Capital Structure and its Deterrents: Case of Quoted Firms in Agriculture and Agro-Allied Sector of the Nigerian Economy

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Abstract: Results of extant researches on capital structure and its determinants are mixed. However, most of these extant researches had been conducted in the pre-International Financial Reporting Standard (hereafter referred to as IFRS) era. This gives rooms for further studies on this area of study. Hence, this study adopted post IFRS period from 2012-2016 to examine the relationship between capital structure proxied by Non-Current Liabilities (hereafter referred to as NCURGLIAB) as well as Current Liabilities (hereafter referred to as CURGLIAB) and its determinant proxied by Shareholder Equity (hereafter referred to as SHEQUITY) and Profit before Interest and Tax (hereafter referred to as PBIT) in post era using quoted firms in agriculture and agro-allied sector of the Nigerian economy. This research used ordinary least square regression analysis. Secondary data used were obtained from the firm's audited annual reports. The result indicates that NCURGLIAB and SHEQUITY are negatively and significantly related. The result also shows that CURGLIAB and SHEQUITY are negatively and significantly related. NCURGLIAB and PBIT are also negatively and significantly related. This shows profitable firms with sufficient SHEQUITY do not depend on either NCURGLIAB or CURGLIAB to fund its business operation. However, CURGLIAB and PBIT are positively and significantly related. This suggests that most of CURGLIAB are at little or no cost to firms involved agriculture and agro-allied sector of the Nigerian economy during period under study, hence, they are more like internal source of fund. This result supports the pecking order theory. Therefore, we suggest management of firms should generate sufficient reserves for all their future business needs.

Key words: Capital structure, shareholder equity, non-current liabilities, current liabilities, result, supports

INTRODUCTION

Business managers are responsible for making suitable finance decisions that will ensure that firms maximize earnings, minimize cost of finance and maximize the value of the firm. In finance literature, debate on suitable capital mix to help finance business operations to achieve business objectives mentioned above has been on for many decades and it is still ongoing. Many capital structure theories has been suggested over many decades to be of help in guiding managers to arrive at a finance decision that will offer the firm optimal capital structure in achieving its goals and objectives. These theories include (Modigliani and Miller, 1958, 1963) known as MM irrelevant theory and modified irrelevant theory, pecking order theory, trade off theory, dynamic trade off theory, static trade off theory as well as agency theory, just to mention a few. These theories would be discussed later.

However, optimal capital structure is a suitable combination of fund from both internal sources and external sources that firm used in financing it business operations to achieve the firm objective of minimization of cost of capital, maximizing earnings and maximizing the value of the firm. Funds such as retained earnings and other reserves from the firm past year’s operations constitute internal source of finance while funds such as

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debt and new equity are external source of finance. According to Otekunrin et al. (2017), capital structure has influence of capital and consequently profitability. Also, extant researches such as Bassey et al. (2013) and Iware and Akinleye (2010) provided evidences in their studies on determinants of capital structure. According to Bassey et al. (2013) determinants of capital structure profitability, size of the firm, growth rate in total sales as well as age of the firm just to mention a few. In line with these extant researches this study examined the determinants of capital structure using agriculture and agro-allied firms quoted on Nigerian Stock of Exchange (hereafter referred as NSE). This sector of Nigeria economy was selected based on Nigerian Government focus on the sector as an additional means of generating additional income to run its government and as means of providing reliable solution to the problem of hunger in the country.

Another motivation for this study includes the fact that the results of the extant researches on this topic are mixed and most of the studies have been conducted before IFRS in Nigeria. Hence, this study focused on post IFRS analysis of determinants of capital structure which is from 2012-2016. This is the gap, this research attempt to fill in the literature. In line with (Bassey et al., 2013) Non-Current Liabilities (NCURLIAB) and Current Liabilities (CURLIAB) are used as proxies for capital structure while Shareholder Equity (SHEQUITY) and Profit Before Interest and Tax (PBIT) was used as proxies for capital structure determinants. Apart from determinants of capital structure, the size of firm (hereafter referred as SCF), Growth Rate in Total sales for firm (hereafter referred as GRTH) and Age of the Firm (hereafter referred as AOF) were used as control variables.

