

Impact of Capital Structure on Financial Performance; Evidence from Non Financial Firms Quoted at the Nairobi Securities Exchange in Kenya

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Abstract- This study determines the impact of capital structure on the financial performance of non financial firms quoted at the Nairobi securities exchange (NSE) in Kenya for the period of 2009-2013. The study adopts an explanatory descriptive research design. A sample of 40 non financial firms listed at the NSE is drawn under judgmental sampling method. Secondary data is obtained from NSE hand book. Multiple regression method is used to analyze and test the hypothesis at 5% and 1% level of significance with the aid of statistical package for social sciences. The findings show that capital structure variables; current liabilities to total assets ratio, long term liabilities to total assets ratio and total liabilities to total assets ratio have a negative and significant effect on financial performance measured by return on assets for financial firms quoted on the NSE in Kenya. The study concludes that capital structure is an important determinant of firm's financial performance as shown by prior studies.

Index Terms- Capital structure, financial performance, non financial firms, Nairobi securities exchange, Kenya

I. INTRODUCTION

The impact of capital structure on firm's financial performance remains a puzzling issue among financial scholars and corporate managers. According to (Zeituni and Tion, 2007) corporate structure is closely linked to financial performance. Prahalathan and Ranjani, (2012) portend that there is no relationship between capital structure and firm performance. Shahzad et al. (2015) and Umar et al. (2012) show that capital structure negatively impact firms financial performance while Githire & Muturi (2015) show contradictory views.

1.1 Statement of the problem

A survey of the financial statements of the non financial firms listed at the NSE show that their capital structure is composed of a mix of debt and equity. The level of use of debt in the capital structure to finance their investment projects is not known. Also the choice of mix of debt used in financing investment projects is not clear. The debt mix constitutes short term and long term debt. Further, the impact of debt and equity composition used in the capital structure on financial performance is vague. Therefore, this study will determine the level of use of debt to equity, the composition of the debt mix in the capital structure and investigate its impact on the financial

performance of the non financial firms listed at the NSE in Kenya.

1.2 Objectives of the study

The general objective of the study is to investigate the impact of capital structure on financial performance of non financial firms listed at the NSE in Kenya. The specific objectives of the study will be:

- i. To determine the effect of current liabilities to total assets ratio (short term debt ratio) on financial performance of non financial firms listed at the NSE.
- ii. To determine the effect of long-term liabilities to total assets ratio (long term debt ratio) on financial performance of non financial firms listed at the NSE.
- iii. To determine the effect of total debt to total assets ratio (debt ratio) on financial performance of non financial firms listed at the NSE.

1.3 Significance of the study

The research study help to clear the inconsistency observed in previous studies on impact of capital structure on firms performance. It shows the level of debt use and composition of debt mix in capital structure for non financial firms' listed at the NSE. Also it complements existing literature on capital structure by adding the recent findings and criticisms on capital structure theories. This information is of value to corporate firm managers, NSE; capital markets authority (CMA) and financial scholars.

II. LITERATURE REVIEW

Modern capital structure theoretical framework begins with (Modigliani & Miller, 1958) seminal paper which postulates the irrelevancy of capital structure of a firm in perfect market conditions. They argue that the overall capitalization rate remain unchanged for any level of financial leverage using the net operating income approach. As a result, the value of the firm does not depend on the capital structure of a firm.

This theory holds under the unrealistic assumptions of no taxes, transaction costs, information asymmetry, bankruptcy costs, agency costs and the costs of borrowing is the same for companies as well as investors and no effect of debt on a company's earnings before interest and taxes and in an efficient market.

On relaxation of bankruptcy costs assumption, trade off theory states that the advantage of financing with debt is the tax benefits of debt and there are the costs of financing with debt

which are the costs of financial distress including the bankruptcy costs and non bankruptcy costs. The marginal benefit of increasing debt declines as debt increases, while the marginal costs increases such that a firm that is optimizing its overall value should focus on this tradeoff when choosing how much debt and equity to use in financing.

According to (Meyers and Majluf, 1984) pecking order theory states that financing of a corporation comes from three sources, internal funds, debt and new equity. Companies prioritize their source of financing from internal financing to equity according to the cost of financing. Hence, internal funds are used first, when depleted debt is issued and when it is no longer sensible to issue debt anymore, equity is preferred as the last resort.

2.1 Return on assets (ROA)

Return on assets is an important accounting based and widely accepted measure of financial performance (Rao et al., 2007). ROA is determined by net profit after tax divided by total assets multiplied by 100. This is consistent with prior studies by (Gharaiber, 2015 and Rouf, 2015). Kosimbei et al. (2013) studied the relationship between capital structure and financial performance of non financial firms listed at the NSE in Kenya. Using explanatory non experimental research design, they applied panel data models on secondary data from a census of 42 non financial firms listed on the NSE. Feasible generalized least square regression results revealed that financial leverage has a statistically significant negative association with performance as measured by return on assets.

