

CAPITAL STRUCTURE AND FINANCIAL PERFORMANCE OF AGRICULTURAL COMPANIES LISTED IN NAIROBI SECURITIES EXCHANGE, KENYA

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Abstract

This study sought to determine the influence of capital structure on financial performance of agricultural companies listed in NSE. The study adopted longitudinal research design with targeted population being the six agricultural companies listed in NSE. Secondary data was obtained from published financial statements for the period 2010-2014. Desk research instrument was used to obtain the data. Census was carried on the six companies listed in the NSE. The empirical data was analyzed using the Statistical Package for Social Sciences (SPSS), to establish the relationship between the variables for study. Pearson's Correlation Coefficient and Multivariate Regression Analysis was used. The findings of this study showed that an increment in debt ratio will lead to an increment in financial performance, and debt-equity combinations increase will lead to a significant reduction in after tax profits of the companies and capital structure affects financial performance. The study recommends that debt ratio and debt-equity to be well managed for performance to be realized.

Keywords: Capital structure, Debt ratio, Financial leverage, Financial performance, Nairobi Securities Exchange

INTRODUCTION

Financial performance is the prejudice measure that assess how effectively a firm employs its assets from the primary business to make revenue (Vedran ,2012).He highlighted that the measure of financial performance include the equity return, profitability amongst others that grant an important tool to the stakeholders to access the present position and the precedent performance of the firm. This is consistent with the goal of the firm of maximizing the wealth or value (Modigliani & Miller, 1958). The relationship between capital structure and other factors that affect the performance of finance in a firm has been a focus of incredible milestone over the past decade. Investors will mainly consider financial performance in the agricultural industry based on the analysis of financial performance measures (CM Report 2014).

In the seminal paper article, which Modigliani and Miller (1958) presented on the irrelevant theory, they affirmed that capital structure is not related to the worth of the firm. In the existence of corporate income tax and the cost of capital, they concluded that the value of the market of the firm is positively correlated to amount of long term debt used in its capital structure. Financial measure is one of the tools which indicate the financial strength, Weakness opportunity and threat of a firm (Zeitun & Tian, 2007). Agriculture has been one of the foundation of modern society. By being able to grow our own crops, we effectively evolved from hunting society to self-sustaining one. Agriculture has also improved with technology and craft over the years.

Globally and particularly in United States of America (USA), agricultural companies did not share in the prosperity of the booming of 1920s (Wall street 2015). The report pointed that's agricultural companies had been overproducing since the world war1.Herbert Hoover who was the federal government's foods administrator in that era encouraged the great amplification in the production of agricultural goods due to the war since the production of Europe was significantly affected and United states where required to supply its European partners with food.

In Africa, most agricultural companies are also performing poorly Abor (2012). A case study in Nigeria shows most of the companies in agricultural sector are underperforming (Olekule & Oni, 2014). Although there was no recently liquidated company in Nigeria, the results of published financial performance of companies shows that companies like Folohimans Farm Ltd which offers service to cats, fish and eggs producing farmers in commercial quantities was not performing well. Also Vet Care a company specializing in provision of veterinary and medical services was not performing quite well. This has been attributed by reduced borrowing to generate revenues due to increased global competition in provision of the services. In Kenya, companies in agricultural sector have not been performing satisfactory (CM Report 2014).

Published report in Nairobi Securities Exchange (2015) shows that there was reduced earnings per share (EPS). In 2015 sisal grower Rea Vipingo plantation was delisted from NSE. According to NSE Report (2015) it was attributed to its poor financial performance.

Statement of the Problem

Firms survival in the dynamic environment of Kenya are mainly dependable on being able to generate revenue from their operation (Niv, 2005). He cited that their income are mainly generated mainly through sale of produce. Most underperforming companies in global, regional and even locally, their poor performance have been mainly attributed by financial risk (Wall Street Journal 2015). Due to this poor performance, there is need for managers to make right decisions which will steer the company in the dynamic economic environment.

