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Article

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Accounting and taxation review

Provided in Cooperation with:

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Reference: Sanyaolu, Wasiu Abiodun/Job-Olatunji, K. A. et. al. (2018). Determinants of capital structure in Nigeria. In: Accounting and taxation review 2 (3), S. 1 - 12.

This Version is available at:

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Leibniz-Informationszentrum Wirtschaft
Leibniz Information Centre for Economics

Mitglied der



ISSN: 2635-2966 (Print), ISSN: 2635-2958 (Online).

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Available online at <http://www.atreview.org>

Original Research Article

Determinants of Capital Structure in Nigeria

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Received: 27/04/2018

Accepted: 30/05/2018

Abstract

Decision regarding optimum capital structure in terms of mixture of debt and equity in financing firms operation is one of the most challenging decisions to be made by firms' financial managers. This study focused on determinants of capital structure in Nigeria with the aim of examining whether the identified determinants (profitability, liquidity, size, tangibility and growth) exert significant influence on capital structure in Nigerian listed Cement Manufacturing Companies, Oil and Gas Companies and Food and Beverages Companies. The study adopted ex post facto research design on the secondary data obtained from the annual reports and accounts of the sampled companies from 2007-2016. The data obtained from secondary source were analysed by using descriptive statistics, panel unit root test, multiple regression analysis and the Hausman specification test was conducted to choose appropriate model post estimation test was done to consider appropriateness of the chosen model. The results of the random effect model revealed that capital structure determinants identified in this study like profitability, liquidity, size, growth have no significant effect on capital structure, while only tangibility was found to exert significant effect on capital structure. All the variables apart from liquidity and sales growth have positive coefficient. The probability of the f- statistics which is less than 5% implies that all the determinants of capital structure identified have joint significant negative effect on gearing. The study therefore recommends that firms' should improve on their profitability, liquidity, size, asset growth and sales growth so as to attain optimum capital structure.

Keywords: Profitability, liquidity, growth tangibility, size and gearing.

JEL Classification Codes: M51 M58

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1.0 INTRODUCTION

Capital structure is one of the controversial issues in finance literature and attention of scholars in the field of accounting and finance such as Akinyomi and Olagunju (2013), Owolabi and Inyang (2012) is ever growing in this area of corporate finance due to its crucial role in the operation, efficiency, management, growth, development and firms' sustainability. Despite the myriad of empirical investigations by scholars such as Dada & Ghazali (2016), Igbinosa & Chijuka (2014), Owolabi and Inyang (2012), scholars are far from reaching consensus opinion as to the exact determinants of capital structure and how these determinants affect capital structure. The determinants of capital structure differs from countries due to the differences in social, environmental, political, economical, technological, ecological and cultural differences (Mazruh, 2007).

The operation of any business without capital is impossible. Every enterprise requires funds at different business stages both at the initial, growth, and development and sustainability stages of business (Panda, 2006). The capital structure of firms determines their dimension of competition as access to finance, its cost, risk involved and the decisions regarding the optimal capital structure choice are essential in maximizing the enterprise value and hence, in stimulating the growth of the existing shareholders' benefits by either improving the market value of shares or maintaining regular dividend payment (Serghiescu & Videan, 2014).

Different businesses finance their operations by utilizing different sources of finance that is considered suitable for the growth and sustainability of their business. The choice of a firm capital structure is significantly determined by the tradeoff between each source of finance and the risk appetite of the managers. A company with high risk appetite may tend towards more debt

financing while a company with low risk appetite may tend more towards equity financing. These risk appetites are influenced by the expected returns. The mixture of finance employed in financing business can therefore be determined by the risk and return associated with each source of finance. The relevance of capital structure of a firm towards the actualization of its goal and objective of wealth maximization is not a matter of concern to managers alone, it also affects shareholders returns and market value of shares because if wrong finance mix is employed, it will affect the market value and return to shareholders thereby exposing them to financial loss (Owolabi & Inyang, 2012); hence, the need for optimum capital structure comes to prominence.

