking and insurance sectors have been left out in this study because their capital structures are regulated by the regulatory agencies i.e. the central bank and Insurance Regulatory Authority respectively. The information of interest that will be used to compute the various variables will be sourced from the audited statements of financial position and comprehensive income as published by these companies in the website of the security exchange.

Sampling Design

The study employed non probability sampling as all the thirty companies in the agricultural, automobile & accessories, commercial & services, construction & allied and energy and petroleum sectors were picked to give the data in the study.

Data Collection Instruments

The research used panel data as obtained from the financial statements of the thirty listed companies in the NSE. The study used quantitative data that was mainly collected by the use of sample survey and administrative data.

The study used existing records i.e. financial statements and the relevant ratios were computed and recorded in observation check lists. Since the study relied on audited financial statements which were prepared in accordance with the international accounting standards, reliability and validity was anticipated.

Data Collection Procedure

The financial statements for the thirty listed companies were downloaded from the Nairobi Securities Exchange website. Then the required data was recorded in the data observation sheet (appendix I). Computation for the relevant ratios for example debt ratio, return on assets, return on equity and earnings per share was done accordingly and recorded in the data computation sheet (appendix II).

Data Analysis and Presentation

This study involved one independent variable (Y) and three dependent variables (X_1, X2 and X_3).Descriptive statistics (multivariate data analysis) has been used to analyze the data.Eviews8 statistical software has also been used to analyze the data. The following formula has been employed in the data analysis process.

EMPIRICAL FINDINGS

The findings of the study on the relationship between debt ratio and earnings per share of the thirty listed companies is as shown in the table 3.

Table 3. Summary of the relationship between debt ratio and earnings per share

Dependent Variable: EARNINGS_PER_SHARE				
Method: Panel Least Squares				
Date: 01/29/17 Time: 15:14				
Sample: 2008 2012				
Periods included: 5				
Cross-sections included: 30				
Total panel (balanced) observations: 150				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DEBT_RATIO	-14.84427	6.799023	-2.183295	0.0306
C	14.83113	3.375311	4.394004	0.0000
R-squared	0.031203	Mean dependent var		8.092800
Adjusted R-squared	0.024657	S.D. dependent var		16.94671
S.E. of regression	16.73648	Akaike info criterion		8.486303
Sum squared resid	41456.26	Schwarz criterion		8.526444
Log likelihood	-634.4727	Hannan-Quinn criter.		8.502611
F-statistic	4.766776	Durbin-Watson stat		1.975842
Prob(F-statistic)	0.030590			

Table 4: Summary of Relationship between Debt Ratio and Earnings per Share

Company Name	Correlation Coefficient	Interpretation
Thirty listed companies	+0.031203	Weak positive correlation.

Table 5: Summary of the Relationship between Debt Ratio and Return on Assets

Dependent Variable: RETURN_ON_ASSETS
Method: Panel Least Squares
Date: 01/29/17   Time: 15:19
Sample: 2008 2012
Periods included: 5
Cross-sections included: 30
Total panel (balanced) observations: 150

Variable	Coefficient	Std. Error	t-Statistic	Prob.	Table 5...
DEBT_RATIO	-0.172642	0.037535	-4.599455	0.0000	
C	0.154023	0.018634	8.265670	0.0000	
R-squared	0.125063	Mean dependent var		0.075655	
Adjusted R-squared	0.119151	S.D. dependent var		0.098448	
S.E. of regression	0.092397	Akaike info criterion		-1.912204	
Sum squared resid	1.263503	Schwarz criterion		-1.872062	
Log likelihood	145.4153	Hannan-Quinn criter.		-1.895895	
F-statistic	21.15498	Durbin-Watson stat		1.364002	
Prob(F-statistic)	0.000009				

Table 6: Summary of Relationship between Debt Ratio and Return on Assets

Company Name	Correlation Coefficient	Interpretation
Thirty companies listed at the Nairobi Securities Exchange	+0.125063	Weak positive correlation.

From the above finding, we can conclude that on average there is a weak positive correlation between debt ratio and return on assets of the listed companies in the NSE which were studied. This therefore implies that capital structure has some little impact on return on assets as a measure of financial performance.

The Summary of relationship between debt ratio and return on equity is as shown on Table 7.

Table 7. Summary of relationship between debt ratio and return on equity

Dependent Variable: RETURN_ON_EQUITY					
Method: Panel Least Squares					
Date: 01/29/17 Time: 15:21					
Sample: 2008 2012					
Periods included: 5					
Cross-sections included: 30					
Total panel (balanced) observations: 150					
Variable	Coefficient	Std. Error	t-Statistic	Prob.	
DEBT_RATIO	-0.429813	0.124545	-3.451067	0.0007	
C	0.301003	0.061829	4.868301	0.0000	
R-squared	0.074479	Mean dependent var		0.105896	
Adjusted R-squared	0.068225	S.D. dependent var		0.317606	
S.E. of regression	0.306580	Akaike info criterion		0.486568	Table 7...

Sum squared resid	13.91072	Schwarz criterion	0.526710
Log likelihood	-34.49262	Hannan-Quinn criter.	0.502877
F-statistic	11.90987	Durbin-Watson stat	1.845022
Prob(F-statistic)	0.000728		

Table 8: Summary of Relationship between Debt Ratio and Return on Equity

Company Name	Correlation Coefficient	Interpretation
Thirty listed companies at the Nairobi Securities Exchange	+0.074479	Weak positive correlation.

From the above findings, we can infer that there is a weak positive correlation between debt ratio and return on equity of the thirty listed companies studied.

CONCLUSION

The above findings show that there is a weak positive relationship between capital structure and financial performance of the sampled companies listed at the Nairobi Securities Exchange market in Kenya. The research also found that there is a weak positive relationship between capital structure and earnings per share. After running the research data in Eviews 8, it was concluded that debt ratio has a weak positive relationship with return on assets and equity.

We noted that too much liabilities in the company's capital structure has an impact in performance of firms as measured by earnings per share, return on assets and return on equity. Kenya's economy is rapidly moving towards medium income level status and therefore studies on the impact of capital structure on financial performance of companies should be carried out regularly to help investors when making decisions.

SCOPE FOR FURTHER STUDIES

Since there are various sectors in Kenya's economy, the study is recommending that further research be done on the impact of capital structure on financial performance of companies when grouped sector wise. Some of the potential sectors are manufacturing, mining, & extractive industry. There is also need carry out a study using panel data over a longer period of time say a study covering a period of twenty years.

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