According to Wall Street Journal (2016) 75% of liquidating companies in the US have also been associated with financial risk. The companies borrow in excess hence increasing the financial risks. According to Nigeria Capital Market report (2015), most of poorly performing companies are mainly in agricultural sector. Their poor performances have been attributed by inability to expand and diversify to counter competition according to that report. The result is reduced earnings per share of such companies. Here in Kenya, most of agricultural companies are also underperforming (NSE Market data 2015). The reduced earnings per share has characterized the entire sector for the last two years. Real Vipingo one of the oldest regional sisal producers was delisted from trading in NSE in 2015. Therefore there is need to determine the aspects that affect the performance of finance in the agricultural sectors. This will be significant because agriculture remain to be the driver of economic growth and development in Kenya. The sector continues to be largest platform upon which economic growth is based on. Therefore agriculture must grow at high rate in order to improve the economic growth of the country.

LITERATURE REVIEW

Theoretical Review

The study adopts Capital Structure Irrelevant Theory. Modigliani and Miller (1958) from their revolutionary studies affirmed that for a perfect market condition there is no relation linking firms financing mix and its value and also suggested for the irrelevance of the capital structure on the firms performance. Due to the idealistic and restrictive assumptions of the theorem, it has led to consequential research work that suggest that the performance of the firm is essentially affected by the quantity of debt from the capital mix choices available to the firm while not anticipating the debate led to contest views on the capital structure and financial performance, and the two

major capital structure theorems which are frequently referred to in the literature which are the theory of leverage or pecking theory and the trade –off theory as from the studies of M. E. Jensen & Meckling, (1976).

The traditional theory of capital structure was challenged by developing a new theory (Modigliani and Miller, 1958). They did their work with certain assumptions, which include; existence of homogenous risk class, homogenous expectations, efficient capital market, risk-less debt and zero growth. They concluded that capital structure of a firm is irrelevant to its value in a world without corporate taxes. The firm's market worth is determined exclusively by its risk of the cash flow and its magnitude which the capital assets generate. The debt- equity ratio hereby indicates how the stream of future cash flow will be among the debt holder and shareholders. The assumption of zero tax rate was seen as a serious limiting factor and hence the need to come up with model that incorporate taxes. In Modigliani and Miller (1958), argued that the a firms worth will incline with its leverage levels due to the debt interest which is a deductible expense therefore the existence of an extra benefit to the levered firm.

Since Modigliani and Miller (1958) made oversight on the impact of individual taxes, Miller (1963) made a significant role by correcting the (1958) contention. Replying on a number of assumptions Miller (1963) initiated a model which was intended to highlight the worth of a firm its influenced by its leverage. When the individual and corporate taxes are mutually accounted, the theorem imply that in the market equilibrium the effects of personal taxes are withdraw the corporate tax advantage therefore the realization of capital structure irrelevance. Miller (1963) notes further that with introduction of personal taxes the usable income available to investors reduces when dividends are paid; this reduces the value of unlevered firm. This theory is very crucial in determining capital structure due to tax effect on debt.

Empirical Review

From the scholar studies of Berger & Dipatti, (2006), firm employ debt in their business since it presents them a potential in the maximization of their operation and amplification on the average return on their equity funds. Debt will only be considered effective as mode of financing in merely when the rate of return on investment is great than its cost of debt. Borrowing firm take this probability to employ debt in the anticipation that it will promote the firm to a more valuable level by amplifying the turn over and hence the maximizing the profits.

Nyaboga (2008) in his research found that the employing of debt capital amplifies agency costs among debt holders and the debt holders and shareholders. Numerous scholars have had a disagreement on the features that extensively affect the capital structure therefore the determination optimum capital structure go beyond various theorems. A number of scholars

have accomplished that the institutional and economic environment in which the firms operate influence significantly the capital structure. Maniagi, Chitiavi, Alala, Musiega, and Rueben (2012) in their study established that long term debt ratio proxy of capital structure is positively correlated to firm's performance (ROA).

An important inverse relationship between the asset tangibility and short-term debt ration amongst manufacturing companies listed in Bucharest stock exchange was highlighted from the studies of Vatavu, (2012). Additionally the study illustrated that there is an inverse irrelevant relationship among both the total debt long term ratio and asset tangibility. This proves that manufacturing had great access of short term debt in comparison to long term debt. A study to appraise the impact of asset tangibility on capital structure and choice on listed firms in Nigeria was established by (Olekule and Oni ,2014). The study used correlation design, capital structure was defined as a ratio of fixed liabilities to total asset .The results of the study found an insignificance correlation among assets and short term to total asset. According to Fissesha, (2010) the research which he conducted on the determinants of capital structure among commercial bank in Ethiopia portrayed that there was negative insignificant relationship amid the asset structure and capital structure.

