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Department of Accountancy
Nnamdi Azikiwe University,
Awka

EFFECT OF FIRM CHARACTERISTICS ON CAPITAL STRUCTURE OF DEPOSIT MONEY BANKS LISTED ON NIGERIAN STOCK EXCHANGE

Egolum, Priscilla U. PhD[1]*, Okika, Christian E.M. PhD[2], Agbata, Amaka E.[3]

[1] Department of Accountancy; Nnamdi Azikiwe University; Awka; Anambra State; Nigeria.
[2] Department of Accountancy; Nnamdi Azikiwe University; Awka; Anambra State; Nigeria.
[3] Department of Accountancy; Nnamdi Azikiwe University; Awka; Anambra State; Nigeria.

*Correspondence to: Egolum, Priscilla U. PhD, Nnamdi Azikiwe University, Department of Accountancy, Faculty of Management Sciences, P.M.B. 5025, Awka, Anambra State, Nigeria.
E-mail: egolumpsuc@yahoo.com Tel.: +2348039341212

ABSTRACT

The main aim of this study is to find out the effect of firm characteristics on capital structure of Deposit Money Banks listed on Nigerian Stock Exchange (NSE) as at December, 2017. Specifically, it investigated the extent to which firm size and asset tangibility affects debt-to-capital ratio and debt-to-asset ratio of Deposit Money Banks. In pursuit of the objective of this study, hypotheses were formulated and tested using secondary data obtained from the firms' annual report and fact book. The ex-post facto design was adopted in carrying out this research. Data were analyzed using Pearson correlation analysis and multiple regression analysis with aid of E-view 9.0 which was to ascertain the direction and strength of the relationship between the variables of the study. The findings of this study confirm that the hypotheses tested were significant at 5% level of significance. Therefore, the researcher recommends that management of Deposit Money Banks need to embrace innovation as a way of increasing the efficiency of the assets and they should strive to attain a sound asset base in order to meet, on a timely basis, their responsibilities towards the customers and by extension, improve on their capital base; especially in the long term.

Keywords: Firm Size, Asset Tangibility, Debt-to-Capital Ratio, Debt-to-Asset Ratio.

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1. Introduction

Nigeria is one of the developing countries with great possibilities and it has an emerging market with a lot of potential possibilities of investment that attracts attention for investors of the world and now it's time for mangers to analyze about the influencing factors of using debt and their extent of influence over firms (Sheikh & Wang, 2011). Firm characteristics are traits or features specific to the firm, which can affect positively or negatively the performance of the firm. Firm characteristics include factors such as the age of the firm, the size of the firm, asset structure, profitability, risk and growth, the availability of collateral and business information (Ong & The, 2011). Firm characteristics are factors that affect a firm directly. These are internally generated within a firm. They include financial and non-financial factors. Financial factors includes: efficiency, liquidity, leverage, firm size and investment among others. Non-financial factors include; Shareholding, labour, age of the firm and board of director characteristics etc. (Hu, 2011).

The discussion on how firms raise capital have generated a lot of academic debate amongst scholars in the recent past, with scholar's examining plausible reasons why listed firms raise capital through primary listing, secondary listing or issuing debt using different combinations of instruments such as ordinary equity, debt and hybrid securities which includes; preference shares, convertible and warrant debt. Capital structure depends on two factors; one is leverage and the other assets (Nur, 2002). All firms have to analyze capital structure properly so as to obtain optimal capital structure for a firm for implementing financing decision otherwise firm will face different financial problems, such as bankruptcy and financial distress etc. So for the firm which has high leverage, it is necessary to make an efficient capital mixture to minimize cost and maximize net profit that maximizes value of firm. Moreover every firm exhibits different specific factors that are related to capital structure that are needed to be considered at the time of choosing optimal capital structure.

Many firms are not able to identify the best capital structure for maximizing their profits due to lack of proper forecasting regarding the factors related to capital structure (Sheikh & Wang, 2011).

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Although there have been number of researches emphasizing on the primary determinants of capital structure; however, there is still disagreement regarding the factors that have significant effect in determining the optimal capital structure. And factors affecting optimal capital structure of a firm in developed countries may not be equally applicable to a firm in developing countries like Nigeria. Also, there are factors yet to be considered for further analysis in measuring their effect on capital structure in Nigeria and is required to bridge the gap between present studies and capital structure theory. This study investigates capital structure of Deposit Money Banks in Nigeria to identify the relationship between firm size and asset tangibility as independent factors and Debt-to-Capital, Debt-to-Asset, for capital structure. Existing studies have generated mixed results ranging from those supporting a positive relationship to those opposing it. A positive relationship between firm characteristics and performance was found by Amahalu, Okoye, Nweze, and Okika (2017), Vijayakumar and Tamizhselvan (2010). In their study, they used different measures of size (sales and total assets) and performance (profit margin and profit on total assets). Majumdar (1997) and Kaguri (2013) found a negative relationship between firm characteristics and capital structure.