**Objectives of the study:** The central research objective is to examine the relationship between capital structure proxied by NCURLIAB and CURLIAB and its determinant proxied by Shareholder Equity (SHEQUITY) and Profit Before Interest and Tax (PBIT) after the adoption of IFRS in Nigeria using agriculture and agro-allied sector of the Nigerian economy. Therefore, this research specific objective is to:

- Examine the relationship between NCURLIAB and its determinants
- Investigate the relationship between CURLIAB and its determinants

**Research hypothesis:** The following research hypothesis stated in null form were tested to achieve the research objectives stated above.

**Hypothesis one:**
- H₀: there is no relationship between NCURLIAB and its determinants

**Hypothesis two:**
- H₀: there is no relationship between CURLIAB and its determinants

**Literature review:** The dependent variable is capital structure proxied by NCURLIAB and CURLIAB. NCURLIAB is the firm Non-Current Liabilities. Non current liabilities are long term liabilities of the firm which are falling due after 1 year. This form of liabilities attracts fixed interest to the creditors. Equity plus liabilities is the summation of the liabilities side of the statement of financial position. The summation of this liabilities side must be equal to the summation of the assets side of the statement of financial position. NCURLIAB was used by Salim and Yadav (2012) to examine the capital structure and performance of firms quoted on Malaysian stock exchange from 1995-2011. The result of their study shows that NCURLIAB and its determinants measured by ROA ratio and ROE ratio are negatively and significantly related. Bassey et al. (2013) similarly study 60 unquoted firms in agro-based sector in Nigeria to analyse determinants of capital structure form 2005-2010. Their result shows that AOF and GRTH impacted NCURLIAB significantly. Similar to Salim and Yadav (2012) the result of their study shows that NCURLIAB and its determinants measured by ROA ratio and ROE ratio are negatively and significantly related. Based on these results as given above, it was expected in this study that NCURLIAB and Shareholder Equity (SHEQUITY) and Profit Before Interest and Tax (PBIT) are negatively related. However, Voulgaris et al. (2004) show significant positive relationship between NCURLIAB and ROA ratio as well as ROE ratio. This is a clear picture contradiction of extant researches on this topic.

CURLIAB is the firm current liabilities. Current liabilities are short term liabilities of the firm which are falling due before 1 year. CURLIAB was used by Salim and Yadav (2012) to examine the capital structure and Performance of firms quoted on Malaysian stock exchange from 1995-2011. The result of their study shows that CURLIAB and its determinants measured by ROA ratio and ROE ratio are negatively and significantly related. Bassey et al. (2013) in a similar study used 60 unquoted firms in agro-based sector in Nigeria to analyse determinants of capital structure form 2005-2010. Their result shows that AOF and GRTH impacted CURLIAB
Theoretical framework: Two professors, Modigliani and Miller (1958, 1963) came up with irrelevant theory and modified irrelevant theory (Lawal et al., 2013; Eluyela et al., 2019; Voulgaris et al., 2004). Irrelevant theory postulated that under perfect market condition, the combination of equity and debts that form the capital structure of firm does not have effect on firm market value. Modigliani and Miller, 1958 assert that firm earning power and the risk of its underlying assets determine the firm market value under perfect market condition. Years later, modified irrelevant theory was introduced by Modigliani and Miller (1963). Modigliani and Miller (1963) postulated that where taxation and capital cost exist, the combination of equity and debts that form the capital structure of firm does have effect on firm market value.

