EFFECTS OF CAPITAL STRUCTURE ON FINANCIAL PERFORMANCE OF FIRMS IN KENYA: EVIDENCE FROM FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE

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Abstract

The main purpose of the study was to examine the effect of capital structure on the performance of firms listed at the Nairobi Securities Exchange. The population of interest was the firms listed at the Nairobi Securities Exchange and a census of all firms listed at the Nairobi Securities Exchange from year 2008-2013 was the sample. The study adopted an explanatory non-experimental research. Secondary data was obtained from the published annual reports and financial statements of the listed companies at the NSE covering the years 2008 to 2013. The collected data was entered into the Statistical Program for Social Sciences (SPSS) and multiple regression analysis method was used to analyze and test the hypotheses. The findings showed that equity and long term debt have a positive and significant effect on financial performance, while short term debt has a negative and significant effect on financial performance. Thus, this study concludes that equity and short debt financing enhances financial performance, while short terms reduces financial performance.

Keywords: Capital Structure, Financial Performance, Nairobi Securities Exchange (NSE), Debt, Equity, Financial statement

INTRODUCTION

Capital structure decision is the mix of debt and equity that a company uses to finance its business (Damodaran, 2001). Capital structure has been a major issue in financial economics ever since Modigliani and Miller showed in 1958 that given frictionless markets, homogeneous expectations, the capital structure decision of the firm is irrelevant. The question firms are faced with is making a decision on the capital structure choice to use. The decision is crucial given that it has an effect on the financial performance of firms. The capital structure of a firm is generally the specific mix of debt and equity the firm uses to finance its operations (Abor, 2005).

Statement of the Problem

Following the work of Modigliani and Miller (1958 and 1963), much research has been carried out in corporate finance to determine the influence of a firm's choice of capital structure on performance. The difficulty facing companies when structuring their finance is to determine its impact on performance, as the performance of the business is crucial to the value of the firm and consequently, its survival. Managers have numerous opportunities to exercise their discretion with respect to capital structure decisions. The capital structure employed may not be meant for value maximization of the firm but for protection of the manager's interest especially in organizations where corporate decisions are dictated by managers and shares of the company closely held (Dimitris, and Psillaki, 2008). Even where shares are not closely held, owners of equity are generally large in number and an average shareholder controls a minute proportion of the shares of the firm.

Justification and significance of the Study

There has been considerable volume of academic papers and studies both in the developed economies, advanced developing economies and developing economies on the impact of capital structure on firms performance and research is still going on to incorporate the existing theories. This work is one of such and it aims at providing empirical evidence in confirming the validity of the theories to assist the firm's management in determining the best capital structure.

The research will educate readers on the effect of capital structure on firm performance for listed firms in the Nairobi Stock Exchange, and it will also enable managers understand how equity, debt (long and short) affect the firm performance and will then adopt a cheaper source of financing.

This research would actually improve financing of most organizations in third world countries like Kenya hence provide a base for development, and it will also be useful to academicians as a source of knowledge for further research

Objectives of the Study

The main objective of this study was to examine the effect of capital structure on financial performance of firms listed at the Nairobi Securities Exchange. Specific objectives were as:

1. To determine the effect of equity financing on financial performance of firms listed at the Nairobi Securities Exchange.

2. To establish the effect of long term debt financing on financial performance of firms listed at the Nairobi Securities Exchange.

3. To establish the effect of short term debt financing on financial performance of firms listed at the Nairobi Securities Exchange.

LITERATURE REVIEW

Theories of Capital Structure

The capital structure of a firm could be explained, in general terms, by three dominant theories; The Modigliani-Miller Theory, The trade-off Theory and The Pecking Order Theory.

The theory of business finance in a modern sense starts with the Modigliani and Miller (1958) capital structure irrelevance proposition. Before them, there was no generally accepted theory of capital structure. Modigliani and Miller start by assuming that the firm has a particular set of expected cash flows. When the firm chooses a certain proportion of debt and equity to finance its assets, all that it does is to divide up the cash flows among investors. Investors and firms are assumed to have equal access to financial markets, which allows for homemade leverage. The investor can create any leverage that was wanted but not offered, or the investor can get rid of any leverage that the firm took on but was not wanted. As a result, the leverage of the firm has no effect on the market value of the firm.