Capital structure is the financial framework which depicts how equity and debts are utilized in financing firms operations that are central to the achievement of its goals given the level of risk, returns and the associated cost of capital (Dada & Ghazali, 2016). A business without adequate capital is at the detriment and there is thus a need for the determination of firm's capital in advance (Igbinosa & Chijuka, 2014). The capital structure of a firm determines the overall proportion of debt and equity that is employed in financing firms operation.

There are different determinants of capital structure identified in literature, some of the prominent ones among these determinants as identified by literature include: profitability, age, size, liquidity growth and a firm's tangibility. These different determinants influence firm's choice of capital mixture differently. Profitability according to Owolabi and Obida (2012) is the ability of a business to make returns higher than the cost of financing their core operations to ensure the continued survival of the company. This implies that profitability is the ability of a company to make a profit from its operating, investing and financing activities to maximize the

values and wealth of the shareholders. Logically, firms prefer internal financing to external financing unless a firm has financing deficit; it would rather use its own money than to risk diluting the claim on its assets with external financing. Thus a rational manager ought to first consider whether financing deficit exist- unless there is a room for growth opportunity which the internal source is deficient in shouldering.

With respect to age, size and asset tangibility, the manager may use these from the dimension of assessing his firm's eligibility to borrow if at all financing deficit exists, and also to be aware of his firm's bargaining power as regards the price of external debt. Obviously, if his firm is relatively old (with accumulated reputation) or big in terms of total assets in general and or in terms of tangibly disposable/collateralizable assets, he should be able to bargain low interest on loan. If the foregoing happened to be correct, then managers may have some yardsticks in managing their finances. (Ishaya, Sannomo & Abu, 2013).

Numerous studies such as those by Dada and Ghazali, (2016), Igbiosa and Chijuka (2014), Serghiescua and Videan (2014) and Owolabi and Inyang (2012) exist on capital structure and firms performance both in Nigeria and abroad. However, they have mostly focused on how capital structure influences performance with little attempts on factors influencing capital structure. Also, it has been observed that among the few existing studies on capital structure determinants, most of them concentrated on consumer goods and other sub- sectors in the manufacturing sectors with few done in the area of cement manufacturing companies sub sector and oil and gas sector. This study aims at filling these gaps by conducting a study on determinants of capital structure in the Nigeria cement manufacturing, oil and gas companies and food and beverages companies.

2.0 LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Capital Structure and Profitability

Corporate performance measured in terms of profitability has been identified as one of the key factors that drives and determines firms' capital structure. There exists controversy on existing theories on capital structure as to the effect of profitability on firms' capital structure. The tradeoff theory states that profitable firm will prefer debt financing to equity so as to take advantage of the tax shield and reduce risk of bankruptcy (Oo1, 1999). While on the other hand, the pecking order theory states that firms will prefer financing their operations by considering least effort. That is, they prefer internal financing to external financing, they finance their operations by utilizing retained earnings first, and issue debt when the retained earnings is depleted and consider equity financing as financing source of last option when it is no more reasonable to issue more debts. The consideration of equity financing as a financing source of last option is due to the fact the shareholders believes that when managers issue new shares, they think that the company is overvalued due to asymmetric information and the shareholders tend to place low value on the company's shares (Myers and Majluf, 1984). They went further by claiming the existence of negative relationship between financing profitability and debt as profitable companies prefer utilizing internal financing than debt which increases cost of capital.

In this regard, many scholars have conducted numerous empirical investigations as to the exact effect of profitability on capital structure. A study conducted by Simon-Oke and Afolabi (2011) which was achieved by using panel data regression model discovered that firms performance has significant positive relationship with equity financing and between performance and debt-equity ratio. Similarly, study by Semiu and Collins (2011) achieved through the use of

descriptive statistics and chi-square analysis discovered significant positive relationship between capital structure and firms market value.

From the reviews it is apparent that there is lack of consensus findings in literature as to the exact effect of profitability on capital structure. The study therefore hypothesised in a null form that Profitability has no significant effect on firms' financial leverage which is a mirror of capital structure.

