

An Examination of Organizational Age Effect on Debt to Equity Ratio of Firms at the Nigeria Stock Exchange Market

Ugwu, Kevin Okoh, Ph.D, Obasuyi, George D.

Department of Accountancy, Faculty of Management Science, Enugu State University of Science and Technology (ESUT), Enugu State, Nigeria.

Mbah, Chris Chukwuemeka (Ph.D)

Department of Marketing, Faculty of Management Sciences, Enugu State University of Science and Technology
Email: kelvinugwu@ymail.com

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Abstract

The paper seeks to examine organizational age effect on debt to equity ratio in Nigeria. The main objective of the study was to examine organizational age effect on debt to equity ratio. The relevant literature was reviewed for the purposes of this study. This study adopts the ex-post facto design. The paper uses secondary data only extracted from the Annual Reports and Accounts of 16 sampled firms out of the insurance companies in Nigeria. The target population of this study is the thirty-two (32) quoted insurance firms on the Nigerian Stock Exchange (NSE) and random sampling technique was used. Multiple regressions were used to analyse data and the hypotheses was tested at 5% significant level using Statistical Package for Social Sciences (SPSS). It was found that Organizational age does not have significant effect on Debt to Equity Ratio (p value = 0.737). The study recommended that managers should consider the organizational age effect on debt to equity ratio.

Keyword: Organizational Age, Equity Ratio, Pecking-Order

Introduction

One of the most repeatedly discussed subjects in financial management is that of organizations' capital structure. Akinyomi and Olagunju (2013), revealed that a company's capital structure refers to how a company finances its operations whether through shareholders equity fund or debt or a combination of both. Capital structure is made up of equity (shareholders' fund) and debt (liabilities) and there are external and internal factors that affect the capital structure of firms. The external factors, which are outside the control of the firms, can be classified into political/legal, social, economic and technological, while

the internal factors are within the control of the firms and include the determinants of capital structure i.e. size, growth, profitability, tangibility and age.

Age is the age of the firm arrived at by finding the difference between the date of this study and the firm's incorporation date. In Nigeria, companies do not seem to have lived up to expectation of achieving optimum capital structure. If this is not achieved, it is at the peril of both the providers of capital and the firm itself. Hence, many developing countries have experienced financial problems requiring major reforms to address weak supervision of insurance firms and inadequate capital. In addition to deposit insurance (implicit or explicit), official capital structure regulations play a crucial role in aligning the incentives of owners of firms with clients. However, it is not altogether clear whether the imposition of capital requirements actually reduces risk-taking incentives. Higher capital requirements may induce clients to shift to capital markets and in the process impair capital allocation, while Gorton and Winton (1995) show that raising capital requirements can increase the cost of capital. Thus, theory provides conflicting predictions on whether capital requirements curtail or promote firms' performance.

This study attempts to determine organizational age effect on debt to equity ratio in Nigeria. The study aims at determining whether the independent or explanatory variable (organizational age), statistically and significantly influence the explained or dependent variable (Debt to Equity Ratio) and to identify organizational age effect on debt to equity ratio in Nigeria.

Purpose of the Study

To examine the effect of organizational age on debt to equity ratio

Review of Related Literature

Equity

Equity enables the firm to obtain funds without incurring debt. This means that the fund obtained through equity do not have to be repaid at a particular time. The investors purchase shares in the firm hope to reclaim their investment out of future profits. The shareholders have the privilege to share in the profits of the firm in the form of dividends or future capital gains. However, if the firm suffers a loss, the shareholders have limited liability, which means that the only loss they face is the amount that they had invested in the firm.

There are two kinds of equity: internal equity and external equity (Myers, 1984). Internal equity refers to the retained earnings of a firm which forms part of the firm's distributable reserves. When distributable profit is determined in the income statement, the firm has to decide what proportion of that profit will be paid out as dividends to the ordinary shareholders. The remaining amount represents the retained earnings and this amount will be carried over to the firm's distributable reserves in the balance sheet.

The retained earnings therefore represent the amount that is reinvested back into the firm. External equity refers to outside capital which is obtained through the issuing of new shares. It generally consists of ordinary share capital and preference share capital. A firm has to raise external equity when its internal equity (retained earnings) is not sufficient for the required investment opportunity. When a firm raises too much capital through equity issues, it could be interpreted as a signal to the market that it does not have sufficient reserves or cash flows, and this could result in the undervaluation of the firm's shares. When investments are financed with external equity, the share prices of firms sometimes fall. Therefore, it is better

to build up reserves so that a higher proportion of capital needs can be supplied from internal sources (Modugu, 2013).