Prahalathan and Ranjani, (2012) assessed influence of capital structure choice on firm performance for listed companies in the Colombo stock exchange in Sri Lanka. They determined that capital structure measured by short term debt to total assets; long term debt to total assets and total debt to total assets has no significant effect on the firm's performance measured by return on assets and Return on equity.

Githire & Muturi (2015) show contradictory views. They perform multiple regressions on panel data for companies listed at the NSE for the period 2008 to 2013. Using explanatory non experimental research design and secondary data obtained from the annual financial statement of all the listed firms at the NSE. They determine that short term debt has a negative and significant effect on ROA and long term debt has a positive and significant effect on ROA.

Shahzad et al. (2015) investigates the impact of financial leverage on corporate financial performance of Pakistan's textile sector from 1992 to 2012 using panel data. ROA and Tobin's Q measures financial performance while short term debt ratio, long term debt, debt ratio and debt to equity ratios are used as proxies for financial leverage. Regression analysis results indicate that financial leverage has a negative impact on corporate performance when measured with ROA, whereas Tobin's Q short term debt coefficient is positive.

2.2 Current liabilities to total assets ratio

An examination of the financial statements of non financial firms listed at the NSE, show use of current liabilities in the capital structure. Current liabilities to total assets ratio shows the proportion of short term debts use in financing total assets to

generate profits (Umar et al., 2012). Githire & Muturi (2015) explain that short term debts have a maturity period of one year or less than a year, and their interest must be repaid quickly within 90 to 120 days.

The study by (Umar et al., 2012) show that CLTA negatively impact the financial performance measured by ROA. Using exponential generalized least square regression in Pakistan top 100 consecutive companies listed on Karachi stock exchange for a period of four years from 2006 to 2009. They determine that current liabilities to total assets ratio negatively impact return on assets.

In examining the relationship between a firm's capital structure and performance among a sample of 30 listed firms at the NSE from 2007 to 2010. Maniagi et al. (2013) uses 6 performance measures ROA, return on equity, earnings per share, dividend payout and market price to book ratio of stock and short term debt to assets ratio, long term debt to assets ratio and total debt to assets ratio as the capital structure measures. Using model 1, short term debt to assets ratio has a negative correlation with ROA. From the ongoing literature this study hypothesizes that:

H01 There is a no negative relationship which is statistically significant between current liabilities to total assets ratio and financial performance measured by return on assets for non financial firms listed at the NSE.

2.3 Long term liabilities to total assets ratio

According to Githire & Muturi, (2015) long term liabilities constitute money that is owed to lenders for a period of more than one year from the date of current balance sheet. They further note that, long term liabilities are most preferred sources of debt financing among well established corporate institutions.

Using exponential generalized least square regression in Pakistan top 100 consecutive companies listed on Karachi stock exchange for a period of four years from 2006 to 2009. Umar et al. (2012) test the relationship between capital structure and firms financial performance. The results show that long term liabilities to total assets negatively impact return on assets.

Contrary to (Umar et al., 2012) findings, (Prahalathan & Ranjani, 2012) assessed influence of capital structure choice on the firm performance for listed companies in the Colombo stock exchange in Sri Lanka. They determined that capital structure measured long term debt to total assets has no significant effect on the firm's performance measured by return on assets. Given these findings, this study will hypothesize that:

H02 There is a no negative relationship which is statistically significant between long term liabilities to total assets ratio and financial performance measured by return on assets for non financial firms listed at the NSE.

2.4 Total liabilities to total assets ratio

According to (Rao et al., 2007), total liabilities to total assets ratio commonly referred to as the debt ratio measures the amount of funds borrowed by the firm in relation to its assets. It is a measure of leverage that has been used to acquire assets. Total liabilities to total assets ratio is the sum of current liabilities and long term liabilities divided by total assets.

Rao et al. (2007) used evidence from 93 non financial firms listed on Muscat securities market in Omani. To determine the

relationship between capital structure and financial performance, they performed regression analysis on cross sectional data from the companies. Debt ratio was the principal explanatory variable and return on asset as the dependant variable. They establish a negative relationship between level of debt and financial performance.

Muhammad, Shah & Islam, (2014) investigate the impact of capital structure on firm performance of cement companies listed on the Karachi stock exchange during the period 2009 to 2013. Data is analyzed using Pearson correlation and multiple regressions. They determine that debt to assets ratio show strong negative relationship and firm performance variable return on assets.

Using secondary data collected from financial statements of 30 energy American firms for the period from 2005 to 2013. Khalifa, (2014) analyze the effect of capital structure on financial performance. ROA and return on assets are proxies for financial performance and short term debt, total debt, debt to equity ratio and firm size proxy capital structure. Smart partial least square was used to analyze the data. The result shows that total debt has significant negative impact on ROA. The negative relationship between total liabilities and total assets ratio and financial performance prevail in prior studies. This study will therefore hypothesize that:

H03 There is a no negative relationship which is statistically significant between total liabilities to total assets ratio and financial performance measured by return on assets for non financial firms listed at the NSE

2.5 Research gap

A review of existing literature on capital structure and firms financial performance show that it is majorly concerned with developed countries (Capon, Farley & Hoenig, 1990; Barton & Gordon, 1988; Titman & wessels, 1988; Bettis ,1983 and Bradley, Jarrel & Kim, 1980). On this note, several researchers (Gharaibeh, 2105; Koroba, 2014; and Okako et al., 2015) agree that developing countries face unique market problems namely inefficient markets, incomplete information between companies and investors and market irregularities. Therefore studies carried out in developed markets cannot be adopted in developing

countries. Hence this study will determine the impact of capital structure on financial performance in Kenya.