According to studies conducted by Nour (2012) on the performance of the firm and the capital structure of Palestine firms, the outcomes showed that the performance of the firm is positively correlated to the capital structure and numerically important with total asset to the total debt in exception of the market value of equity or the Book value of equity which was vital with the total debt to total assets & short-term debt to total assets. The relationship among the industries distinctiveness, operational performance and capital structure among a sample which comprised of 427 companies listed on the Vietnamese stock exchange throughout the three years 2007-2009 was conducted by (Ngoc-Phi-Anh and Jeremy ,2011). The outcome of the study portrayed that both short term and long term debts related negatively to performance shown by the return on asset but positively with the long-term assets ratio and negatively correlated with short term ratio.

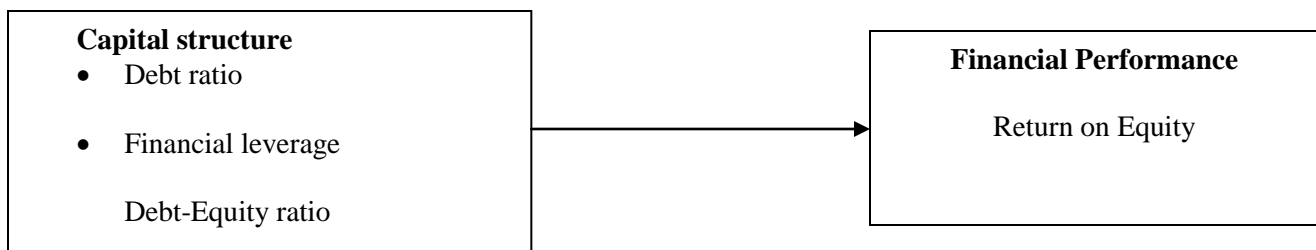
A research on SMEs in Ghana where it employed 160 SMEs was carried out by (Abor and Biekpe,2007) where the outcome comprised of pecking order hypothesis as the coefficients for performance calculated by the profitability were negative and of great importance comparison to the capital structure alternatives ascertained by long term and short term debt. It was implied that the internal financing maximizes the profits therefore SMEs are likely to evade from debt to fund their activities. Although the greater access to debt finance by firms which are profitable, the necessity for debt finance may be lowered if the retained earnings are inadequate to suit the need.

The capital structure determinants of Ghanaian firms listed on the Ghana Stock Exchange throughout the six-year phase, 1998-2003 was studied by (Abor, 2008). The outcome showed that both the short term and long term debt ratios were negatively correlated in comparison to the profitability in the test groups. The study conclusions evidently conformed with the pecking order hypothesis, lucrative firms tend to rely on the less costly internal generated finances and consequently seek for external funds if supplementary finances are needed.

Conceptual Framework

The conceptual framework is a methodical variation and context. It focuses on capturing an actual thing and hence this makes it easy for remembrance. (John Aluka Orodho, 2009). Subsequent to cautious study of literature review, the following conceptual framework on capital structure influence financial performance can be formulated.

Figure 1: Conceptual Framework



METHODOLOGY

Research Design

Mugenda and Mugenda (2008) describe research design as the process the investigator follows from inception to completion of the study. The study used longitudinal research design. Longitudinal research design is appropriate since it follows the sample overtime and makes repeated observation. It also describes patterns of changes and help to establish the direction and magnitude of casual relationships (John Aluka Orodho, 2009). The measurement of variable was taken over distinct time period (2010-2014). This allow the changes of the variable to be measured.

Research philosophy

Research philosophy engages of a wide framework which consists of the beliefs, perceptions and the understanding of various theorems and practices that are employed to conduct the

study (Cohen, Manion, & Marrison, 2007). They described philosophy to comprise of diverse features which include a person's mental model, the way he perceives things from various perceptions and perception of things towards actuality.

