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CAPITAL STRUCTURE AND FINANCIAL PERFORMANCE OF NON FINANCIAL FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE

Kerongo, Maatwa Meshack
Department of Finance & Accounting, University of Nairobi, Kenya
mkerongo8@gmail.com

Nyamute, Winnie
Department of Finance & Accounting, University of Nairobi, Kenya

Okiro, Kennedy
Department of Finance & Accounting, University of Nairobi, Kenya

Duncan, Elly
Department of Finance & Accounting, University of Nairobi, Kenya

Abstract

This study examines the effect of capital structure size on the financial performance of the nonfinancial firms quoted at the Nairobi Securities exchange in addition, evaluates the existence of equilibrium\disequilibrium relationship between these two variables. The study analyzed unbalanced panel data sourced from across 53 non-financial firms in listed at the Nairobi Securities Exchange covering 2010 to 2017 period. Total debt to total equity, total equity to the total assets and total debt to total assets was used for assessing financial performance of the quoted nonfinancial firms. Tobin's Q was used to measure financial performance attribute. Descriptive analysis, multiple and simple regression analyses was conducted. Leverage had a significant positive effect on the financial performance of the listed non financial firms. The study concludes that firms should strive to increase their leverage since it has statistically significant positive effect on financial performance of the nonfinancial firms quoted on the NSE.

Keywords: Financial performance, Tobin's Q, Capital structure, Multiple regression analysis

INTRODUCTION

Capital structure is an intensely controversial issue in finance (Myers, 2001). According to the Modigliani and Miller (1958) theorem, a firm's level of debt or equity is inconsequential from an economic point of view. This is due to corporate tax shield resulting from debt financing and an increase in cost of equity. An increase of cost of equity leads to increased cost of capital. In their research, Modigliani and Miller evaluated two firms with varying capital structures, one having debt in its capital structure while other firm's capital structure constituted no debt. The authors have concluded that the financial performance of the firm is not influenced by the financial decisions taken by companies and hence the market value. Ideally, M&M speculate that the forecasted cash flow is divided adequately between firm's investors as per capital structure while the firm's value is not affected by this share-out.

This dimension has however been opposed through several studies which argue that debt levels posses non-neutral impacts on the performance and behaviour of the firm. Kosimbei *et al.,* (2014), argued that corporate failure in Kenyan firms, among Kenyan companies has often had a connection with the behaviour of financing in firms. Great focus has been on the failing companies has been on restructuring of firm financing. Dilemma exists on the possibility of firms attaining an optimal capital structure, both short-term and long-term. This optimal capital structure and its influence on financial performance is also a matter under consideration. According to Harris (2017) higher firm performance is realised at higher levels of debt. Increased leverage leads to tax exclusion on interest paid on debt. This influences directly firm profitability hence financial performance. Simerly and Li (2000) on the contrary opine about the debt presence in the firm and how it causes decreased financial performance. This is due to an increase in the cost of equity that results in an increase in the cost of capital that ultimately causes a decrease in firm financial performance.

The decision on capital structure is an important issue in firm financing. Firm managers always seek to make the right decisions on firm financing. Highly leveraged firms tend to experience increased financial performance due to high interest tax advantage. According to Onyango *et al.,* (2016) higher levels of debt cause an increase in financial performance. Highly leveraged firms tend to have increased efficiency. This efficiency can be attributed to firm managers who are under pressure from debt holders who hold high expectation. The managers therefore tend to make capital structure decisions that result in investments that have increased positive cash flows to the firm. Margaritis and Psillaki (2010) for instance posit that higher leverage leads to improved efficiency that ultimately affects companies' profitability and return on assets. Capital structure constitutes debt and equity as the key components (Margaritis & Psillaki, 2007). According to Myers (2001) debt ratios of large, public U.S. agencies differ within

homogenous industries. They also change over time even when information differences, agency problems and taxation remain constant.

High leverage possesses non-neutral impacts on the performance and behaviour of the firm. According to Harris (2017) higher firm performance is realised at higher levels of debt. Increased leverage leads to tax exclusion on interest paid on debt. This directly influences firm profitability hence financial performance. Simerly and Li (2000) on the contrary postulate that the presence of debt in the firm's capital structure causes decreased financial performance. This is due to an increase in the cost of equity that results in an increase in the cost of capital that ultimately causes a decrease in firm financial performances.