Capital Structure and firms Liquidity

Liquidity is the ability of a firm to meet its daily financial obligations. The liquid resources of a firm are used in financing their daily business operations and thus it is central to the achievement of firms' corporate objectives. The liquidity need of a firm may also affect their choice of capital. Firms that use more of equity in financing its operations tend to enjoy high degree of liquidity because debt requires payment of principal and interest from the firms' liquidity which will affect adversely firms' liquidity position. In the case of equity, the retained earnings and proceed from ordinary shares can be used in financing firms operation for long period of time without the payment of principal, what the shareholders expect is the residual profit in terms of dividend. On the other hand, the ability of a firm to sustain optimum liquidity makes them to attract more debts when there is financial deficit when the growth and investment opportunities are higher than retained earnings. The lenders consider firms that are able to sustain optimum liquidity for a long period of time because it signals that they will be able to meet up with the payment of interest and principal when they are due.

As suggested by the pecking order theory firms will prefer to use internal funds first if they are available for their activities and will only resort to debt and issuing of new equities as last resorts respectively (Myers

& Majluf, 1984; Myers, 1984). On the contrary, high liquidity also indicates that the firm has the ability to pay its debt and hence no risk of default. This shows a positive relationship between liquidity and leverage. A study conducted by Adaramola and Olarewaju (2015) which was achieved by utilizing regression model found that liquidity management has significant negative effect on leverage of insurance companies in Nigeria.

The study therefore hypothesised in a null form that liquidity has no significant effect on leverage

Firms' size and Capital Structure

Firms' size may also influence firms' choice of capital structure. When a firm is big in terms of its assets, it stands the better chance of raising more debt, because the lenders can hold a claim on the assets of the company than a small firms with little asset. Information asymmetry in the larger firms is lower than in the smaller firms because they release more information to their stakeholders than the smaller firms (Rajan & Zingales, 1995). With the absence of information asymmetry, larger firms are able to attract long-term debt than smaller firms. Besides, with an economy of scale advantage on the part of large firms they have good bargains on credits thus getting long term debt. For these reasons it is argued that smaller firms are more likely to depend on equity while large firm use more debt (Sogorb-Mira, 2005). Empirically studies have confirmed this positive relationship between size and long-term debt (Huang & Song 2006; Abor, 2005; Sheikh and Wang, 2011). In contrary, however, using 469 firms in the United State of America Titman and Wessels (1988) found that size and short-term debt ratio have negative relationship. However, existing empirical studies between firm size and leverage are inconclusive as they have produced mixed and conflicting findings.

Study by Mubeen, Nazam, Batool and Riaz (2016) achieved by utilizing regression analysis on data obtained from secondary source between 2008 to 2012 concluded that size has significant positive effect on leverage of sugar listed companies in Pakistan. This is against earlier findings by Khan (2010) who found that size is one of the weakest determinants of leverage in India.

The study therefore hypothesised in a null form that firm size has no significant effect on Capital structure.

Tangibility and Capital Structure

Tangibility refers to the durable noncurrent asset of a company. The tangible assets can serve as collateral and thus can be used by firm in obtaining long term debt. This implies that firms with tangible asset can utilize more of debt in their capital structure because the tangible asset will serve as collateral for the security of the loan. This has made it very easy for tangible firms to access long-term debt as against firms with low tangible assets.

Tangible assets are associated with low asymmetric information and their value is greater than that of intangible assets during bankruptcy arising from less susceptibility of tangible assets to information asymmetry, they can support higher debt level than intangible assets (Myers, 1977). Companies with higher tangible asset tend to have higher liquidation value (Haris and Reviv, 1991). The tradeoff theory states that companies with higher tangible assets stand the chance of issuing more debts because the tangible assets can serve as collateral for the debts issued in the case of financial distress and also helps in reducing the agency cost associated with debt financing (Stulz and Johnson, 1985). On the other hand the pecking order theory states that firms with more tangible assets will issue more equity than debt because tangibility reduces asymmetric information which

makes shareholders to place much value on equity.

Generally, the tradeoff theory predicts positive relationship between tangibility and leverage. However, existing empirical studies between tangibility and leverage are inconclusive as they have produced mixed and conflicting findings.