Modigliani and Miller (1963) assert that debt would be beneficial to firm where there is tax shield which would lead to reduction in cost of capital by deducting tax from interest. In this case the cost of capital is reduced by tax shield which resulted from deduction of tax from interest. According to Otekurin et al. (2017), Lawal et al. (2013) and Voulgaris et al. (2004) Modigliani and Miller “assert that returns made from using only equity would be less than returns a firm would generate from the mixed capital after the optimal capital structure is reached and from this point, a firm would be able to maximize returns to its shareholders. They went further to encourage firms to use only debt capital to finance their operation because of the tax deductions on interest payment.” One of the critics of Modigliani and Miller theory is that though it is sound theoretically but is faulty from practical perspective in the opinion of Bassey et al. (2013).

Bassey et al. (2013) opined that “cost of bankruptcy have proportional and direct relationship with the level of debt of a firm. Capital structure optimal would be at optimal level only when cost of bankruptcy is equal to tax sheltering benefits obtained from an increase in the debt level of the firm Otekurin et al. (2017), Lawal et al. (2013) and Voulgaris et al. (2004). Based on the view of Bassey et al. (2013), Modigliani and Miller Model though emphasize optimal capital structure but lack practical validity. Capital structure theories adopted in the research include pecking other theory and trade off theory. However, trade off theory has static trade off theory and dynamic trade off theory. Trade off theory improved on Modigliani and Miller Model by additionally considering risk involved in acquiring debt. Trade off theory was suggested by Myers (1984) as well as Myers and Majluf (1984) and this theory lay emphasis on optimal capital structure has combination of debt finance and equity finance to be used based on balancing the costs and benefits. It involved a balance between tax saving arising from debt, decrease in agent cost, the deadweight costs of bankruptcy as well as financial distress costs.

Trade off theory is also known as tax based theories and bankruptcy costs because under this theory firms are expected to use combination of debt and equity that maximizes the firm value by minimizing the costs of prevailing market imperfections (Sheikh and Wang, 2011). All the discussion on trade off theory so far is the position of static trade off. The position of dynamic trade off is that “the indebtedness wished (or optimal) and real cannot be equal at any time. Market frictions such as transaction costs and financial market imperfections can prevent instantaneous adjustment of the real debts at the desired level. While adjustment costs are not of key concern under static trade off theory, it is of primary concern under dynamic trade off theory.

Dynamic trade off theory asserts that the time adjustment towards the optimal capital structure brings to existence the adjustment cost. Tarek opined that “firms can not eliminate random events that deviate from the optimum, it is possible to observe the cross-sectional dispersion of current debt ratios across a sample of firms with the same target ratio. Important adjustment costs may explain the observed wide variation of current debt ratios as firms are obliged to operate far from their optimal ratios. Theoretical reflections and empirical extant researches in area are also available (Fischer et al., 1989; Jalilvand and Harris, 1984; Marsh, 1982; Taggart, 1977) and to this extent, this study adopt trade off theory to examine the relationship between capital structure proxied by NCURLIAB and CURLIAB and its determinant proxied by SHEQUITY and PBIT after the adoption of IFRS in Nigeria using agriculture and agro-allied sector of the Nigerian economy.

Pecking order theory categorized financing business operations under capital structure determinant model into three and these include using retained earnings and other reserves from prior year’s operations of the firm issuance of debt and issuance of new equity capital (Miller, 1977). Both issuance of debt and issuance of new equity capital are considered to be external source of finance because both will affect the residue of profit due to
existing shareholders. Use of retained earnings and other reserves from prior year’s operations of the firm are considered to be internal source of finance as it will not affect the residue of profit due to existing shareholders. The pecking order theory opined that firm should finance their assets and operations firstly from their internally generated cash, then secondly on issuance of debt and lastly on issuance of new equity capital.

Pecking order theory opined that cost of debt will have negative impact on the level of SHEQUITY and PBIT in this study and issuance of new equity will dilute the ownership structure of the firm and reduce the percentage of profit due to existing shareholders on the long run. Hence, the most preferred source of finance to minimize cost of capital, maximize profit and maximize of firm value is internal source (Myers, 1984; Margaritis and Psilaki, 2007; Otekkurn et al., 2018a-d, Lawal et al., 2017).