In the research on factors influencing financial performance of agricultural companies listed in NSE, the research mainly adopted pragmatic research philosophy. According to pragmatic philosophy, research question is the significant determinant of research philosophy. Pragmatic can combine mutually interpretivism and positivist within a single research according to the nature of the question of research. Pragmatism research can also incorporate more than one research methodology and research strategies within the same study. Many different methods in collecting, analyzing as well as presenting data were adopted in the research. Also different methods of examining the relationship of variables were used.

Empirical Model

Empirical model are those that are based on entirely on data (J. A Orodho, 2012). He noted that these assumptions concern the relationship between variables and are not based on physical principles. Multivariate linear regression analysis was conceded to establish the effect of capital structure on financial performance of the agricultural companies listed in the NSE. The approach used for modeling the correlation among a scalar dependent variable and a more explanatory variable is referred to as the Linear regression. For more than one variable, the process is referred as multiple linear regression. In linear regression, the relationship are modeled using linear predictor functions estimated from the data where unknown model parameters are estimated from the data. Therefore capital structure is the independent variable and the financial performance is the dependent variable. From these independent and dependent variable, the following relationship can be formulated.

Financial performance of agricultural companies depends on capital structure. It can be expressed as follows;

$$P=f(C).$$

Where p=financial performance

C=Capital Structure

Therefore the regression model can be expressed in the following manner;

$$ROE = a_0 + a_1X_1 + \varepsilon_t$$

Where a_0 is intercept coefficient of regression

a_1 , is regression coefficient

X_1 is Capital Structure

ε_t is the error term

Target Population

A population is the total collection of elements that a researcher wishes to study and make inference from it (John Aluka Orodho, 2009). The target population is the six agricultural companies listed in the NSE. This included; Eaagads, Kakuzi, Kapchorua Tea, Sasini and Williamson Tea.

Sample Design

A sample consists of two elements which are the sampling method and estimator (John Aluka Orodho, 2009). According to him sampling methods is the procedures and rules through which various elements of the population are integrated in the sample while the estimator is the process estimation of computing the sample statistic. There are only six listed agricultural companies in NSE, therefore the researcher carried out census.

Data Analysis and Presentation

Quantitative research approach was employed for the research findings. Due to the use of numerical and secondary data, quantitative approached was considered to be an appropriate approach for the study. According to John Aluka Orodho (2009) the analysis on statistics are used to depict an account for the variability experimented in the data. This involves thorough analysis of the data collected. Therefore the aim of statistics is to recapitulate and give answers to the questions in the study. Person's correlation coefficient and multivariate regression analysis were carried out to determine the relationship of the variables.

RESULTS AND DISCUSSION

Capital Structure that Affect the Financial Performance of Agricultural Companies Listed in NSE

In this section, the researcher sought to establish the capital structure which affects the financial performance of agricultural companies listed in NSE. The capital structure included in this study is debt ratio, financial leverage and debt-equity combinations. Based on the correlation matrix in table 1 it shows that financial performance is positively related to debt ratio, even though the relationship is not statistically significant at the five percent level of significance. This indicates that as debt ratio increase this will lead to an increment in financial performance, however the increment in financial performance following an increment in debt ratio will not be large to guarantee a significant change in the after tax profits of the companies. This finding is consistent with those established by Maniagi et al. (2012) and in line with Nour (2012) who established that firm performance is positively related with total debt to total assets.

The correlation matrix in table 1 also shows that financial performance is positively related to financial leverage, even though the relationship is not statistically significant at the five percent level of significance. Furthermore correlation matrix shows that financial performance is positively related to debt-equity combinations, even though the relationship is not statistically significant at the five percent level of significance. This concurs with those by Zeitun and Tian (2007) who found that there is a positive correlation on the ratio of equity and debt and the financial performance.