Study by Nasimi (2016) discovered from the result of regression that tangibility has significant effect on leverage.

The Study therefore hypothesised in a null form that tangibility has no significant effect on capital structure

Growth and Capital structure

Tradeoff theory suggests that more investment opportunities is associated with low leverage because of stronger incentives to avoid under-investment and asset substitution that can arise from stockholder-bondholder agency conflicts (Drobtz and Fix, 2003). Negative relationship is therefore expected between growth and financial leverage. On the other hand, the pecking order theory predicts a positive relationship between growth opportunity and financial leverage. According to the pecking order, debt increases when investment is higher than retained earnings that is when the retained earnings is deficient in financing all investment opportunities, and falls when retained earnings is higher than investment opportunities (surplus of retained earnings for financing investment) debt is contacted to fill the gap between the investment opportunities and retained earnings.

Empirical study by Nasimi (2016) discovered that growth has significant effect on capital structure in USA.

Arising from this, the study therefore hypothesised in a null form that growth has no significant effect on leverage which is a mirror of capital structure

3.0 METHODOLOGY

This study employed ex-post facto research design. The population of study consists of all one hundred and eighty-six (186) (Equities - *Main Board*) Companies listed on floor of Nigeria Stock Exchange as at December 31, 2016 Equities are listed under 12 industry sectors including (i) Agriculture; (ii) Conglomerates; (iii) Construction/Real Estate; (iv) Consumer Goods; (v) Financial Services; (vi) Healthcare; (vii) ICT; (viii) Industrial Goods; (ix) Natural Resources; (x) Oil and Gas; (xi) Services; and (xii) Utilities. (NSE Q4 2016 Fact Sheet). Of all these industry sectors, only companies under “Consumer Goods” sub-sector cement manufacturing sub sector and oil and gas companies were considered in this study while others were excluded. Out of all the companies in each sector total of 10 were chosen. Purposeful sampling technique was adopted. Four companies were chosen from the cement manufacturing sub sectors, three from the oil and gas companies and three from consumer goods based on their size. The rationale for this is because of the fact that cements manufacturing and oil and gas sub-sectors have not been adequately considered by other existing studies. Data were collected from annual reports and accounts of the sampled companies for the period of ten years (10) years from 2007 – 2016.

Model Specification

$$\text{Gear}_{it} = \beta_0 + \beta_1 \text{Pro}_{it} + \beta_2 \text{LiqBS}_{it} + \beta_3 \text{Size}_{it} + \beta_4 \text{Tan}_{it} + \beta_5 \text{Grow}_{it} + e_{it}$$

Where:

Gear_{it} = Gearing of firm i in period t

Pro_{it} = profitability of firm in period t

Liq_{it} = liquidity of firm i in period t

Size_{it} = size of firm i in period t

Tan_{it} = tangibility of firm i in period t

Grow_{it} = Growth which is measured by percentage change in sales and total assets

4.0 DESCRIPTIVE STATISTICS

The study starts the analysis by describing ranges of descriptive statistics. The table below represents the description of both the dependent and independent variables. The average asset growth ratio from the table equal 1.478736, the current ratio proxy for liquidity equals 1.601333, earnings per share a mirror of profitability equals to 128.0390, the log of size amount to 18.07665, the sales growth accounts for 2.402309, the tangibility equals to 9.163638 and gearing is equal to 0.168589. The maximum gearing ratio is 0.996483 and the minimum ratio is 0.000000 whereas the standard deviation of the gearing is 0.239645. Minimum value ranges from -0.999920 to 13.51637 while the maximum value ranges from 0.996483 to 934.0000. The high standard deviations for most of the variables indicate that the companies considered in this study are not of the same size but since all the companies are subject to the same regulatory requirements whether big or small; to certain extent we may need not to worry about the outcome of the standard deviations. The positive values for the skewness indicate that the variables are normally distributed.