Hence, it is expected that capital structure proxied by NCURLIAB as well as CURLIAB and its determinants are measured by SHEQUITY and PBIT are negatively related in this study. This study also adopted pecking order theory in order to examine the relationship between capital structure proxied by CURLIAB and CURLIAB and its determinant proxied by SHEQUITY and PBIT after the adoption of IFRS in Nigeria using agriculture and agro-allied sector of the Nigerian economy.

MATERIALS AND METHODS

In examining the relationship between capital structure proxied by NCURLIAB as well as CURLIAB and its determinant proxied by SHEQUITY and PBIT in post IFRS era in Nigeria using agriculture and agro-allied sector of the Nigerian economy for period of 5 years (2012-2016), descriptive research design was adopted. In line with previous research by Adesina et al. (2015) and Otekkurn et al. (2017) secondary data obtained the audited financial statement of firms using ordinary least square regression analysis.

Population of the study, sample size and sampling technique: The population of this study includes twenty-three in agriculture and agro-allied sector of the Nigerian economy and the sample size nineteen as in Table 1.

In line with the modern online sample size calculator by Raosoft INC which required that at least 50% of the population of the study must be selected (Uwuiyge and Uadiala, 2011; Uwuiyge et al., 2016; Otekkurn et al., 2018a-d). Simple random sampling technique was used to select 82.61% of firms in agriculture and agro-allied sector of Nigerian economy quoted on the NSE.

Table 1: Number of population and the sample size

<table>
<thead>
<tr>
<th>Description</th>
<th>Total No. (%)</th>
<th>Sample size (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firms in agriculture and agro-allied sector of Nigerian economy quoted on the NSE</td>
<td>23(100)</td>
<td>19(82.61)</td>
</tr>
</tbody>
</table>

Compilation in 2018

Model specification: In line with Adesina et al. (2015), Bassey et al. (2013) and Voulgaris et al. (2004) two empirical models was adopted in this study as given below:

Model 1:

\[
\text{NCURLIAB} = \beta_0 + \beta_1 \text{SHEQUITY} + \beta_2 \text{PBIT} + \beta_3 \text{TOTAST} + \beta_4 \text{GRTH} + \beta_5 \text{AOF} + e_n
\]

(1)

Where:

- NCURLIAB = Non-current Liabilities
- SHEQUITY = Share Equity
- PBIT = Profit Before Interest
- SOF = Size of Firm - Total assets
- GRTH = Growth Rate in Total sales for firm measured by the change in the value of total assets of firm i in time
- AOF = Number of years in business = log of number of years in business
- \(e_n\) = Residual

Expected a priori expectation:

- \(\beta_1, \beta_2, \beta_3, \beta_4, \beta_5 > 0\)
- \(\beta_3 > 0\)

Hence:

- \(\beta_1 < 0\): means that the higher the level of SHEQUITY, the lower the level of NCURLIAB
- \(\beta_2 < 0\): means that the higher the level of PBIT, the lower the level of NCURLIAB
- \(\beta_3 > 0\): means that the higher the level of GRTH, the higher the level of NCURLIAB
- \(\beta_4 > 0\): means that the higher the level of AOF, the higher the level of NCURLIAB

Model 2:

\[
\text{CURLIAB} = \beta_1 + \beta_2 \text{SHEQUITY} + \beta_3 \text{PBIT} + \beta_4 \text{TOTAST} + \beta_5 \text{GRTH} + \beta_6 \text{AOF} + e_n
\]

(2)

Where:

- CURLIAB = Current Liabilities
- SHEQUIT = Share Equity
RESULTS AND DISCUSSION

Descriptive statistics: The descriptive statistics for the variables in empirical model 1 and 2 combine. Table 3 shows that the probability of the Jarque-Bera statistics of Non-Current Liabilities (NCURLIAB) and Current Liabilities (CURLIAB), Shareholder Equity (SHEQUITY), Profit Before Interest and Tax (PBIT), Size of Firm (SOF), Changes in Total Asset (GRTH) and Age of the Firm (AOF) which are 0.000000, 0.000000, 0.000000, 0.000000, 0.000000, 0.000000 and 0.001986, respectively. It means, we can reject the two null hypothesis. This is because their probability values are highly statistically significant.

