EFFECT OF DEBT FINANCING ON PROFITABILITY OF LISTED AGRICULTURAL COMPANIES IN NIGERIA

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ABSTRACT

The purpose of this research was to examine the effect of debt financing on the profitability of listed agricultural companies in Nigeria. The study sample of 5 listed Agricultural companies in Nigeria on Nigeria stock exchange (NSE). Secondary data for the study was extracted from the annual report of listed agricultural firms. The data was analyzed using multivariate regression analysis and results from the study showed that long-term debt had a significant negative effect on profitability of listed agricultural companies in Nigeria. Also, the result shows that short term debt has a significant positive effect on profitability of listed agricultural companies in Nigeria. The study concluded that debt financing has effect on profitability but long-term debt in the debt financing of the agricultural companies should be kept at a moderate level to improve their profitability. The study recommends that agricultural companies should be mindful of the level of debt they incur into their businesses so as to avoid having a negative effect on profitability.

KEYWORDS: Agricultural businesses, Debt financing, Profitability, Long-term debt, Debt ratio.

INTRODUCTION

Over the year's agriculture has been the main stay of Nigeria economy before the discovery of oil. The development of agriculture has attracted many agricultural firms in Nigeria of which few are listed while many are not listed on the Nigeria stock exchange (NSE). Agricultural business requires huge capitals which include equity financing and debt financing.

Companies are established for the aim of making profit, many factors have been established influencing profitability of firm. It is necessary to examine the effect of debt financing on profitability of firm specifically on agricultural firm. Agricultural firm being one the main sector

Nigeria economy, debt financing and equity financing which are the main two source of financing are critical to the performance of agricultural firm.

It has been argued that most companies prefer debt financing because interest element in debt are free from tax and are allowable expenses. Also equity financing is cheapest source of financing because it has no financing cost and does not require repayment of principal and interest. The advantage of debt financing may influence firms to choose a wrong choice of finance because long term debt and short term debt are source for different purpose. Using debt financing to finance a company project depend on the duration of the project due to short term project should be finance with a short term debt while a long term project should be finance with a long term debt. Where long term project is finance with a short term debt and short term debt is used to finance long term project may have great consequence of firm performance. Wrong choice of debt on a viable project may have serious consequence on the company profit and it is necessary to examine the impact of short term debt and long term debt specifically on profitability of quoted agricultural firms in Nigeria.

Objectives of the study

The main objective of this study is to examine the effect of debt financing on the profitability of listed agricultural companies in Nigeria. Other specific objectives are to:

i. Assess the effect of short term debt financing on profitability of agricultural companies in Nigeria.
ii. Examine the effect of long term debt financing on profitability of agricultural companies in Nigeria.

Research Hypotheses

The hypotheses for this study are stated in null forms as follows:

H_{01}: There is no significant relationship between long term debt financing and profitability of agricultural companies in Nigeria.

H_{02}: There is no significant relationship between short term debt financing and profitability agricultural companies in Nigeria.

LITERATURE REVIEW

Concept of Debt financing

Zietlow, Hankin, and Seidner (2007) stated that debt financing is a major component in the capital structure of companies and it is use to fund their business operations. Debt instrument includes notes, certificates, bonds, debentures, mortgages and leases etc. The major attribute of debt funding is that the amount borrowed in addition to the interest, must be paid back to the providers of the fund at the agreed period of time. The agreed interest rate which must be paid on the borrowed money is usually set out in the contract agreement between the company and the fund provider. If the borrower does not fulfill their obligations set out in the contract, it can negatively affect their credit rating, which in turn can make it more difficult for the company to obtain funds for future investment which in return can result in financial failure. Even if a company suffers loss and they are unable to make the scheduled payments, they still owe debt obligation to the lenders (Shah & Hijazi 2004).

Debt financing can either be short-term or long-term financing which organization obtains to meet their business operations. Short-term debt refers to funds needed to finance the day-to-day operations of the firm which repayment period is within 12month period such as trade payable, loan, bank overdraft and accruals. Long-term financing is usually acquired when firms want to purchase assets such as buildings, equipment or machinery. The scheduled repayments for these funds extend over periods longer than one year (Zietlow et al, 2007).