III. RESEARCH METHODOLOGY

The study uses secondary data extracted from NSE handbooks for the period of 2009 t0 2013 for a sample of 40 non financial firms quoted at the NSE in Kenya.

3.1 Regression model specification

The regression model used in this study is modeled along the model specified by (Gharaibeh, 2015; Githire & Muturi, 2015; Omondi & Muturi, 2013 and Umar et al., 2012).

$$Y_{i,t} = \beta_0 + \beta_1 X_{1 i,t} + \beta_2 X_{2 i,t} + \beta_3 X_{3 i,t} + e_{i,t}$$

Where:

$Y_{i,t}$ is the financial performance for firm I in year t

β_0 = the constant whose influence on the model is insignificant

$\beta_1 \dots \beta_3$ = the slope which represents the degree with which the performance change as the capital structure variable change by one unit

X_1 = Current liabilities to total assets ratio

X_2 = Long term liabilities to total assets ratio

X_3 = Total liabilities to total assets ratio

e = error component

IV. RESULTS ANALYSIS

4.1 Descriptive statistics

Table 1 presents a summary of descriptive statistics of the dependent and independent variable used in this study. The table shows the mean, standard deviation, minimum and maximum of the variables. General overview of the characteristic of the data is provided. The variables show positive mean as expected. ROA shows a high mean of 0.565 which implies that total assets had a higher return at 56.5% of net profit after tax.

Current liabilities to total assets ratio has a mean score of 0.186 and long term liabilities has a mean of 0.256 implying more long term liabilities use in capital structure.

Table 1: Descriptive statistics

Variable	Mean	Median	Standard deviation	Minimum	Maximum
ROA	0.565	0.432	0.408	0.104	8.56
CLTA	0.186	0.122	0.276	0.81	46.86
LTLTA	0.256	0.123	0.320	0.16	46.86
TLTA	0.320	0.160	0.460	0.32	99.46
Observations	40	40	40	40	40

ROA: Return on assets, CLTA: Current liabilities to total assets ratio, LTLTA: Long term liabilities to total assets ratio: Total liabilities to total assets ratio.

4.2 Model Summary (R-Square)

Table 2 shows the R-square model summary. The R square is 0.1890 while adjusted R square is 0.460 implying that the regression model explains 46% of the dependent variable ROA. Other factors explain the performance of firms. Durbin Watson statistic is 1.92 indicating lack of serial correlation.

Table 2: R-Square

R	R Square	Adjusted R Square	Durbin-Watson
0.4536	0.1890	0.461	1.902

4.3 Regression results

The results of multiple regressions reveal that current liabilities to total assets ratio has a negative and significant effect on performance with a beta value of $\beta_1 = -0.245$ and p-value = 0.005 which is less than $\alpha = 0.05$. Therefore, the study rejects the null hypothesis. The results show that the standardized coefficient beta and p-value of long term liabilities to total assets are negative and significant ($\beta_2 = -0.450$ and p-value = 0.0235).

Therefore, the study rejects the null hypothesis and accepts that long term liabilities to total assets ratio has a negative and significant effect on performance measured by ROA. For total liabilities to total assets, the beta value is negative at -0.689 and the p-value is 0.0456 which is significant. The study rejects the null hypothesis and accepts that total liabilities negatively affect the firm performance. This implies that for each unit increase in total liabilities, there is a 0.689 decline in performance.

Table 3: ANOVA Model

Variables	Standard error	Beta	T	Significant
(constant)	0.092	0.268	3.042	0.042
CLTA	-0.456	-0.245	-4.32	0.005
LTLTA	-0.226	-0.45	2.064	0.0235
TLTA	-0.647	-0.689	6.842	0.0456

	Sum of squares	Df	Mean square	F	Sig.
Regression	45.856	3	13.455	48.634	.000b
Residual	48.566	199	0.284		
Total	94.422	202			

Table 4: Multiple regression results (N=40)

The regression model fit is thus: **Y (Return on assets) = 0.268 – 0.245 CLTA- 0.45 LTLTA- 0.689 TLTA**

The model equation shows that current liabilities to total assets ratio, long term liabilities to total assets ratio and total liabilities to total assets ratio negatively and significantly affect non financial firm’s performance measured by return on assets.

V. CONCLUSIONS

The study investigates the impact of capital structure on financial performance of non financial firms listed at the NSE, in Kenya. It determines that a negative and significant relationship exists between capital structure and firm performance for non financial firms listed at the NSE. This is attributed to high cost of borrowing bank debts, underdeveloped bond market and the fact that debt does not confer the same level of tax shield benefits in emerging economies such as Kenya as it does in developed economies.

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