Table 4.1 Descriptive Statistics

	Asset- G	CR	EPS	LSIZE	SALES-G	TANG	GEARING
Mmean	1.478736	1.601333	128.0390	18.07665	2.402309	9.163638	0.168589
Median	0.094050	1.016193	12.42500	18.19466	0.010000	0.735893	0.072696
Maximum	58.58817	9.407630	934.0000	20.68602	77.70149	249.2862	0.996483
Minimum	-0.98846	0.304269	-2.08000	13.51637	-0.99992	-0.51598	0.000000
Std. Dev	6.753475	1.657557	227.7238	1.346370	11.72135	35.87549	0.239645
Skewness	6.777827	3.419776	2.198329	-0.84758	5.268520	5.033451	1.697291
Kurtosis	54.24728	15.64957	7.005193	4.274497	30.20929	28.90360	4.914550
Jarque-Bera	11708.50	861.6298	147.3841	18.74138	3547.394	3218.078	63.28624

Probability	0.000000	0.000000	0.000000	0.000085	0.000000	0.000000	0.000000
Sum	147.8736	160.1333	12803.90	1807.665	240.2309	916.3638	16.85890
Sum Sq. Dev.	4515.333	272.0020	5133956.	179.4585	13601.61	127418.0	5.685540
Observations	100	100	100	100	100	100	100

Table 4.2 Panel Unit Root Test

Variables	ADF	PP	Order of Integration
	Level	Level	
EPS	0.000	0.053	I(0)
CR	0.0017	0.09	I(0)
TANG	0.000	0.013	I(0)
SALES_G	0.006	0.0001	I(0)
LSIZE	0.000	0.094	I(0)
Gearing	0.0049	0.004	I(0)

Source: Computed Result, 2018 Using Eviews 9

The result of the panel unit root test implies that all the variables are integrated at level at 5% and 10% level of significance, thus regression analysis is the appropriate analytical technique.

Table 2: Regression results for the Model

Method	FIXED EFFECT			
	Coef	Std.Er	t-stat	Prob
LAG3EPS	5.42	0.00	0.54	0.59
ASSET_G	0.01	0.01	1.65	0.1
CR	-0.01	0.01	-0.51	0.61
LSIZE	0.01	0.02	0.77	0.45
TANG	0.00	0.00	3.13	0.00
SALES_G	-0.00	0.00	-0.08	0.93
CONST	-0.13	0.31	-0.42	0.67

Source: From the researcher's computation (2018) using Eview 9

Adjusted R-Square	0.51
Fstat	2.919039
Prob	0.01

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f	Prob
Cross-section random	5.497	6	0.49

Hausman Test

Source: From the researcher's computation (2018) using Eview 9

Post Estimation Technique

Breusch-Pagan LM	Pesaran scaled LM	Pesaran CD
Stat 58.33	Stat 0.351	Stat = 1.9075
Prob< chi2 = 0.087	Pr=0.7258	Prob = 0.06

Source: From the researcher's computation (2018) using Eview 9

The result of the post estimation technique shows that there is no heteroscedasticity, no serial independence and no auto correlation since the p value of Breusch-Pagan LM, Pesaran scaled LM and Pesaran CD are all not significant at 5%. Since there is no error in the model, we therefore use random effect as estimation technique.

Effect of Profitability, Asset Growth rate Liquidity, Log of Size (Log of Total Asset) Tangibility and Sales Growth on Capital structure

The regression result showed that out of all the capital structure determinants, only tangibility exhibited significant effect on capital structure with a probability value of 0.01 which is significant at 5%, all other variables like profitability, liquidity, sales growth, firm size and asset growth exhibited no significant effect on gearing with probability of 0.59, 0.61, 0.93 and 0.45 and 0.1 respectively, adjusted R-square is 0.51 which indicates that the sample defines the dependent variables in this model up to 51%. The F of the variables which is 2.919039 and level of significance is 0.01 which is less than 0.05 (level of significance). Thus, it can be inferred from the value of the F-statistics that the independent variables have joint significant effect on gearing.