The term trade-off theory is used by different authors to describe a family of related theories. In all of these theories, a decision maker running a firm evaluates the various costs and benefits of alternative leverage plans. Often it is assumed that an interior solution is obtained so that marginal costs and marginal benefits are balanced. The original version of the trade-off theory grew out of the debate over the Modigliani-Miller theorem. When corporate income tax was added to the original irrelevance, this created a benefit for debt in that it served to shield earnings from taxes. Since the firm's objective function is linear, and there is no offsetting cost of debt, this implied 100% debt financing.

The pecking order theory does not take an optimal capital structure as a starting point, but instead asserts the empirical fact that firms show a distinct preference for using internal finance over external finance. If internal funds are not enough to finance investment opportunities, firms may or may not acquire external financing, and if they do, they will choose

among the different external finance sources in such a way as to minimize additional costs of asymmetric information. According to Akerlof (1970), the latter costs basically reflect the "lemon premium" that outside investors ask for the risk of failure for the average firm in the market. The resulting pecking order of financing is as follows: internally generated funds first, followed by respectively low-risk debt financing and share financing.

Short Term debt Financing

Short term debt financing have a maturity period of one year or less, they must be repaid quickly within 90 – 120 days. Term loans with short maturities help to meet immediate need for financing without long term commitment (Peavler, 2014). The cost of servicing short term debt is less taxing on the company. Short term loans usually offer lower interest charges, and most lenders do not charge interest until all credit allowance period is breached. The study by Ebaid (2009) sought to establish the relationship between debt level and financial performance of companies listed on the Egyptian stock exchange. The study found out that there was a negative impact of short term debt on return on assets.

Teruel and Solane (2008) analyzed the Spanish SMEs Corporate cash holdings and found that firms with a higher amount of short-term debt will hold higher levels of cash, because it might lower the risks of the non -renewal the short -term debt. Weinraub and Visscher (1998) in their study on debt financing suggest that aggressive liquidity policy combine the higher levels of normally lower cost short-term debt and less long -term capital. Although capital costs are reduced, this increases the risk of a short -term liquidity. They established that total and short -term debt is positively related to firm's profitability, which might be the most important factor in accessing outside financing in countries with weak collateral laws. From their studies they also found out that a negative relation between tangibility and short-term debt and a positive relationship between tangibility and long-term debt exists. These results are consistent with most theories on capital structure that suggest that firms without fixed-assets to use for collateral are unable to access long-term financing.

According to Garcia-Terul and Martinez -Solano, 2007) Short-term debt is positively correlated with firm's growth opportunities. The anecdotal evidence suggests that there is a positive relationship between short term debt financing and financial performance. However, due to the lack of previous research and empirical evidence in this area, particularly on the use of short term debt financing, the prediction is tentative. Therefore, the relationship was formally stated in its null form as follows:

H_{01}: *There is no relationship between short term debt financing and financial performance.*

Long Term Debt Financing

Long term debt is money that is owed to lenders for a period of more than one year from the date of current balance sheet. The study by EBaid (2009) found that there was no significant relationship between long term debt and return on assets. Long term debts are most preferable sources of debt financing among well-established corporate institution mostly by virtue of their asset base and collateral is a requirement many deposit taking financial institutions. Report by European Commission (2008) indicates that large financial banks have considerably reduced lending to SMEs thus inhibiting their potential for growth and financial performance.

Pelham (2000) argued that long term debts provided small firms with more competitive advantages when compared with large firms. According to the results it was found out that there is a direct positive and significant relationship between long term loans and financial performance of the small businesses. He reported that long term debt was positively related to the growth/share, /sales effectiveness, and gross profit in small and medium size manufacturing firms. However, due to the lack of previous research and empirical evidence in this area, particularly on the use of long term debt financing, the prediction is tentative. Therefore, the relationship was formally stated in its null form as follows:

H_{02}: There is no significant relationship between long term debt financing and financial performance.