Regression analysis: The regression analysis was used to study whether capital structure of firm proxied by Non-Current Liabilities (NCURLIAB) and its determinant proxied by Shareholder Equity (SHEQUITY) and Profit Before Interest and Tax (PBIT) are significantly related from 2012-2016.

Predictors: (CONSTANT), SHEQUITY, PBIT, SOF, GRTH, AOF.

Dependent variable: NCURLIAB.

Interpretation: Regression analysis result as displayed in Table 4 above indicates capital structure proxied by Non-Current Liabilities (NCURLIAB) and its determinant proxied by Shareholder Equity (SHEQUITY), Profit Before Interest and Tax (PBIT), Size of Firm (SOF), Growth Rate in Total sales for firm (GRTH) are significantly related but Non-Current Liabilities (NCURLIAB) and Age of the Firm (AOF) are significantly related.

Non-Current Liabilities (NCURLIAB) and Shareholder Equity (SHEQUITY) are negatively and significantly related where the regression coefficient of the Shareholder

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHEQUITY</td>
<td>Shareholder Equity</td>
</tr>
<tr>
<td>PBIT</td>
<td>Profit Before Interest and Tax</td>
</tr>
<tr>
<td>NCURLIAB</td>
<td>Non-Current Liabilities</td>
</tr>
<tr>
<td>CURLIAB</td>
<td>Current Liabilities</td>
</tr>
<tr>
<td>SOF</td>
<td>Size of Firm = Total assets</td>
</tr>
<tr>
<td>GRTH</td>
<td>Growth Rate in Total sales for firm measured by the change in the value of total assets of Firm i in time</td>
</tr>
<tr>
<td>AOF</td>
<td>Number of years in business = log of No. of years in business</td>
</tr>
</tbody>
</table>

Table 3: Descriptive statistics of variables for empirical model 1 and 2 combine

<table>
<thead>
<tr>
<th>Variables</th>
<th>NCURLIAB</th>
<th>CURLIAB</th>
<th>SHEQUITY</th>
<th>PBIT</th>
<th>TOTAST</th>
<th>GRTH</th>
<th>AOF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>44904706</td>
<td>31791880</td>
<td>68951018</td>
<td>11114232</td>
<td>1.46E+08</td>
<td>12147567</td>
<td>1.557149</td>
</tr>
<tr>
<td>Median</td>
<td>6886614</td>
<td>14919196</td>
<td>18553083</td>
<td>4046722</td>
<td>49818490</td>
<td>4113004</td>
<td>1.612784</td>
</tr>
<tr>
<td>Maximum</td>
<td>6.54E+08</td>
<td>1.45E+08</td>
<td>6.17E+08</td>
<td>8251396</td>
<td>1.29E+09</td>
<td>1.11E+08</td>
<td>1.977274</td>
</tr>
<tr>
<td>Minimum</td>
<td>40341.00</td>
<td>375277.0</td>
<td>4608386</td>
<td>24606992</td>
<td>1739760</td>
<td>22781804</td>
<td>0.903050</td>
</tr>
<tr>
<td>SD</td>
<td>1.35E+08</td>
<td>38747766</td>
<td>1.33E+08</td>
<td>19793099</td>
<td>2.66E+08</td>
<td>23029739</td>
<td>0.273339</td>
</tr>
<tr>
<td>Skewness</td>
<td>3.951280</td>
<td>1.490336</td>
<td>3.600361</td>
<td>1.788468</td>
<td>3.102361</td>
<td>1.998016</td>
<td>-0.886500</td>
</tr>
<tr>
<td>Jarque-Bera</td>
<td>1026.585</td>
<td>41.32432</td>
<td>426.8157</td>
<td>87.68732</td>
<td>485.4847</td>
<td>139.0863</td>
<td>12.44139</td>
</tr>
<tr>
<td>Probability</td>
<td>0.000000</td>
<td>0.000000</td>
<td>0.000000</td>
<td>0.000000</td>
<td>0.000000</td>
<td>0.000000</td>
<td>0.001986</td>
</tr>
<tr>
<td>Sun</td>
<td>4.27E-09</td>
<td>3.04E-09</td>
<td>6.25E-09</td>
<td>1.06E-09</td>
<td>1.39E-10</td>
<td>1.15E-09</td>
<td>147.9291</td>
</tr>
<tr>
<td>Sun Sq. Dev.</td>
<td>1.66E-18</td>
<td>1.41E-17</td>
<td>1.66E-18</td>
<td>3.68E-16</td>
<td>6.65E-18</td>
<td>4.99E-16</td>
<td>7.02121</td>
</tr>
</tbody>
</table>