From the analysis we accept the null hypotheses that profitability has no significant positive effect on gearing, asset growth has no significant positive effect on gearing, liquidity has no significant negative effect on gearing, firm size has no significant positive effect on gearing and sales growth has no significant negative effect on gearing which is a proxy for capital structure. On the other hand, the null hypothesis as regards tangibility is rejected and we therefore conclude that tangibility has significant positive effect on gearing.

Profitability and Capital Structure

As regards profitability, the findings is in contrast with the theoretical disposition by Myers & Majluf (1984) who opined the existence of negative relationship between financing profitability and debt as profitable companies prefer utilizing internal financing than debt which increases cost of capital. The logical conclusion that can be made from the finding is that as profit increases, substantial part of it is retained which reduces the gaps between investment opportunities and retained earnings (retained earnings is sufficient in meeting up with investment opportunities).

Empirically, study by Akinyomi and Olaunju (2013) discovered that profitability has no significant effect on profitability

Liquidity and Capital Structure

As regards liquidity, the finding is in conformity with the pecking order theory which states that firms will prefer to use internal funds first if they are available for their activities and will only resort to debt and issuing of new equities as last resorts respectively (Myers & Majluf, 1984; Myers, 1984). This means that firms that have high liquidity will certainly have low debt ratio. One of the reasons for the negative relationship is that the firm is observed as not having long-term debt investment opportunities so as to be in need of debt (Mouamer, 2011). This findings is in contrast with earlier findings by A study by Tolat and Amer (2011) achieved by utilizing pooled data regression model found significant effect of liquidity management on leverage of Automobile, Engineering, and Cable and Electrical Goods Sectors in Pakistan by providing empirical support for the static tradeoff model and pecking order theory.

As regards size, with the absence of information asymmetry, larger firms are able to attract long-term debt than smaller firms. Besides, with an economy of scale advantage on the part of large firms they

have good bargains on credits thus getting long term debt. For these reasons it is argued that smaller firms are more likely to depend on equity while large firm use more debt (Barton et al, 1989; Sogorb-Mira, 2005). Studies by (Huang & Song 2006; Abor & Biekpe, 2007; Akhtar & Oliver, 2009; Sheikh and Wang, 2011; Pratheepan & Banda, 2016) are in conformity with our findings while it is in contrast with the findings by Titman and Wessels (1988) who found that size and short-term debt ratio have negative relationship.

Capital Structure and Firm Size

The finding of this study as regards firms' size and gearing a mirror of capital structure implies that firms' size has no significant effect on capital structure. The logical conclusion that can be made from the findings is that majority of the assets that make up the entire firms size comprise more of current assets which are considered so liquid, and when a company is liquid, it requires less debt because it has the financial resources needed in financing its operations and the need for raising external debt is considered not necessary. This finding is also evidenced in the liquidity ratio which is high for most of the firms. This confirms that the firms' size is high for most of the firms. This is against the conclusion by Barton et al, 1989; Sogorb-Mira, 2005) that with the absence of information asymmetry, larger firms are able to attract long-term debt than smaller firms. Besides, with an economy of scale advantage on the part of large firms they have good bargains on credits thus getting long term debt. For these reasons it is argued that smaller firms are more likely to depend on equity while large firm use more debt. This conclusion is confirmed by Mubeen, Nazam, Batoool and Riaz (2016) that size has significant positive effect on leverage of sugar listed companies in Pakistan. While it is in contrast with earlier findings by Khan (2010) who found that size is one of the weakest determinants of leverage in India

Tangibility and Capital Structure

The finding as regards the effect of tangibility on capital structure implies that there is positive and significant effect of tangibility on capital structure. The logical conclusion that can be made from this finding is that as firms have much tangible assets, they require much finances to invest in daily operations which the short term fund and retained earnings may not be sufficient in meeting up with and as such, they result to more debt financing going by the pecking order theory which postulates the financing hierarchy of firms as a result of least effort. This finding validates the conclusion by (Myers, 1977) that tangible assets are associated with less asymmetric information which makes them to have higher value than the intangible assets during bankruptcy and liquidation. This finding is in line with the tradeoff theory which states that companies with higher tangible assets stand the chance of issuing more debts because the tangible assets can serve as collateral for the debts issued in the case of financial distress and also helps in reducing the agency cost associated with debt financing (Stulz and Johnson, 1985). While it is against the pecking order theory that firms with more tangible assets will issue more equity than debt because tangibility reduces asymmetric information which makes shareholders to place much value on equity.