Equity Financing

Equity financing is money acquired from the small business owners themselves or from other investors. According to Kisgen (2006), equity capital is the mode that enables equity holders to exert influence and monitor managerial decisions continuously through the board of directors. It is also likely to result in greater value to equity holders and thereby increasing firm performance. Booth (2002) argues that the firm that uses equity finance is able to make its performance better since there is direct control and because all the equity holders are the residual claimants they have to ensure that resources are allocated efficiently to be able to maximize shareholders wealth. Booth's arguments have been supported by Boateng and Jones (2003) who found that use of equity capital is positively related to the financial performance of firms. However, due to the lack of previous research and empirical evidence in this area, particularly on the use of equity financing, the prediction is tentative. Therefore, the relationship was formally stated in its null form as follows:

H_{03}: There is no significant relationship between equity financing and financial performance.

Research Gaps

The previous studies particularly on large firms have looked at the relationship between corporate size, fixed assets and financial leverage. Little has been studied on how and to what extent these variables (debt financing) have an influence on the financial performance of firms using data from the firm level. This study will seek to establish the effect of capital structure on the financial performance firms listed on the Nairobi Securities Exchange in Kenya

RESEARCH METHODOLOGY

The study adopted an explanatory non-experimental research design to analyze the effect of capital structure on performance of firms listed at the Nairobi Securities Exchange in Kenya. The target population comprised all firms listed at the Nairobi Securities Exchange (NSE) and the sampling frame was the list of all firms listed at the Nairobi Securities Exchange. The study utilized secondary data, which was collected by use of content analysis which was obtained from the annual financial statement reports of listed firms, annual investors' reports, magazine and articles related to the financial performance of listed firms.

The study utilized panel data which consisted of time series and cross-sections. The data for all the variables in the study was extracted from published annual reports and financial statements of the listed companies at the NSE covering the years 2008 to 2013. Multiple regression analysis technique was used to determine the effect of independent variables on the dependent variable, it was used to measure the relative influence of each independent variable based on its covariance dependant variable and was useful in forecasting. The following reduced multiple linear regression model was used to model the data:

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

Where;

Y = Firm performance

B_0 = the y-intercept (constant) whose influence on the model is insignificant

$\beta_1 \dots \beta_3$ = the slope which represents the degree with which firm performance changes as the independent variable changes by one unit variable.

X_1 = equity component

X_2 = long term debt component

X_3 = Short term debt component

ε = error component

EMPIRICAL FINDINGS AND DISCUSSION

The quantitative data obtained was analysed using both descriptive (means, standard deviations, frequencies and illustrations) and inferential statistics (ANOVA and t test were used for testing significant differences and multiple regression for determining relationships).

Descriptive statistics provides the means and standard deviations of the scores relating to each of the variables used. Means and standard deviations for all the variables were also calculated in order to get an idea about the direction of all the variables.

Research Results for All Sectors

Liquidity ratio recorded a mean of 0.5868; liquidity ratio is the best measure of firms' solvency and is calculated as the ratio of current asset to current liabilities, hence the mean of 0.5868 suggest that current asset should double current liabilities. Return on asset (ROA) is used as the dependent variable to analyze the effect of debt financing on a firm's profitability. This variable is defined as the ratio of net income to total assets (Michaelas, Chittenden, and Panikkos, 1999). Results from table 4.7 shows that ROA reported a mean of 0.5029which is the highest mean; this shows that total asset had a higher return of 50% (net income).

More analysis revealed that Long-term loans were measured as the ratio of long-term loans to total loans; analysis indicated that the sample of firms in the study had a long-term loan mean score of 0.3868, suggesting 38% of long-term loan in all total loans. Short term loan was calculated as the measure of short-term loan to total loan, short-term loan had mean score of 0.5137.Liquidity ratio was 58.68% current assets over current liabilities (mean = 0.5868).

