POLAC INTERNATIONAL JOURNAL OF ECONOMICS
AND MANAGEMENT SCIENCE (PIJEMS)
DEPARTMENT OF ECONOMICS AND MANAGEMENT SCIENCE
NIGERIA POLICE ACADEMY, KANO

EFFECTS OF DEBT FINANCING ON FIRM VALUE FOR LISTED MANUFACTURING ENTERPRISES IN NIGERIA

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Abstract

The study examines the effects of debt financing on value of listed industrial goods companies in Nigeria, using micro panel analysis through ordinary least square (OLS) technique spanning from 2006-2016. Secondary data were adapting through the companies' individual annual reports of 12 listed manufacturing firms in Nigeria. The outcome of the study revealed that debt financing enhances value of firms in Nigeria. However, firm growth reduces the level of firm value. The capacity of firm size does not influence value of firm. Thus, it is suggests that policies should be toward promoting debt financing by all avenues to reduce cost of borrowing for greater value of firms. In addition, financial institutions should be directed to uplift debt financing through optimistic management that will increase future cash flows.

Keywords: Value of Firms, Debt Finance, Firm Size, Ordinary Least Square, Nigeria

JEL Classification: H6; H63; L22

1. Introduction

For the past several decades, it has been argue from the theoretical perspective that capital mix remained the major determinant of firm value. However, it stands the complex venture of sources of funds for business operation (Abor, 2008). It encompasses all cooperate assets in promoting business value. Hence, global financial institutions have accepted capital mix as a source of financing investment through equity, debt or their mixture (Abor, 2008).

In Nigeria, firm's business operation has not realized the overall needs for their stakeholders due to high level of competition. This situation supposed to reduce financial risk and cost, instead it deteriorate the value of business venture as a result of inappropriate management and capital mix for viable firms operation. It is documented that managers have an obligation to manage and control financial resources so as to enhance stakeholder's capital as well as minimizing firm's financial risk and cost. Thus, the call for optimizing capital mix is mandatory due to a reason that best capital combination determines firm's success (Ross, Westerfield & Jordan, 2005). In view of these challenges, debt financing have given way to promote value of firms as it has the ability to reduce cost of assets, risk and enhances the general performance of the firms (Ghosh 2008; Margaritis & Psillaki 2010). Nevertheless, the issue on the right choice of the best capital combination and how it affects firm value remain controversial. However, empirical justification stands inconclusive as studies on firm financing and its value are concentrated in developed nations with very few in developing economies, particularly, Nigeria(Garima 2013; Michael, Dalbor & Arun 2015). Therefore, this study aimed at analyzing the influence of debt financing on value of firms for the listed manufacturing enterprises in Nigeria.

2. Literature Review

The link among Debt financing and firm value has been discuss in the literature. For instance, study by Harries and Raviv (1991) emphasize on the issue of debt financing in promoting firm performance. Similarly, Yazdanfar and Öhman (2015) used 3SLS technique to analyze the influence of debt financing on the value of firm among Swedish SMEs from 2009 to 2012. Their estimation reveals that debt financing reduce the level of firm performance. Barry, Mihov, and Barry (2015) documents that low and high debt levels, determine the value of firm's performance among IPO. In another development, Davydov (2016) studied the influence of debt financing on firm performance in BRCS nations. The outcome shows that debt financing negatively influence firm performance. Vo and Ellis (2017) argue that capital mix decrease firm performance in Vietnam. However, Cole and Sokolyk (2018) analyze the linkage among debt finance and firm performance between early stage of firm operation. They reveal that debt finance

promote value of firms. The outcome is similar with the result of earlier studies (DeAngelo & Masulis 2015). From the reviewed literature, it is observed that various studies have analyze the association among debt finance and firm performance. However, these studies concentrates in developed nations and very few are done in Africa particularly, Nigeria. Hence, the study examined the influence of debt financing on value of firms in Nigeria.

3. Materials and Methods

The study comprised the ex-post facto research design that helps to ascertain possible cause association through identifying some existing consequence on explaining variable. 12manufacturingcompanies that are listed on the Nigerian stock Exchange as at 31st December, 2016 was the study's sample. Thecriteria of industrial goods companies are based on Nigerian stock Exchange classification and its choice by this study is informed by the need to make generalizations that cover the entire industrial goods companies. Therefore, census method have been employed for data collection and enhances validity of the collected data by eliminating errors associated with population (Harries & Raviv, 1991). Census is a total enumeration which remains merely a head count from part of the population. Similarly, Davydov (2016) noted that a census is preferred where the population is small and manageable. Hence, information from the census units is used to determine the characteristics for the population. Nonetheless, census method has given equal chance for the entire population. Thus, the data collected was analyzed using multiple regression analysis using 132 observations, including 12 cross-sectional units, Time-series length of 11years. The study analyzed the effects of debt financing on value of listed industrial goods companies in Nigeria.

Furthermore, multiple regression technique was utilized for the models estimation. Therefore, relationship between debt financing and two explanatory variables are thus estimated based on the following equation.

$$VF = f(TDTA, FRMSZE, GRWTH) \quad (1)$$

In equation (1) VF represents value of firm, FRMSZE is firm size and GRWTH represents assets growth.

The econometric specification of the model is expressed in equation (2)

$$VF_{it} = \alpha_{0\,it} + \beta 1 LnTDTAit + \beta 2 LnFRMSZE_{it} + \beta 3 LnGRWTH_{it} + \square_{it} \quad (2)$$

In equation (2) VF represent value of firm, TDTA is debt financing (ratio of total debt to total assets), FRMSZE is firm size(logarithm of total assets), and GRWTH represent growth,(logarithm of total assets),while β and α are the coefficient of the variables, i represent the corrections of the firms, t is period of time, ε is error term.