Organizational Age

Shehu (2011) opines that age of the firm is a standard measure of reputation in capital structure models. As a firm continues longer in business, it establishes itself as an ongoing business concern and therefore increases its capacity to take on more debt; hence age is expected to be positively related to debt. Before granting a loan, banks tend to evaluate the creditworthiness of entrepreneurs as these are generally believed to pin high hopes on very risky projects promising high profitability rates. In particular, when it comes to highly indebted companies, they are essentially gambling with their creditors' money. If the investment is profitable, shareholders will collect a significant share of the earnings, but if the project fails, then the creditors have to bear the consequences (Myers, 1977). To overcome problems associated with the evaluation of creditworthiness, Diamond (1984) suggests the use of firm reputation. He takes reputation to mean the good name a firm has built up over the years; the name is recognized by the market,

The Pecking-Order Theory

Myers (1984) and Myers and Majluf (1984) suggest that capital structure choice is driven by the magnitude of information asymmetry present between the firm and outside investors. The more severe the information asymmetry, the more risk the outside investors are facing and hence the more discount they demand on the price of issued securities. Consequently, firms will prefer financing through internal funds and if they do need to raise outside capital, they will firstly issue risk-free debt then followed by low-risk debt. Equity is only issued as a last resort. As stated in Myers (1984), the static trade-off theory assumes that firms set an optimal debt ratio and they move gradually towards it. The theory proposes that the optimal debt ratio is set by balancing the trade-off between the benefit and cost of debt. The benefit of debt arises from the tax deductibility of interest payments on debt and the cost of debt comes in the form of higher probability of bankruptcy and the loss suffered in the event of bankruptcy.

The pecking order theory is based on the assertion that firms use debt only when retained earnings are insufficient and raise external equity capital only as a last resort. More recent models of capital structure choice include 'windows of opportunity' and 'managerial optimism' (Heaton, 2002). Baker and Wurgler (2002) suggest that managers could minimize the cost of capital by timing the market (issuing equity when share prices increase) implying that market conditions influence the pecking order. However, Hovakimian (2006) shows that the timing of equity issuance does not have any significant long-lasting impact on capital structure. In a quest for the factors that managers consider in deciding the financing mix of a firm, many studies have examined the role of several firm-specific factors. In a review article, Harris and Raviv (1991) report that leverage is positively related to non-debt tax shields, firm size, asset tangibility, and investment opportunities, while it is inversely related to bankruptcy risk, research and development expenditure, advertising expenditure, and firm's uniqueness.

Previous Studies on Effect of Age on Debt to Equity Ratio

Chandrasekharan (2012) investigated the potential determinants of capital structure among listed Nigerian firms for a period of five years from 2007 to 2011 using panel multiple regression and discovered that Age is a strong determinant of leverage in the Nigerian firms.

Vitor and Badu (2012) studied Capital Structure and Performance of Listed Banks in Ghana from 2000 to 2010 using Panel Regression and found that Age of the firm is negatively insignificant to Leverage.

Chechet, Garba and Odudu (2013) examined the determinants of Capital Structure in the Nigerian Chemical and Paints Sector from 2005 to 2009 using OLS regression method of data analysis and discovered that Age has insignificant impact on Leverage.

Akorsu (2014) tested the pecking order and signaling theories for 26 financial Institutions in Ghana from 2005 to 2012 employing the panel data methodology in the model estimation. The results showed that age is positively correlated with Leverage.

Bassey, Arene and Okpukpara (2014) studied the determinants of Capital Structure of twenty eight (28) agro-allied firms, which have been listed on the Nigeria Stock Exchange (NSE) from 2005 to 2010 using Ordinary Least Squares (OLS). The results showed that Firm age is positively related to long term debt ratio.

Shala, Ahmeti, Berisha and Perjuci (2014) investigated the factors that determine the capital structure among insurance companies in Kosovo, based on data retrieved from 11 insurance companies during the period 2009-2012 using the Random Effect (RE) model. The result showed that Age has positive relationship with the debt ratio and also has significant effect on it.

Mutairi and Naser (2015) studied the Determinants of Capital Structure of Banking Sector in 47 Gulf Cooperation Council (GCC) Commercial Banks from 2001 to 2010 employing Panel Data Analysis. It was found that there is negative relationship between Age and Leverage.