Compilation in 2018
Equity (SHEQUITY) is negative (-0.252780) with negative t-statistic (-1.877175) and a p-value of 0.0638 which makes the coefficient value significant at 1%. This is in line with the apriori expectation that the higher the Non-current Liabilities (NCURLIAB), the lower Shareholder Equity (SHEQUITY) and vice-versa.

Non-current Liabilities (NCURLIAB) and Profit Before Interest and Tax (PBIT) are negatively and significantly related where the regression coefficient of Profit Before Interest and Tax (PBIT) is negative (-1.540970) with negative t-statistic (-12.705985) and a p-value of 0.0000 which makes the coefficient value significant at 1%. This is in line with the apriori expectation that the higher the Non-current Liabilities (NCURLIAB), the lower Profit Before Interest and Tax (PBIT) and vice-versa.

Non-current Liabilities (NCURLIAB) and Size of Firm (SOF) are positively and significantly related where the regression coefficient of Size of Firm (SOF) is positive (0.619206) with positive t-statistic (9.312627) and a p-value of 0.0000 which makes the coefficient value significant at 1%. This is in line with the apriori expectation that the higher the Non-current Liabilities (NCURLIAB), the higher Size of Firm (SOF) and vice-versa.

Non-current Liabilities (NCURLIAB) and Growth rate in Total sales for firm (GRTH) are negatively and significantly related where the regression coefficient of Growth Rate in Total sales for firm (GRTH) is negative (-0.349130) with negative t-statistic (-3.267336) and a p-value of 0.0015 which makes the coefficient value significant at 5%. This is in line with the apriori expectation that the higher the Non-current Liabilities (NCURLIAB), the lower Growth Rate in Total Sales for firm (GRTH) and vice-versa.

Non-current Liabilities (NCURLIAB) and Age of the Firm (AOF) are positively but not significantly related where the regression coefficient of Age of the Firm (AOF) is positive (1009821.4) with positive t-statistic (1.184226) and a p-value of 0.2395. Hence, Non-current Liabilities (NCURLIAB) and Age of the Firm (AOF) not related.

The F-values which are significant at 1% level indicate that our models do not suffer from specification bias. The regression analysis shows that, we can conclude that the variance in the Non-current Liabilities (NCURLIAB) can be explained for 97.77% (Adj R² = 97.65%) further justifies this effect) for pooled data because of change in Non-current Liabilities (NCURLIAB). This percentage is relatively high percentages, hence, the model used to compute Non-current Liabilities (NCURLIAB) is appropriate (that is the proxy for capital structure).

The regression analysis was used to study whether capital structure of firms proxied by non-current liabilities (CURLIAB) and its determinants proxied by Shareholder Equity (SHEQUITY), Profit Before Interest and Tax (PBIT) are significantly related from 2012-2016.