Empirically, the finding gains support from the study by Nasimi (2016) which discovered from the result of regression that tangibility has significant effect on leverage.

Growth and Capital Structure

The study as regards growth in the form of assets exhibit no significant positive effect on gearing a mirror of capital structure measured by growth in asset. Whereas, sales growth was found to have non-significant negative effect on gearing. The logical conclusion that can be made from this is that as companies grow, most especially in the aspect of sales, they tend to generate much

revenue which will in turn improve their profitability enabling them to have much internal finance for their operations and for future investment which discourages them from borrowing. These findings are in support of the tradeoff model which suggests that more investment opportunities is associated with low leverage because of stronger incentives to avoid under-investment and asset substitution that can arise from stock-holder-bondholder agency conflicts (Drobtz and Fix, 2003).while it is in contrast with the pecking order theory which predicts a positive significant relationship between growth opportunity and financial leverage. According to the pecking order, debt increases when investment is higher than retained earnings; that is when the retained earnings is deficient in financing all investment opportunities, and falls when retained earnings is higher than investment opportunities(surplus of retained earnings for financing investment) debt is contacted to fill the gap between the investment opportunities and retained earnings. Theoretical study by Nasimi (2016) is in line with this pecking order but against the result of the findings that growth has positive and significant effect on leverage in sugar industry in Pakistan.

5.0 CONCLUSION AND RECOMMENDATION

5.1 Conclusion of Findings

The study investigated determinants of capital structure in listed cement manufacturing firms, oil and gas companies and food and beverages companies in Nigeria from 2007-2016. The effect of capital structure determinants on gearing was established through regression model. From the study, it has been established that among all the capital structure determinants identified in this study, only tangibility was found to exert significant positive influence on capital structure, liquidity and sales growth were found to have no significant negative effect on capital structure proxy by gearing while others were found to have

non-significant positive effect on capital structure. The conclusions that can be made from these findings is that even though only tangibility positively and significantly influence firms capital structure and that it matters a lot for firms capital structure decision. Nevertheless, there is significant joint significant effect of all the independent variables on capital structure.

5.2 Recommendations

Among all the capital structure determinants identified, only tangibility was found to have significant effect on gearing. This implies that only company with tangible assets have opportunities to debt financing because the tangible assets can serve as collateral against the amount borrowed in the case of default. The recommendation stems from the fact that capital structure determinants have serious implication for shareholders wealth maximization, then the capital structure should be based on tangibility and other factors which may have serious implications on capital structure that were not captured in this study.

5.3. Suggestion for Further Studies

This study only considered companies in the cement manufacturing sub sector, food and beverages sub sector and oil and gas companies. Future research can expand the scope by including companies under other sub sectors in the manufacturing companies and other sectors, also the variables used in the study were limited to those peculiar to individual companies, Other variables that affect the entire companies operating in an economy like Gross Domestic Product, Interest Rate, Inflation and Exchange rate can be considered by future researchers.

References

- Abor, J (2005). The Effect of Capital Structure on Profitability: An Empirical Analysis of Listed Firms in Ghana. *Journal of Risk Finance*, 6(5), 438-495.
- Adaramola, A. O., & Olarewaju, M (2015). Determinants of Capital Structure in