Statement of the Problem

Despite interventions, several inadequacies in capital structure choice problems among some nonfinancial firms quoted on the NSE have been witnessed in Kenya resulting into receivership/statutory management, hostile takeovers and government bailout. According to Onyango *et al.,* (2016) increased leverage in firms leads to increased financial performance. Furthermore, increased leverage causes a decline in ROE. The indication of this is a debt-equity causal relationship differences exist on listed companies ROE. Firms that have huge debts in their capital structure including Kenya Airways, Home Africa, ARM cement and Transcentury have reported huge losses and found themselves in major debt crises owing creditors more than their net worth. These firms that have relied much on debt financing tend to be more liquid in order to pay their debt obligations. This leads to decreased financial performance. These advancements combined with the lack of universal theory trigger the need for further studies into the firm financing and its influence on profitability on quoted companies at the NSE (Kamuti & Omwenga, 2017). The study's population will constitute all the non-financial firms quoted at the NSE. This choice due to the fact that companies that are nonfinancial have many financing choices and incur lower costs to adjust their capital structures (Myers, 2001).Firms that engage in financial services offer leverage and other debt services to the non-financial companies. Therefore, the non financial firms are excluded from this study. Furthermore, the recent corporate failures have largely been witnessed among the non financial firms. The intention is to find answers to the research question: what is the association between capital structure and financial performance of non financial firms quoted in the NSE.

Research Objective

To establish the effect of capital structure on the financial performance of listed non- financial firms at the NSE.

LITERATURE REVEIW

Zertun and Tian (2007) using unbalanced cross sectional pooled OLS regression model studied capital structure effect on profitability as computed by return on assets on corporate companies in Jordan listed at ASE between 2005 to 2013.The revelation of the findings is that there is a relationship that is inverse and significant a between leverage and the Jordanian industrial companies profitability as measured by ROA listed at the ASE. The company's profitability was used as an index for the firms' financial performance.

Abdul (2012) by employing descriptive Statistics and multiple linear regressions did a similar study on capital structure decisions and the performance of firms' relationship in Pakistan. The conclusion of the study is that leverage has a negative significant association and firm performance. The research recommends that other firm specific factors can with a wider time span can be utilized for instance dividends and taxes to measure the effect and derive more conclusive outcomes. The study concluded that other developed economies can also be assessed against other industries. This research had a short period of time in which it was conducted. A longer period of time should have been considered.

Mwangi *et al.,* (2014) using multiple regression analysis undertook a survey on performance and capital structure relationship on the companies quoted at the NSE. Revelation of study results showed that financial leverage exhibited a strong negative a relationship with performance as computed by ROE and ROA analyzed. The study's recommendation is that firm managers of quoted non-financial companies should rely more on long term debt as a form of firm financing analyzed.

Birru (2016) using multiple regression models did a study on financial performance and the capital structure relationship of selected commercial banks in Ethiopia over five (5) years. The indication of the study results is that there exists a significant nexus between financial performance and capital structure. The conclusion of the exploration was that capital structure has a negligible and negative effect on commercial banks' financial performance.

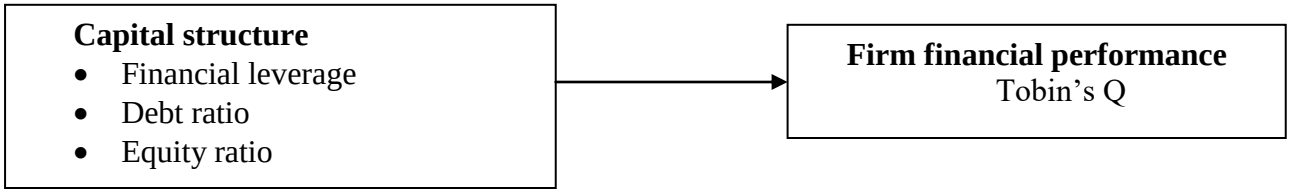
Cyril (2016) did a study on financial performance and capital structure relationships of conglomerates quoted on the NSE between the time frame 2011 and 2015. The survey employed the descriptive statistics and the pooled ordinary least square (POLS) regression analytical model. The study quantified four levels of dependent variables including (ROA), (ROE), earnings per share and assets turnover ratio (AT) whereas financial leverage was the independent variable. The research study found leverage causing an impact on both ROA and AT of the conglomerates but no impact on ROE and EPS of the conglomerate. The conclusion of the study was that an in-depth analysis of business factors which influence specific industries should be considered in order to leverage on the debt-equity mix.