**Predictors:** (CONSTANT), SHEQUITY, PBIT, SOF, GRTH, AOF.

**Dependent variable:** CURLIAB.

**Interpretation:** Regression analysis result as displayed in Table 5 above indicates capital structure proxied by Non-current Liabilities (CURLIAB) and its determinant proxied by Shareholder Equity (SHEQUITY), Profit Before Interest and Tax (PBIT), Size of Firm (SOF), Growth Rate in Total sales for firm (GRTH) are significantly related but Non-current Liabilities (CURLIAB) and Age of the Firm (AOF) not related.

Current Liabilities (CURLIAB) and Shareholder Equity (SHEQUITY) are negatively and significantly related where the regression coefficient of the Shareholder Equity (SHEQUITY) is negative (-0.743340) with negative t-statistic (-5.526515) and a p-value of 0.0000 which makes the coefficient value significant at 1%. This is in line with the apriori expectation that the higher the Current Liabilities (CURLIAB), the lower Shareholder Equity (SHEQUITY) and vice-versa.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-220.5550</td>
<td>1348.132</td>
<td>-1.655439</td>
<td>0.1015</td>
</tr>
<tr>
<td>SHEQUITY</td>
<td>-0.252780</td>
<td>0.134660</td>
<td>-1.87175</td>
<td>0.0638</td>
</tr>
<tr>
<td>PBIT</td>
<td>-1.540970</td>
<td>0.121279</td>
<td>-12.70598</td>
<td>0.0000</td>
</tr>
<tr>
<td>SOF</td>
<td>0.619206</td>
<td>0.066491</td>
<td>9.312627</td>
<td>0.0000</td>
</tr>
<tr>
<td>GRTH</td>
<td>-0.349130</td>
<td>0.106855</td>
<td>-3.267336</td>
<td>0.0015</td>
</tr>
<tr>
<td>AOF</td>
<td>1009821.4</td>
<td>852726.6</td>
<td>1.184226</td>
<td>0.2395</td>
</tr>
<tr>
<td>R²</td>
<td>0.977112</td>
<td>Mean dependent var.</td>
<td>-</td>
<td>4990.706</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.976460</td>
<td>SD dependent var.</td>
<td>-</td>
<td>1.35E+08</td>
</tr>
<tr>
<td>SE of regression</td>
<td>20381226</td>
<td>Akaikes info criterion</td>
<td>-</td>
<td>36.55920</td>
</tr>
<tr>
<td>Sum squared resid</td>
<td>3.70E+16</td>
<td>Schwarz criterion</td>
<td>-</td>
<td>36.7250</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>7.30E+52</td>
<td>Hannan-Quinn criteria</td>
<td>-</td>
<td>36.62438</td>
</tr>
<tr>
<td>F-statistic</td>
<td>780.8240</td>
<td>Durbin-Watson stat</td>
<td>-</td>
<td>0.855638</td>
</tr>
<tr>
<td>Probab (F-statistic)</td>
<td>0.000000</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Table 5: Regression results of the variables (model 2)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>SE</th>
<th>t-statistic</th>
<th>Problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>22856120</td>
<td>1345889</td>
<td>1.697335</td>
<td>0.0931</td>
</tr>
<tr>
<td>SHEQUITY</td>
<td>-0.743340</td>
<td>0.134504</td>
<td>-5.526515</td>
<td>0.0000</td>
</tr>
<tr>
<td>PBIT</td>
<td>1.586237</td>
<td>0.121139</td>
<td>12.68157</td>
<td>0.0000</td>
</tr>
<tr>
<td>SOF</td>
<td>0.378797</td>
<td>0.066414</td>
<td>5.703544</td>
<td>0.0000</td>
</tr>
<tr>
<td>GRTHIT</td>
<td>0.349502</td>
<td>0.166712</td>
<td>2.345885</td>
<td>0.0015</td>
</tr>
<tr>
<td>LOGAOF</td>
<td>-10390915</td>
<td>8517435</td>
<td>-1.219958</td>
<td>0.2257</td>
</tr>
<tr>
<td>R²</td>
<td>0.738647</td>
<td>-</td>
<td></td>
<td>31971880</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.723964</td>
<td>-</td>
<td></td>
<td>38747766</td>
</tr>
<tr>
<td>SE of regression</td>
<td>20357728</td>
<td>-</td>
<td></td>
<td>3655689</td>
</tr>
<tr>
<td>Sum squared resid</td>
<td>3.696E-16</td>
<td>-</td>
<td></td>
<td>3671819</td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-1730.452</td>
<td>-</td>
<td></td>
<td>362207</td>
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<td>F-statistic</td>
<td>50.30713</td>
<td>-</td>
<td></td>
<td>0.857862</td>
</tr>
<tr>
<td>Prob (F-statistic)</td>
<td>0.000000</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Compilation in 2018