Oke and Obalade (2015) investigated the determinants of capital structure in Nigerian oil industry for the period 2005 to 2012 employing Pooled OLS, Fixed and Random Effect Model for analytical purpose. It was found that Age is significant in determining the capital structure of Nigerian oil firms.

Guruswamy and Marew (2016) examined the determinants of capital structure of selected insurance companies in Ethiopia using multiple regression analysis. It was discovered that Age is one of the most important determinant factors of capital structure.

Methodology

This study adopts the *ex-post facto* i.e. after the fact or event. The paper uses secondary data only extracted from the Annual Reports and Accounts of 16 sampled firms out of the insurance companies in Nigeria representing 50% of the population. Random sampling technique is employed to select the firms so as to ensure that all the firms have equal chance of representation and also depending on availability of data. Multiple regression is used as a tool of analysis for the study covering a period of 11 years (2006-2016) using Statistical Package for Social Science (SPSS).

Area of Study

The focus of this study is on organizational age effect on debt to equity ratio in Nigeria

Sources of Data

Secondary data are extracted from the annual reports and accounts of the sixteen (16) sampled firms based on availability of data.

Population of the study

The population of this study is the thirty-two (32) quoted insurance firms on the Nigerian Stock Exchange (NSE) as at 31st December, 2016. (Otaru, 2017).

Sample Size

Random sampling is used to select the insurance firms from the population of thirty-two (32) by arranging the population in groups of twos and one firm selected from each group, thereby giving a fair chance of representation of the population and based on data availability.

Method of Data Collection

The data collected from the annual reports of the sampled insurance firms are presented in tabular forms namely summary of descriptive statistics, summary of coefficient of correlation, summary of regression results, model summary and Analysis of Variance (ANOVA). Multiple regression is used to analyse data and test the hypotheses at 5% significant level i.e. 0.05 using Statistical Package for Social Scientists (SPSS).

Data Analysis and Presentation of Results

Table 2

Summary of Regression result

Variable Coefficient Standard Error t. test Probability

	B	Std Error	t	Sig	Tolerance
VIF					
CONSTANT	-11.861	6.658	-1.781	0.079	
SIZE	1.531	0.698	2.193	0.031	0.940
GROWTH	-0.102	0.131	-0.780	0.438	0.967
PROF	-9.746	3.444	-2.830	0.006	0.921
TANG	0.090	1.696	0.053	0.958	0.881
AGE	-0.008	0.024	-0.337	0.737	0.946

Table 3

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.399 ^a	.159	.106	2.94952	2.301

Source: SPSS computation

Table 4

ANOVA^a

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	129.943	5	25.999	2.987	0.016
Residual	687.272	79	8.700		
Total	817.215	84			

Source: SPSS computation

R-square 0.159

Adjusted R-square 0.106

Durbin-Watson 2.301

F-statistic 2.987

Prob (F-statistic) 0.016

From the summary of the estimated regression model in table 3,

$D/ER = -11.861 + 1.531 \text{ SIZE} - 0.102 \text{ GROWTH} - 9.746 \text{ PROF} + 0.090 - 0.008 \text{ AGE}$

From table 2, the age variable has p value of 0.737

DECISION RULE: At 5% significant level, if the p value of the age variable is less than 0.05 (i.e. $p < 0.05$), it is significant and we reject the null hypothesis, while if it is greater than 0.05 (i.e. $p > 0.05$), it is insignificant and we fail to reject the null hypothesis.

Therefore the age variable with p value of 0.737 is insignificant at the 0.05 level, thus we fail to reject the null hypothesis and conclude that age does not have significant effect on Debt to Equity Ratio.

Discussion of Findings

The age of the firm was found to be negatively correlated with leverage which disagrees with the findings of Diamond (1984) who takes reputation to mean the good name a firm has built up over the years; the name is recognized by the market, which has observed the firm's ability to meet its obligations in a timely manner, but in agreement with the findings of Shehu (2011). It is in agreement with the pecking Order Theory but in disagreement with the Trade-Off theory.

Summary of Findings

Organizational age does not have significant effect on Debt to Equity Ratio.

Recommendation

1. The impact of age on capital structure is imperative in debt financing decisions. Age has an insignificant negative effect on Debt to Equity Ratio. Therefore as firms continue longer in business, debt does not increase thereby minimising the possibility of liquidation and bankruptcy costs. So older firms should be encouraged to continue in business and minimise debt.

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