Concept of Profitability

Profitability can be referred to the level of performance of a firm over a specified period of times, expressed in terms of overall profit or losses at the end of accounting period (Tian and Zeitun, 2007). It is measuring the results of a firm's policies and operation in monetary terms. According to Abor(2008), profitability are results that reflect in firm's return on investment, return on assets and valued added. Analysis of the determinants of profitability is essential for all the stakeholders, but especially for investors. This principle provides a conceptual and operational framework for evaluating business performance. A company's profitability performance is directly influenced by its market position. It is often the measuring tool which indicates the financial strengths, weaknesses, opportunities and threats. According to the Business Dictionary profitability is the ability of a firm to generate net income on a consistent basis. Ratio is used as a benchmark for evaluating the profit performance of a firm.

Theoretical Review

This theory that underpin these study include trade off theory and pecking order theory

Trade-Off Theory

According to trade-off theory as developed by Myers (1984), states that firm choice of debt-equity ratio is a trade-off between cos of financial distress and tax advantage of debt. Debts enable the possibility to deduct interest charges raising incentive higher leverage in other to maximize tax shield. Trade-off theory further argued that firm would prefer debt over equity until the point where the probabilities of financial distress start to be important. This theory implies that debt financing is preferred till the optimal level and equity is preferred after the optimal point.

Pecking Order Theory

According to Myers and Majluf(1984), pecking order theory refer to firms prefer to finance themselves internally through retained earnings; when this source of financing is not available, the company issues debt and only in the last instance does it issue equity. Myers and Majluf (1984) argued that in a perfect market a firm will prefer using internal sources (retained earnings) and reserves over external sources of finance and would prefer to use debt to issuance of new stock. Myers and Majluf (1984) suggest that managers may reduce the cost of debt by issuing secured debt, therefore they expect that firms with assets that can be collaterized to use more debt. This theory is relevant to this study because an agricultural firm with a higher tax advantage will issue more debt for financing its operations so that the cost of financial distress will be offset by the tax shield benefit on interest payments. Also debt is used for signaling by firms since leverage increases the value of the firm.

Review of Related Literature

Akaji, Nwadialor and Ngubata (2021) examine the effect of debt financing on firm's performance in Nigeria between (2013-2020). The study population consist 31 listed firms which include oil and gas sector health care sector and ICT of which 5 listed firms were sample. The study uses secondary data and data were analyzed using ordinary least square (OLS). The study found that preferred stock have a negative effect on profitability, short term debt has positive effect on profitability and also long term debt. The limitation in this study is those quoted agricultural firms were not included in their study.

Philip and Olanrewaju (2020) examined the effect of debt financing on the financial performance of non-financial firms listed on the Nairobi Securities Exchange in the five-year period 2013 to 2017. Using a sample of 23 listed non-financial firm's data was collected from published financial statements of the sampled firms and analyzed statistical using the panel data regression method. The independent variables were short-term, medium term and long-term debt while the explained variable was return on equity. Three control variables, firm size, sales growth and growth opportunities, were included and considered as having an effect on the relationship between the independent and dependent variables. The study results observed that medium-term debt had a negative and statistical significant relationship with return on equity. Lon g-term debt had a positive but statistically insignificant relationship while short-term debt had a negative relationship with return on equity.

Sohail and Ulfat (2019) examined the association of different debt financing on firm's performance in 14sectors of Pakistan. The study uses Secondary data to collect about 14 different sectors in Pakistan Stock Exchange, for the time period of 9 years (2006 to 2014). The results of the study indicated that debt financing have negative but also significant impact on firm performance in Pakistan. The study findings recommend that companies should more rely on their internal source of finance because it is the cheap and reliable source of finance in Pakistani context. Rahman, Sarker and Uddin (2019) examined the impact of capital structure on the profitability of publicly traded manufacturing firms in Bangladesh. The study applied the fixed effect regression to find out the correlation among independent variables (debt ratio, equity ratio and debt to equity ratio) and dependent variables (return on asset, return on equity and earnings per share). The study collect sample of 50 observations of selected 10 manufacturing companies listed in Dhaka Stock Exchange has been analyzed over the period of 2013 to 2017. This study reveals that the debt ratio and equity ratio have a significant positive impact but debt to equity ratio has a significant negative impact on ROA. Also, the finding shows that equity ratio has a significant positive impact but debt to equity ratio has a significant negative impact on ROE. Finally, debt and equity ratio has a significant negative impact on EPS. Findings of this research will help the listed manufacturing companies to maintain an optimum capital structure which will lead to the maximization of stockholder's wealth. Charles and Aondofa(2017) examine effect of debt financing on profitability of listed agricultural companies in Nigeria between 2011-2015 the study population consist of five listed agricultural firm but livestock feed plc was excluded as a result of non-availability of long term debt, the study uses secondary data and data collected were analyze using multiple regression. Their finding shows that long term debt has a negative effect on profitability of listed agricultural firm, the limitation in this study is that short term debt were not included and also not all the listed agricultural were not