4. Results

Table 4 presents the result of the estimated model of debt financing (TDTA) and value of firm (TOBIN'S Q) of listed manufacturing companies in Nigeria. The coefficient estimate value (β) shows the influence of explanatory variables to the explained variable, while the p values, which shows the significance of the variables.

Table 4. The estimated model of debt financing TDTA and value of firm TOBIN'S Q

Variables	(1) OLS	(2) R.E	(3) F.E
Lntdta	0.8143***	0.8143***	0.7245***
	(0.0630)	(0.0636)	(0.0710)
lnfrmsze	-0.7219	-0.7219	1.3267
	(0.3591)	(0.3591)	(1.6003)
lngrwth	-0.0315*	-0.03152*	-0.0322*
	(0.0201)	(0.0201)	(0.0209)
Constant	1.6162**	1.616**	-3.0801
	(0.8007)	(0.8007)	(3.6242)
Observations	90	90	90
R-squared:	0.73		
Adj. R-squared:	0.72		
Autocorrelation:		Breusch-Pagan Test:	
F(1,9)=	0.391	Test(χ^2)	0.00

Prob>F=	0.5472	Prob> χ^2=	1.0000
IM-Test:			
χ^2	15.64		
Prob> χ^2	0.2691		

Note: *** p<0.01, ** p<0.05, * p<0.1 illustrate 10, 5 and 1 significance level

Similarly, the problem of multicollinearity among the variables used in the estimated model is investigated using the variance inflation factor VIF presented in Table 5 below.

Table 5. Multicollinearity Test

Variables	T.Value	VIFs Value
TDTA	1.30	0.7680
FRMSZE	1.29	0.7745
GRWTH |	1.16	0.9896
Mean VIF		1.20

It is indicates from table 4that F-statistics explains the overall significance of the model. Further, the F-Statistics shows the fitness of the model and the fact that the established relationship is not due to mere chance. Hence, the coefficients indicate a relationship between the set of independent variables and (TOBINS Q). The adjusted R^2 value are however high and shows that the regression model which consists of (LnTDTA), (LnFRMSZE) and (LnGRWTH) indicate that only about 0.7237 (72) percent of the variations in firm value (TOBIN'S Q)is explained by the variation (LnTDTA).Moreover, in order to further ascertain the validity of the estimated Pooled OLS model, various post estimation tests were conducted. The test of heteroscedasticity and normality were conducted using Cameron and Trivedi im-test. The test indicates that there was no problem of heteroscedasticity. Likewise, the test for autocorrelation indicates that the estimates have no issue of autocorrelation as shown by the P-value of the test for autocorrelation. Additionally, from all the three models estimated, the Breusch-Pagan test for random effects indicates that the Pooled OLS model estimated is the most appropriate model and therefore, the interpretation of results obtain in Table 4 concentrate on only the pooled OLS model. Furthermore, the adequacy of the model is examined through the VIF test for multicollinearity among the variables which indicates that none of the variables in the model has a VIF value of up to 5 and therefore no much multicollinearity among the variables included in the model.

It is also found from Table 4 that (LnTDTA) and (LnGRWTH) are significant in explaining variations in (TOBIN'S Q), while (LnFRMSZE) found not significant. However, among the two significant variables, only (LnTDTA) is found to meet the expected sign or support the hypothesis, while (GRWTH) is found to have a different sign than expected or has not supported the hypothesis. The negative result of (LnGRWTH)indicates that an increase in (LnGRWTH) by one unit decrease value of firm by 0.72 and 0.032 units , while the positive result of (LnTDTA)indicates that an increase in (LnTDTA) by one unit cause value of firm (TOBIN'S Q)to rise by 0.8143 unit. The table also revealed that (LnTDTA) has the highest beta coefficient value (0.8143); indicating the strongest contribution in explaining the dependent variable.

Deliberations on the results obtained from the multiple regression and implication of theory on the effects of debt financing (TDTA) on value of firm (TOBIN'S Q). Table 4 shows that, the variable (TDTA) have positive influence on value of listed manufacturing firms in Nigeria. This signify that, an increase in ratio of (TDTA) in companies, increases the value of listed industrial goods companies in Nigeria when there is a commiserate increase in their financial risk. Hence, according to McConnell and Serves (1995), the influence of debt financing on value of firm rest on the presence of growth opportunities the results illustrates that the listed industrial goods companies in Nigeria are facing low growth opportunities, because their debt ratios (TDTA) are positively related to their market value.

In this vain, debt enhance the capacity of firm performance and it implies that increase in the percentage of (TDTA) increases the value of the firm. This has been acknowledged by pecking order theory (Myers, 1984). It

stressed that sources of internal finance promotes investment opportunities that uplift the firm performance. Therefore, the study provides an evidence of debt financing to improve firm value in Nigerians industrial goods companies.

5. Conclusions

This study examine the effects of debt financing (TDTA) on value (TOBIN'S Q) of listed manufacturing firms in Nigeria from 2006 – 2016. The explanatory variable is measured on firm value by using (TOABIN'S Q); one of the market-based measures value of firm (TOBIN'S Q), variables was used to restrain the linkage among debt financing and value of firm. Itconfirms that the trade-off theory is valid in the sense that the debt financing to be adopted by an organization will be a balance between tax shields associated with the level of debt used and related to the financial risks. It was resolved that; debt financing and financial risks are drivers of increasing value of the firm among listed industrial goods companies. It is recommended among others that; the management of listed Industrial goods companies should continuously increase their debt ratio as increase in total debt to asset assets increases the financial risk of the firm and increase in the level of financial risk increase the return on investment thereby enhancing the value of the firm.

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