- Nigerian Quoted Composite Insurance Companies. *Global Journal of Management and Business Research*, 15(10), 7-15
- Akinyomi, O. J; & Olagunju, A. (2013). Determinants of Capital Structure in Nigeria. *International Journal of Innovation and Applied Studies*, 3(4) 999-1005.
- Dada, A. O., & Ghazali, Z. B (2016). The Impact of Capital on Firms Performance. Empirical Evidence from Nigeria. *Journal of Economics and Finance*, 7(4), 23-30.
- Drobetez, W., & Fix, R (2003). What are the Determinants of Capital Structure? Some Evidence from Switzerland, University of Basel. *WWZ/Department of Finance*, Working Paper No 4/03
- Harris, M. & Raviv. D (1991). The Theory of Capital Structure. *Journal of Financial Economics*, 41, 297-353.
- Igbinsola, S. O., & Chijuka, I, M (2014). The Determinants of Capital Structure of Listed Firms in Nigeria. *European Journal of Accounting, Auditing and Finance Research*; 2(10), 96-111
- Ishaya, L. C., & Abduljeleel B. O (2014). Capital Structure and Profitability of Nigerian Quoted Firms. The Agency Cost of Theory Perspective. *American International Journal of Social and Management Sciences* 3(1), 139-140
- Khan, A. G (2004). The Relationship of Capital Structure Decisions with Firm Performance: A Study of Engineering Sector of Pakistan. *International Journal of Accounting and financial reporting*, 245-262
- Lawal, B. A., Edwin T. K., Monica W. K & Adisa M. K (2014). Effect of Capital Structure on Firms Performance, Empirical Study of Manufacturing Companies in Nigeria. *Journal of Finance and Investment Analysis*, 3(4), 39-54
- Mazur, K (2007). The determinants of Capital Structure Choice: Evidence from Polish Companies. *International Atlantic Economic Security*, 13, 495-514
- Mubeen, R., Nazam, M., Batool, A., & Riaz M (2016). The Determinants of Capital Structure: A Case from Sugar Industry of Pakistan. *International Journal of Management Sciences and Business Research*, 5(11), 191-199
- Myers, S. C., & Majluf N (1984). Corporate Financing and Investment Decision when Firms have Information that Investors do not have. *Journal of financial Economics*, 13, 187-221
- Nasimi, R.N (2016). Determinants of Capital Structure (An Empirical Evidence from US).. *Global Journal of Management and Business Research*. 16(4), 29-42.
- Ooi(1999). The Determinant of Capital Structure. Evidence on UK Property Companies. *Journal of Property Investment and Finance*, 17(5), 464-480
- Owolabi, S.A., & Inyang U.E (2012). Determinants of Capital Structure in Nigerian Firms. A Theoretical Review. *eCanadian Journal of Accounting and Finance* 1(1), 7-15
- Owolabi, S.A., & Obida S.S (2012). Liquidity Management and Corporate Profitability: Case Study of Selected Manufacturing Companies Listed on the Nigerian Stock Exchange. *Business Management Dynamics*. 2,(2), 10-25.
- Panda, J. K (2006). Accounting and Finance for Management. New Delhi, Sanrup and Sons.
- Rajan, R., & Zingales, L(1995). What do we know about Capital Structure? Some Evidence from International Data. *The Journal of Finance*, 50(5), 1421-1460
- Serguscue, & Vaideen (2014): Determinants Factors of the Capital Structure of Firm- An Empirical Analysis. *Procedia Economics and Finance*, 15, 1447-1457.
- Semiou, B. A., & Collins S.O (2011). Perceived Relationship between Corporate Capital Structure and Firms Value in Nigeria. *International Journal of Business and Social Sciences*, 2(19) (Special Issue. October, 2011)

- Sheikh, N. A., & Wang, Z (2011).Determinants of Capital Structure: An Empirical Study of Firms in Manufacturing Industry of Pakistan, *Managerial Finance*, 37(2), 117-113
- Simon-Oke, O., & Afolabi, B (2011). Capital Structure and Industrial Performance in Nigeria. *International Journal of Business and Management*, 2(1), 100-106
- Sogorb-Mira, F., & Lopez-Gracia J (2003), Pecking order Versus Trade off. An Empirical approach to Small and Medium Scale Enterprises SSRN: <http://ssrn.com abstract=393160>.
- Stulz, R. M (1990). Managerial Discretion and Optimal Financial Policies. *Journal of Financial Economics*, 26, 3-27.
- Titman, S., & Wessels, R (1995). The Determinants of Capital Structure. *The Journal of Finance*, 43(1), 1-9