use in their study. Prempeh, Pekyere and Asare (2016) examined the effect of Debt Policy (Short-Term Debt, Long-Term Debt, and Total Debt) on firms' performance. Annual data was collected from five (5) manufacturing companies listed on the Ghana Stock Exchange (GSE) between 2005 to 2015. The panel data regression model was used to test if there was significant relationship between the debt ratios and the performance indicators. The financial performance indicated that Gross Margin Profit, return on Assets (ROA), Tobin's Q Ratio, and Debt Ratios employed are (Short-Term Debt, Long- Term Debt and Total Debt). Firm size and growth opportunity are considered as control variables. The results revealed that listed manufacturing firms in Ghana use 14% equity capital and 86% debt capital to finance their operations. The debt structure is made up of 49% long-term debt and 37% short-term debt. It was also found that debt (Short- Term Debt, Long Term Debt and Total Debt) has a negative effect on firms' performance. The study recommended that listed manufacturing firms should increase the level of equity finance and exploit the of leverage. The Ghanaian government should take concrete steps to develop the country's capital market to enable businesses access long-term capital necessary for the financial performance of the firm in the long run.

Ochong, Muturi and Atambo(2016),examined the impact of debt financing on financial performance of the firm over the short-term and long-term. For the purpose of this study a population 60 firms with debt in their capital structure in Nairobi Security exchange were evaluated. Three independent variables were examined; they include Short term debt ratio (STDR) and long debt term ratio (LTDR) in determining financial performance of the firms in form of return of assets (ROA), liquidity ratio and profit margin ratio as dependent. This study utilized secondary data from audited financial report of these firms between periods of 2009-2012. From the study it emerged that the regression analysis coefficient on the debt effects on return on asset suggest that a unit increase of short term debt reduces return on asset by. The findings also show that profit margin ratio suggests a different outcome. A unit increase in short term debt however will reduce the profit margin ratio by 1.054. The liquidity ratio response to a unit increase in short term debt ratio leads to a decrease of liquidity ration by 0. 838. From this study it is evident that at 95% confidence level, the variables produce statistically significant values (high t-values, $p < 0.1$.) hence when the variables are combined hence, they can be relied on to explain debt financing of the firms listed at the Nairobi securities.

Ishaya and Abduljeleel (2014) This study examined capital structure and profitability of the Nigerian listed firms from the Agency Cost Theory perspective with a sample of seventy (70) out of population of two hundred and forty-five firms listed on the Nigerian change (NSE) for a period of ten (10) years: 2000 - 2009 with the aid of the NSE Fact Book covering the period under review. The study used Panel data which include fixed-effects, random-effects and Hausman Chi Square estimations. Two independent variables which served as surrogate for capital structure were used in the study: debt ratio, DR and EQT while profitability as the only dependent variable. The result show that DR is negatively related with PROF, the only dependent variable but EQT is directly related with PROF. The study by these findings, indicate consistency with prior empirical studies and provide evidence against the Agency Cost Theory.

METHODOLOGY

Research Design

Ex-post facto design is designs when data are extreme are in existence and after an event has passed. The choice of the ex- post facto is because data for this study are in existence in the annual report of quoted agricultural firm in Nigeria.

Population of the Study

The population of this study consist of five (5) quoted agricultural firm listed on Nigeria stock exchange (NSE) 2019. This information was retrieve from the fact book of Nigeria stock exchange (2019).

Sources and method of data collection

This study uses secondary data. The data was extracted from the annual report of quoted agricultural firm in Nigeria between (2016- 2020).