Adekunle (2009) used Ordinary Least Squares method of estimation in did a study in an endeavour to determine the performance and capital structure relationship in the manufacturing firms in Nigeria employed debt ratio to measure capital structure while firms' performance was computed using return on equity and return on asset. The indication of the results was that there is negative significant effect of debt ratio on the firm's financial performance measures. Other firm financing options were not considered in the study.

Conceptual Framework and Hypotheses

Based on the theoretical and literature review, the following conceptual model guided the study as presented in Figure 1. The figure shows that the relationship could be influenced by the bank size as shown by the arrow representation.

Figure 1: Conceptual model and hypotheses



The study developed following null-hypothesis;

H_1: There is no relationship between capital structure and the financial performance of non-financial firms that quoted at the NSE.

METHODOLOGY

Quantitative secondary data on the study variables was retrieved from annual financial statements found at NSE website. Data on firm financing was determined by obtaining debt and equity employed by the listed companies in their various operations. The book values of total equity and total assets were used to measure quoted non-financial firms financial performance. Secondary data on firm financing and financial statements was used because it gives reliable results as compared to primary data. Secondary data was mainly a seven-year (2010-2017) annual historical data on the listed firms' financial performance. A census survey was conducted since the size of the population is small. There are a total of fifty three (53) non-financial entities found on the NSE listing as at 31stDecember, 2017. The study period 2010 to 2017 was chosen because many non financial firms faced financial distress, bankruptcies and takeovers. Capital

structure and financial performance analysis was done using descriptive statistics. Regression analysis was used to test the linear relationship.

To explore the association between capital structure and financial performance (objective i), hypothesis ($\mathbf{H_1}$) was tested by the following model;

$$\mathbf{Y=\beta_0+\beta_1X_1+\varepsilon.....1}$$

Y=Firm financial Performance, B_0=intercept, X_1=CS, β_1, β_2, β_3, β_4= coefficients, ε= Error term

Where Y and CS are vectors for firm financial performance and capital structure respectively.

In testing the relationship between the study variable, a correlation analysis was conducted. The test statistic for linear relationship between the capital structure and firm financial performance are shown in table 1 below.

Table 1: Test for Linearity

Reference Variable: Firm Performance	Coefficient of Correlation	P-Value
Capital structure	0.506	0.000

From table 1 above capital structure shows a coefficient of correlation of 0.506.The value exceed 0.5000 meaning that there exists a positive correlation. Financial performance is the reference variable. The p-value of the respective coefficient of correlation is 0.000 which is lower than 0.05. Thus the predictor variable significant and positive correlation with financial performance at five percent significance level. Therefore the predictor variable and the explanatory variable move in the direction which suggests a linear relationship. The implication of the positive relationship is that the true coefficient of the predictor variable in the simple regression model is positive.

The exploration used the Variance Inflation factor (VIF) to establish the level of multicollinerity that would be tolerated model. The requirement is that value of VIF <10 means that the level of multicollinerity is considered applicable (Robinson & Schumacker, 2009). Since multicollinerity test is only used for multivariate regressions, VIF statistics are applied since regressions entail more than just independent variables.

Table 2: Variance Inflation factor statistics

Variables	VIF
Capital structure	2.09
Financial Performance	3.09

Table 2 signifies that the VIF for the two models are between the acceptable ranges of 1.45 to 3.09 showing that VIF results are between the acceptable ranges of 1 to 10 (Robinson & Schumacker,2009).This shows that the variables did not exhibit multicollinearity and regression analysis could then be carried out. Were the VIF factor >10 it would imply serious multicollinearity. Serious multicollineraity can be dealt by dropping collinear variables or obtaining additional data.