Existing evidence in the developed markets asserts the existence of some influence of firm characteristics on the capital structure. Further critical review shows that, studies of a similar nature are lacking in the West African economies, particularly, Nigeria. More specifically, none of the studies reviewed above examined the effect of size and asset tangibility on capital structure (debt-to-capital and debt-to-asset) as at 2017. This is the research gap, the study sought to fill (surrogate gap and period gap). The choice of the two independent variables is guided by the fact that, firm size and asset tangibility are important drivers of future performance of a firm. They serve as guiding principles when making investment decisions, financing decision as well as determining the dividend policy of a firm. The study formulates the following hypotheses in the null form as follows:

Ho_1: Firm Size and Asset Tangibility has no significant effect on Debt-to-Capital ratio of Deposit Money Banks listed on Nigeria Stock Exchange.

Ho_2: Firm Size and Asset Tangibility has no significant effect on Debt-to-Asset ratio of Deposit Money Banks listed on Nigeria Stock Exchange.

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2. Review of Related Literature

2.1 Conceptual Framework

2.1.1 Firm Characteristics

Firm characteristics are traits or features specific to the firm, which can affect positively or negatively the performance of the firm. Firm characteristics include factors such as the age of the firm, the size of the firm, asset structure, profitability, risk and growth, the availability of collateral and business information (Campello, Graham, & Harvey, 2010). Firm characteristics are internally generated and directly affect the firm. They include financial and non- financial factors. Financial factors includes: efficiency, liquidity, leverage, firm size and investment among others. Non-financial factors include; Shareholding, labour, age of the firm and board of director characteristics etc. (Hu, 2011).

Three divergent views exist globally in respect to firm characteristics (Wallace, Naser, & Mora, 1994; Chen & Jaggi, 2007). Firstly, the view that structure characteristics of firm play a prominent role in preventing managers from manipulating accounting numbers than other measures such as monitoring or performance variables. Secondly, the view that monitoring mechanisms (independent directors and institutional shareholders) control better managerial opportunistic behaviour in preparing financial statements. Thirdly, are those that opine that performance variables surpass both structure and monitoring elements in checkmating the accounting activities by managers that reduce financial reporting quality.

From the theoretical point of view, the effect of size on capital structure is ambiguous. As Rajan and Zingales (1995) and Honhyan (2009) found that larger firms tend to be more diversified and fail less often, so size (computed as the logarithm of total asset) may be an inverse proxy for the probability of bankruptcy. If so, size should have a positive impact on the supply debt. However, size may also be a proxy for the information outside investors have, which should increase their preference for equity relative to debt. Burhart and Ellingsen (2004) stated that the size of a firm has an important influence on the debt ratios as firms with more real assets tends to have greater access to long-term debt. Cassar (2004) argued that it may be relatively more costly for smaller firms to resolve information asymmetries with debt providers. Consequently, smaller firms may be offered less debt capital. In addition, transaction costs are typically a function of scale and may be higher for smaller firms. Therefore, it is hypothesized that, there is a positive relationship between size of the bank

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and capital structure. Asset tangibility should be an important determinant of the capital structure of a firm. (Titman & Wessels 1988 in Klein, O´Brien, & Peters, 2002) argued that, the degree to which a firm's assets are tangible and generic should result in the firm having a greater liquidation value because it reduces the magnitude of financial loss incurred by financiers should the company default. Pledging the firms' assets as collateral also reduces adverse selection and moral hazard costs. Storey (1994); Berger and Udell (1998) suggested that bank financing will depend on whether lending can be secured by tangible assets. Empirical evidence suggests a positive relationship consistent with theoretical arguments between asset structure and leverage for large firms. The limited smaller firm research, while not conclusive, shows signs of a positive relationship between asset structure and leverage, long-term debt, and possibly a negative relationship with short-term debt (Michaelas, Chittenden, & Poutziouris, 1999; Majed, Alsharayri, & Dandan, 2010).