Regression Results

Regression results show that multiple regression model had a coefficient of determination (R^2) of about 0.383. This means that 38.3% variation of performance is explained/predicted by joint contribution of short term debt ratio, long term debt ratio and equity. Durbin–Watson statistic is within the thumb rule value of 1 to 2, thus from the table Durbin Watson statistics value was 1.767 indicating lack of serial correlation.

Table 1. ANOVA Model

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	35.096	3	11.699	41.242	.000b
Residual	56.447	199	0.284		
Total	91.543	202			

a Dependent Variable: return on asset(performance)
b Predictors: (Constant), short term debt ratio, long term debt ratio, equity

The results of multiple regressions revealed that equity has a positive and significant effect on performance with a beta value of $\beta_1 = 0.486$ (p-value = 0.000 which is less than $\alpha = 0.05$). Therefore, the researcher rejects the null hypothesis and it is accepted that for each unit increase in equity, there is 0.486 unit increase in performance. Also, the effect of equity was stated by the t-test value = 8.568 which implies that the standard error associated with the parameter is less than the effect of the parameter.

The results showed that the standardized coefficient beta and p value of long term debt were positive and significant (beta = 0.16, $p < 0.05$). Thus, the researcher rejects the null hypothesis and it is accepted that, long term debt has a positive and significant effect on performance. This in line with Pelham (2001) report that long term debt is positively related to the growth/share, marketing/sales effectiveness, and gross profit in small firms. Also, for each unit increase in long term debt, there is 0.16 unit increase in performance. The effect of long term debt is shown by the t-test value of 2.836 which implies that the effect of long term debt surpasses that of the error by over 2 times.

Thus, p-value is significant ($p < 0.05$), and the beta value of short term debt was negative (beta = -0.235). Therefore, the researcher rejects the null hypothesis and concludes that short term debt has a negative and significant effect on performance. Consequently, for each unit increase in short term debt, there is 0.235 decline in performance. Finally, the effect of short term debt is shown by the t-test value of -4.119 which implies that the effect of short term debt surpasses that of the error by over 4 times.

Table 2. Regression Results

	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	T	Sig.	Tolerance	VIF
(Constant)	0.286	0.094		3.033	0.003		
Equity	0.651	0.076	0.486	8.568	0.000	0.965	1.036
long term debt	0.251	0.089	0.16	2.836	0.005	0.969	1.032
short term debt	-0.483	0.117	-0.235	-4.119	0.000	0.953	1.05
liquidity ratio	0.228	0.081	0.202	2.806	0.006	0.907	1.103
Age	0.002	0.002	0.077	1.103	0.272	0.970	1.031
Sector	-0.037	0.027	-0.099	-1.377	0.170	0.913	1.096

The regression model fit is thus: *Y (Return on asset) = 0.286 + 0.486 equity + 0.16 long term debt ratio - 0.235 short term debt ratio*.

The equation above shows that equity and long term debts positively and significantly affect performance of firms, while short term negatively and significantly affect firm performance which was measured using return on asset**.**

CONCLUSIONS

There is overwhelming evidence from the study showing that equity financing has a positive influence on firm financial performance. This is due to the direct control exercised by equity holders who ensure that resources allocated are appropriately utilized in ways that maximize shareholders interest. Long term debt financing was shown to have a positive and significant effect on firm financial performance. The positive influence on firm performance is evidenced by a competitive advantage when compared to large firms as well as the development of credit management systems specifically suited for small firms so that they can access long term financing.

The study used secondary data that relied on already collected information however; the problem with using secondary data is that it may be outdated depending on how long ago the data was collected. The data may also be more general and lack validity.

RECOMMENDATIONS

The study has established that equity financing is of essence if firm financial performance is to be enhanced. As a result, in order to benefit from direct control and appropriate utilization of resources, there is need to increase financing through equity. Long term debt financing improves firm financial performance. It is therefore imperative for financial institutions to develop a favorable credit policy that will facilitate long term lending by small firms. Firms can benefit from short term debt financing through close monitoring of the management thereby mitigating agency conflicts between shareholders and debt holders as well as the problem of underinvestment.

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