Model Specification

This study adapts the model of Charles and Aondofa (2017). The model of their study is

$$ROA + EPS = \beta_{0it} + \beta DR_{it} + E_{it}$$

The model for this study added short term debt

$$ROA + \beta_I LD_{It} + \beta_2 SD_{it} + + E_{it}$$

Where;

ROA=Return on asset = Profit after Tax / Total Asset

β_0 = Constant

LD = Long term debt = Long term liabilities

SD = Short term debt = Short term liabilities

E = Tolerance error

Method of Data Analyses

Data collected is subject to various statistical analyses such as descriptive statistics, Correlation matrix and Ordinary least square.

Analysis of Results and Discussion

Descriptive Analysis

Descriptive analysis shows mean, maximum, minimum range and standard deviation of data collected.

Table 1

Descriptive statistic

	ROA	LD	SD
MEAN	0.008	0.817	1.838
MAXIMUM	0.260	1.653	2.62
MINIMUM	0.180	0.002	0.254
STANDARD DEVIATION	0.123	0.208	0.927

Sources: researcher computation (2021) using E-view version 7 Sources:

Table 1 shows that Return on Asset (ROA) has an average mean of 0.008, maximum 0.260, minimum 0.180 and standard deviation of 0.123

Also, from table 3, LD shows an average mean of 0.817, maximum value of 1.653, minimum value of 0.002 and standard deviation of 0.208, SD show an average mean

Correlation Analysis

Correlation deals with relationship among variables. The correlation coefficient is a measure of linear association between two variables.

Table 2

	ROA	LD	SD
ROA	1		
LD	0.1159	1	
SD	0.2274	0.6293	1

Researchers Computation (2021) using E – view statistical package.

Correlation analysis shows the relationship between dependent variable (ROA) and independent variables (LD and SD).

Correlation matrix in table 2 shows that Return on Asset (ROA) has a positive relationship with LD at a coefficient of 0.1159, also the relationship between Return on Asset (ROA) and SD at a coefficient of 0.2274 is position.

Regression Result

MODEL: ROA = β+ βLD+ βSD

DEPENDENT: ROA (Return on Asset)

Number of Companies: 5

Numbers of Years: 5 years

Number of Observation: 25

Table 3

VARIABLE	COEFFICIENT	STANDARD ERROR	T- VALUE	PROFITABILITY
C	5.4938	6.2983	0.8402	0.4018
LD	-1.223	1.5716	0.8903	0.0004
SD	1.3144	1.8232	0.7757	0.0002

Sources: Researchers computation (2021) using E – view statistical package.

Adjusted R – square 0.73

P – Value 0.0009

F – Statistic 0.6712

In table 3, LD is negatively related to Return on Asset (ROA) at a coefficient of -1.223 and significant at 1%. Also, return on asset (ROA) has a positive relationship with SD at a coefficient of 1.3144 and significant at p – value of 0.0002.

Adjusted R – square of 0.73 which is 73% of the variance in Return on Asset can be explained by independent variable. The 73% also means that the variation in Return on Asset is as a result of changes in the explanatory variable.

P – value of 0.0009 in the OLS result simply mean that the overall model is significant at a 1% which indicate that Return on Asset of listed companies is predicted with 99% probability of LD, and SD and shows a statistically significant relationship among them.

Discussion

From the result of OLS in table 3

I. Return on Asset and Long-term Debt

The result of OLS reveal that Return on Asset as positive impact on companies. Return on Asset and is significant at 5%. This result means an increase in LD will result to decrease in Return on Asset of listed companies in Nigeria. This finding supports the earlier findings of Charles and aondofa (2017).

2. Return on Asset and Short-term Debt

The result from OLS shows that there is positive relationship between SD and Return on Asset and it's significant at 5%. These means that an increase in SD will lead to increase in Return on Asset of listed companies Nigeria. This finding support earlier findings of Philip and olanrewaju (2020)

Conclusion and Recommendation

The study concluded that debt financing has effect on profitability on listed agricultural companies in Nigeria but long-term debt in the capital structure of the agricultural companies should be kept at a moderate level to improve their profitability. The study recommends that agricultural companies should be mindful of the level of debt they incur into their businesses so as to avoid having a negative effect on profitability.

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