2.1.2 Firm Characteristics and Debt-to-Capital

Capital structure refers to the firm's financial framework which consists of the debt and equity used to finance the firm. Policy of capital structure is maintaining balance between risk and return (Abdo & Miri, 2003). Debt in financial structure of a firm can increase earning because of its tax saving and consequently increases stock return, on the other hand, due to interest costs and risk of non-payment of debt financial risk can increase and thus can reduce stock return. Pavelkova and Knápková (2009) posits that when a firm becomes larger, it enjoys economics of scale and its average cost of production is lower and operational activities are more efficient. Yegon, Mouni, and Wanjau, (2014) opined that large firms face less difficulty in getting access to credit facilities from financial institutions for investment, have broader pools of qualified human capital, and may achieve greater strategic diversification. Akbas and Karaduman (2012) while citing Hardwick (1997) stated that larger firms have some advantages such as greater possibility of taking advantage of scale of economies which can enable more efficient production, a greater bargaining power over both suppliers and distributors or clients, exploiting experience curve effects and setting prices above the competitive level. Akbas and Karaduman (2012) argues that larger firms are more stable and mature and can generate greater sales because of the greater production capacity and finally, they have the chance of capital cost savings from economies of scale.

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2.1.3 Firm Characteristics and Debt-to-Assets

Companies with high level of tangible assets are less likely to default and will be able to secure more debts which may result in a positive relationship between tangibility and capital structure. Most of the empirical studies conducted in developed countries found a positive relationship between tangibility and capital structure, for instance, Titman and Wessels (1988) as cited in Banner (2004), Rajan and Zingales (1995) among others while empirical studies in developing countries found mixed relationship between tangibility and capital structure; for instance, Wiwattanakantang (1999) in Thailand reported a positive relationship between tangibility and capital structure while other studies showed that tangibility is negatively related to capital structure, for instance, Booth, Aivazian, Demirguc-Kunt, and Maksimovic (2001) and Huang and Song (2002) in China. Antoniou, Guney, Paudyal (2002) argued that size is a good explanatory variable for a firm's capital structure. Bevan and Danbolt (2002) asserted that large firms tend to hold more debt because they are regarded as "too big to fail" and therefore gain better access to capital market. Wiwattanakantang (1999), Booth et al. (2001), Pandey (2001), and Huang and Song (2002) reported a significant positive relationship between capital structure and size in developing countries. Rajan and Zingales (1995) also found a positive relationship between size and capital structure in G-7 counties. On the other hand, Bevan and Danbolt (2002) found that size is negatively related to short – term debt and positively related to long – term debt.

3. Design and Methodology

The study adopts the ex post facto research design. This design is chosen because the researchers collected secondary data and no attempt is made to control or manipulate the relevant independent variables. The population of the study consists of consist of the sixteen (14) Deposit Money Banks listed on the Nigerian Stock Exchange and published in the NSE website as at 31st December 2017. The researchers made used of purposive sampling technique in selection of sample size for the study; which comprises of ten (10) Deposit Money Banks listed on the Nigerian stock Exchange. The data were analyzed using Pearson correlation analysis and multiple regression analysis to ascertain the direction and strength of the relationship between the variables of the study. The basis for the acceptance or rejection of the hypothesis is the f-ratio.

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Decision Rule:
The decision rule is to accepted the null hypothesis if the probability value (p-value) is greater than the level of significance (5%=0.05), while the alternate hypothesis is rejected and when the probability value is less than the level of significance, the null hypothesis is rejected while the alternate hypothesis is accepted.

4. Data Presentation and Results

The study used data obtained from the annual report and accounts of Deposit Money Banks listed on the Nigerian Stock Exchange from 2008 to 2017.

4.1 Test of Hypotheses

4.1.1 Hypothesis One

Ho_1: Firm Size and Asset Tangibility have no significant effect on Debt-to-Capital ratio of Deposit Money Banks listed on Nigerian Stock Exchange.