Table 1: Regression Model

Random-effects GLS regression	Model 1
Financial performance indicator	Coefficient (P-Value)
Debt ratio	0.474* (0.000)
Financial leverage	-0.003 (0.463)
Debt-equity combinations	-0.798* (0.000)
Constant	0.041 * (0.000)
R-squared: Within	0.9980
Between	0.9996
Overall	0.9984
Chi-square statistic	14386.13 * (0.0000)

Upon controlling for other independent variables a positive coefficient of 0.474 on debt ratio to financial performance indicator was realized with a p-value of 0.000 which was statistically significant at the 0.05 level. Hence the rejection of the hypothesis that, debt ratio has no effect on financial performance. This indicates that, debt ratio as measured by total debt to total assets is positively associated with financial performance, and it does have a statistically significant effect on financial performance. This indicates that as debt ratio increase this will lead to an increment in financial performance, and the increment in financial performance following an increment in debt ratio will be large to guarantee a significant change in the after tax profits of the companies.

After controlling for other independent variables a negative coefficient of 0.003 on financial leverage to financial performance was realized in the regression model presented. Its associated p-value of 0.463 was not statistically significant at the 0.05 level. This indicates that, financial leverage as measured by fixed charged capital to equity is negatively associated with

financial performance, and though it does not have a statistically significant effect on financial performance. This is in line with the findings by Prahalathan and Ranjany (2011) in Colombo Stock Exchange in Sri Lanka, that capital structure measured by long term debt to total asset has no significant effect on the firm's performance. The results also concurs with those by Vedran (2012) in Australia who established that at relatively high levels of leverage capital structure is negatively correlated to performance. However, the findings contrast those by Ogebe, Ogebe, and Alewi (2013); Oladeji et al. (2015); and Omondi and Muturi (2013) that leverage had a major negative effect on financial performance.

Further analysis revealed that a negative coefficient of -0.798 on debt-equity combinations to financial performance was realized in the regression model presented in. It's associated p-value of 0.000 was statistically significant at the 0.05 level. Hence we reject the hypothesis that, debt-equity combination has no effect on financial performance. This indicates that, debt-equity combination as measured by total debt to equity is negatively associated with financial performance, and it does have a statistically significant effect on financial performance. Hence as debt-equity combinations increase this will lead to a significant reduction in after tax profits of the companies.

CONCLUSIONS

The first aim was established so as to determine the consequence of set of capital structure on financial performance of agricultural companies listed in NSE. Based on the correlation matrix financial performance is positively correlated to the debt ratio, financial leverage and debt-equity combinations even though the relationship is not statistically considerable at the five percent level of significance. This designates that as debt ratio increase this will lead to an increment in financial performance; however the increment in financial performance following an increment in debt ratio will not be large to guarantee a significant change in the after tax profits of the companies.

Upon controlling for other independent variables a positive coefficient of 0.474 on debt ratio to financial performance which was statistically important at the 0.05 level. This indicates that, debt ratio as computed by the total debt to total assets has a positive and a considerable statistical effect on the firm's finance performance. Hence as debt ratio increase this will lead to an increment in financial performance, and the increment in financial performance following an increment in debt ratio will be large to guarantee a significant change in the after tax profits of the companies. A negative coefficient of -0.798 on debt-equity combinations to financial performance was realized which was statistically significant at the 0.05 level. This indicates that, debt-equity combination as measured by total debt to equity has a negative and a statistically

significant effect on financial performance. Hence as debt-equity combinations increase this will lead to a significant reduction in after tax profits of the companies. A joint significance test for the coefficients of the three capital structure variables produced a chi-square statistic realized of 113.22 with p- value of 0.0000., showing that the coefficients of the three capital structure factors were statistically different from zero. Hence capital structure affects financial performance. Based on the findings of the study, it was concluded that

- An increment in debt ratio will lead to an increment in financial performance, and the increment in financial performance following an increment in debt ratio will be large to guarantee a significant change in the after tax profits of the companies.
- Debt-equity combinations increase this will lead to a significant reduction in after tax profits of the companies.
- Capital structure affects financial performance.

RECOMMENDATIONS

Emanating from the aforementioned conclusions the study recommends the following:

- i). In practice, the study will enable management of various organizations in agricultural sector and more so those listed at Nairobi Securities Exchange to configure capital structure as the major determinant of superior performance and thus help stakeholders to make right decisions regarding their investment.
- ii). It is important that future researchers conduct a comparative study on the listed agricultural companies for each category of crops under cultivation to determine if capital structure have equally across the firms.

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