ANALYSIS AND DISCUSSION OF FINDINGS

Descriptive Statistics

In order to visualize the dataset, descriptive statistics were generated as shown in table 3.

Table 3: Descriptive Statistics

	N	Minimum	Maximum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
CS	233	.50	3.00	1.8382	.03597	.54902
FP	233	.04	6.00	3.4686	.09738	1.48641
Valid N (listwise)	233					

The results presented in Table 3 above shows descriptive statistics for secondary data for a 7-year period from 2010 to 2017. The table shows that the average Tobin Q is 3.4686. This suggests that on average, firms listed on the NSE have recorded fairly impressive financial performance. The Tobin's Q mean of 3.4686 suggests that the firm's market values are more than the firms' book values. Since their market price to book value ratio is more than one, the market expects value of these firms to increase in the future because the market price also takes any future earnings into account at the current price. For Capital structure the average is 1.8382, meaning that most non-financial firms quoted in the NSE have low a large amounts of debt compared to equity in their capital structure.

Pearson moment Correlations between financial performance and capital structure

The association between strength and direction of the variables' relationship was investigated by the Pearson Product moment correlation coefficient. This was significant so as to assess if any relationship existed between the variables before proceeding with further analyses. The study employed the following classification: strong if 0.7 and above; moderate if 0.4 but less than 0.7 and weak if 0 and less than 0.4.

Apart from analysing the direction and strength of the relationship, correlation analysis was also used to test the presence of multicollinearity between the independent variable. Multicollineraity exists if independent variables are strongly correlated. (r=or greater than 0.75).Multicollinearity reduces the importance of predictors, making it difficult to assess the individual importance of a predictor. Mulicollinearity may lead to poor regression modelling (Dancey& Reid, 2011).The results in table 4 below show that there is no multicollinearity since all the predictor coefficient results are below 0.75.

Table 4: Correlations

		CS	ASSETLQ	TEMPINV	SALES	ASSETS	FP
CS	Pearson Correlation	1	.444**	.436**	-.045	.822**	.769**
	Sig. (2-tailed)		.000	.000	.494	.000	.000
FP	Pearson Correlation	.769**	.545**	.443**	.012	.940**	1
	Sig. (2-tailed)	.000	.000	.000	.858	.000	
	N	233	233	233	233	233	233

As illustrated in table the table above, a strong positive correlation exists between financial performance and the firm's capital structure (r=0.769). The association between financial performance and capital structure moved in the same direction as hypothesized in the research.

Regression of capital structure and financial Performance

The study adopted regression analysis to determine the effect of capital structure on financial performance of the quoted nonfinancial companies on the NSE and it employed panel data design. Panel data was used in establishing financial performance by (equity market value/book value). Capital structure on the hand was using the formula debt/equity. The following hypothesis was developed: $\mathbf{H_1}$: Capital structure has no effect on the financial performance of non- financial firms quoted on the NSE. Maximum Likelihood regression Model was employed in data analysis. The model summary findings were as shown in Table 5 below:

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.769[a]	.591	.590	.95216

a. Predictors: (Constant), CS

Table 6: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	303.160	1	303.160	334.389	.000[b]
	Residual	209.427	231	.907		
	Total	512.587	232			

a. Dependent Variable:

b. Predictor: (Constant), CS

Table 7: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.359	.218		-1.642	.102
	CS	2.082	.114	.769	18.286	.000

a. Dependent Variable: FP

b. Predictors: (Constant), CS

The model coefficients are depicted in table 7 above. The results indicate that capital structure is a significant predictor, because the p-value is 0.000 is <0.05(significance level). Furthermore, the results indicate R^2 of 0.591 which implies that capital structure explains 59.1% of the variability in financial performance. The results have accepted the null hypothesis implying that capital structure has a statistically significant effect on financial performance of nonfinancial companies quoted at the NSE. The regression model that explains the variation in financial performance as a consequence of capital structure is shown below:

$Q_{it} = -0.359+2.082CS_{it}$

Where:

Q= Financial Performance

CS= Capital Structure

DISCUSSION

The study achieved its first objective through analyzing the audited financial statements of quoted firms (panel data). The findings reveal that there is a significant positive relationship between capital structure and the financial performance. The findings on the influence of capital structure on financial performance also showed a statistically significant relationship. These studies are consistent with other studies on capital structure and financial performance. For instance Mahmoodi and Saeedi (2011) found a positive association between capital structure

and financial performance of companies quoted at the Teheran Securities Exchange. The positive significant effect of capital structure on financial performance is associated attributed to increased level of leverage by firms. This leads firms to use more debt as opposed to equity in their capital structure thereby obtaining the debt tax benefits. Consequently the tax benefits lead to increased profitability hence financial performance.

Similarly Cyril (2016) alluded that capital structure has an effect on both ROA and AT of the conglomerates but no effect on ROE and EPS of the conglomerate. The study difference in the study findings by Cyril (2016) are due to business factors which affect a particular industry depending on the industry where the firm operates. This is due to the different tax benefits obtained in the debt-equity mix in various industry sectors. Furthermore, differences in the study findings are due to differences in the operationalisation of financial performance between the market based and accounting based measures.

SUMMARY OF FINDINGS

This study was founded on the premise that capital structure has an influence on financial performance. The study's first objective was set to ascertain the association between capital structure and financial performance of the nonfinancial firms quoted at the NSE. The findings reveal that capital structure has a statistically strong positive effect on financial performance of the non-financial firms at NSE listing. The findings are supported by a coefficient of 59.1 which indicates that the differences in financial performance (explanatory variable) is explained by capital structure (predictor variable).The effect of capital structure was established to be statistically significant and therefore the null hypothesis that capital structure has no statistically significant impact on non- financial firms quoted at the NSE was rejected.

The findings on the Impact of capital structure on financial performance also showed a statistically significant relationship. These studies are consistent with other studies on capital structure and financial performance. Studies by Saeedi and Mahmoodi (2011) found a positive association between capital structure and financial performance of entities at the Teheran Securities Exchange listing. The positive significant effect of capital structure on financial performance is due to increased level of leverage by firms. This leads firms to employ more debt as compared to equity in their capital structure thereby obtaining the debt tax benefits. Consequently the tax benefits lead to increased profitability hence financial performance.

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particular industry depending on the industry where the firm operates. This is due to the different tax benefits obtained in the debt-equity mix in various industry sectors. Furthermore, differences in the study findings are due to differences in the operationalisation of financial performance between the market and accounting based measures.

CONCLUSIONS

Based on the study's findings, capital structure is vital to firm financial performance of the nonfinancial firms quoted at the NSE. Firms should strive to increase their leverage since it has statistically significant positive impact on financial performance of the nonfinancial firms listed on the NSE. Firms should strive to increase their leverage since it has statistically significant positive effect on the financial performance of the nonfinancial firms quoted on the NSE. This is because from the results, most firms' capital structure constitutes more debt than equity. This enables them to obtain the debt tax benefits. Consequently, the tax benefits leads to increased profitability hence financial performance.

RECOMMENDATIONS

The findings have indicated that there exists a positive association between capital structure and financial performance. The research therefore recommends that firm managers, other practitioners and investors should focus on the desire to make the right capital structure decisions that involves increased debt levels that will help increase firm financial performance. Positive capital structure indicates that a firm is utilizing more debt than equity in its financing decisions. The implication of this is to achieve growth and improved financial performance, firms should be highly leveraged. Regulators, policy makers, investors and other practitioners should emphasize right capital structure choices and high levels of liquidity in firms to maintain, if not improve firm high firm performance. The results indicate that choosing the best firm financing decisions can help firm managers take actions that are in harmony with shareholders interest which is enhancing firm value.

The study used Tobin Q in measuring financial performance. Further studies need to be conducted using return on sales (ROS), return on equity (ROE), return on assets (ROA),return on investment (ROI), sales growth, market share or productivity. he study population was all the non-financial firms listed at the NSE. These firms cut across various industry sectors. Future studies could focus on specific industries such as, manufacturing, financial sector, communications, agricultural or automobile industry. This is because focusing on a specific industry could yield different results that are unique for the industry.

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