Table 1: Panel Least Squares output for hypothesis one

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	18.38517	5.816347	3.160949	0.0019
FSZ	-1.013317	0.520530	-2.946702	0.0035
AT	-0.028047	0.048675	-2.576215	0.0254
R-squared	0.688219	Mean dependent var		7.100577
Adjusted R-squared	0.525780	S.D. dependent var		7.456093
S.E. of regression	7.409252	Akaike info criterion		6.863133
Sum squared resid	8069.860	Schwarz criterion		6.923346
Log likelihood	-511.7350	Hannan-Quinn criter.		6.887596
F-statistic	9.944967	Durbin-Watson stat		1.010528
Prob(F-statistic)	0.000164			

Source: Researchers' Computation 2019 using E-view 9

In table 1, a multiple regression analysis was conducted to test the influence of the predictor variables. The Adjusted R Square is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variables. From the findings, the value of adjusted R squared was 0.526, an indication that there was variation of 52.6% on the capital structure measure (DCR) due to changes in FSZ and AT. This shows that only 52.6% changes in debt-to capital ratio of deposit money banks could be accounted for by firm characteristic components. The probability of the slope coefficients indicate that; $P(x_1 = -1.013317 < 0.05; x_2 = -0.028047 < 0.05)$. This implies that DCR is significantly negatively related to FSZ and AT. The Durbin-Watson Statistic of 1.010528 suggests that the model does contain serial correlation problem.

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Decision:

The F-statistic of the DCR regression is equal to 9.944967 and the associated F-statistics probability is equal to 0.000164. Since the result of the Prob (F-statistic) is less than the critical value of 5% significance level, leading to the conclusion that there is a significant negative relationship between firm characteristic components and DCR at 5% significant level, hence, H_1 is accepted. Thus, the null hypothesis is rejected and the alternate accepted. There is a linear relationship of DCR to the independent variables (FSZ and AT).

4.1.2 Hypothesis Two

Ho_2: Firm Size and Asset Tangibility have no significant effect on Debt-to-Asset ratio of Deposit Money Banks listed on Nigeria Stock Exchange.

Table 2: Panel Least Squares output for hypothesis two

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.524047	0.409236	3.724129	0.0003
FSZ	0.061675	0.036624	3.683995	0.0004
AT	0.000401	0.003425	3.116948	0.0017
R-squared	0.619715	Mean dependent var		0.840569
Adjusted R-squared	0.406377	S.D. dependent var		0.522982
S.E. of regression	0.521312	Akaike info criterion		1.554861
Sum squared resid	39.94962	Schwarz criterion		1.615074
Log likelihood	-113.6146	Hannan-Quinn criter.		1.579324
F-statistic	11.78169	Durbin-Watson stat		1.667310
Prob(F-statistic)	0.000002			

Source: Researchers' Computation 2019 using E-view 9

Table 2 above showed the results of regression model of DAR. The coefficients of FSZ has a t – statistic equal to 3.683995 and a p – value equal to 0.0004; AT has a t – statistic equal to 3.116948 and a p – value equal to 0.0017. This implies that FSZ and AT positively and significantly relate with DAR. The R-squared statistic measures the success of the regression in predicting the values of the dependent variable. The adjusted R–squared of the DAR model is equal to 0.406, which indicates that 40.6% of the variation in DAR is explained by the regression variables. Hence, the explanatory variables included in this regression are good predictors of DAR. The Durbin-Watson value of 1.667310 is an indication of the absence of auto-correlation problem in the model of this study. The value for the F-statistic is 11.78169 with a significant p-value of 0.000002 endorses the validity and stability of the model relevant for this study.

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Decision:
Based on Prob(F-statistic) value of 0.000002, which is less than the critical significance value of 5%, this invariably means that there is a significant positive relationship between firm characteristic components and DAR of Deposit Money Banks in Nigeria.

5. Conclusion and Recommendation

This study assessed the relationship between firm characteristics and capital structure. This study obtained data from annual reports and account of Deposit Money Banks listed on the Nigerian Stock Exchange for the period 2008 to 2017. In addition, the effects of specific firm variables, such as firm size and tangibility of assets, on debt-to-capital ratio, debt-to-asset ratio and debt-to-common equity ratio were assessed. To determine the relationship that exists amongst the variables and the effect thereof, Pearson correlation coefficient and multivariate regression were employed. The study revealed that firm characteristics have a statistically significant influence on debt-to-capital ratio and debt-to-asset ratio at 5%. Based on the findings, the following recommendations were made;

1. In order to reverse the negative effect of firm characteristics on debt-to-capital ratio, deposit money banks should strive to attain a sound asset base in order to meet, on a timely basis, their responsibilities towards the customers and by extension, improve on their capital base; especially in the long term.
2. The management of deposit money banks should embrace innovation as a way of increasing the efficiency of the assets. Increased efficiency of assets is critical to maximizing the profitability of the firms, which consequently reduces the negative impact arising from the cost of debt (financing costs).

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