Current Liabilities (CURLIAB) and Profit Before Interest and Tax (PBIT) are positively and significantly related where the regression coefficient of Profit Before Interest and Tax (PBIT) is positive (1.536237) with positive t-statistic (12.68157) and a p-value of 0.0000 which makes the coefficient value significant at 1%. This is in line with the prior expectation that the higher the Current Liabilities (CURLIAB), the higher the Profit Before Interest and Tax (PBIT) and vice-versa.

Current Liabilities (CURLIAB) and Size of Firm (SOF) are positively and significantly related where the regression coefficient of Size of Firm (SOF) is positive (0.349502) with positive t-statistic (5.703544) and a p-value of 0.0000 which makes the coefficient value significant at 1%. This is in line with the prior expectation that the higher the Current Liabilities (CURLIAB), the higher the Size of Firm (SOF) and vice-versa. Current Liabilities (CURLIAB) and Growth rate in total sales for firm (GRTH) are positively and significantly related where the regression coefficient of Growth Rate in Total sales for firm (GRTH) is positive (0.349502) with negative t-statistic (3.274585) and a p-value of 0.0015 which makes the coefficient value significant at 5%. This is in line with the prior expectation that the higher the Current Liabilities (CURLIAB), the higher the Growth Rate in Total sales for firm (GRTH) and vice-versa.

Current Liabilities (CURLIAB) and Age of the Firm (AOF) are negatively but not significantly related where the regression coefficient of Age of the Firm (AOF) is negative (-10390915) with negative t-statistic (-1.219958) and a p-value of 0.2395. Hence, Current Liabilities (CURLIAB) and Age of the Firm (AOF) is not related. The t-values which are significant at 1% level indicate that our models do not suffer from specification bias. The regression analysis shows that we can conclude that the variance in the Current Liabilities (CURLIAB) can be explained for 73.86% (Adj R² = 72.39%) further justifies this effect for pooled data because of change in Current Liabilities (CURLIAB). This percentage is relatively high percentages; hence, the model used to compute Current Liabilities (CURLIAB) is appropriate (that is the proxy for capital structure).

Hypothesis testing: Our decision rule is from the significances of the t-statistics represented by the p-values.

Hypothesis one:
- H₀: There is no relationship between NCURLIAB and its determinants

Discussion of findings on hypothesis: The result of the regression analysis shows that Non-Current Liabilities (NCURLIAB) and Shareholder Equity (SHEQUITY) are negatively and significantly related. Based on the regression analysis results, the null hypothesis is hereby rejected and the alternative hypothesis which states that there is a relationship between NCURLIAB and its determinants (proxied by Shareholder Equity (SHEQUITY)) is accepted. The significant relationship is negative. This result is in line with the study prior expectation that the higher the level of SHEQUITY, the lower the Non-Current Liabilities (NCURLIAB). This result is consistent with the findings of Sonora (2015). Non-Current Liabilities (NCURLIAB) and Profit Before Interest and Tax (PBIT) are also negatively and significantly related. Based on the regression analysis results, the null hypothesis is hereby rejected and the alternative hypothesis which states that there is a relationship between NCURLIAB and its determinants (proxied by Profit Before Interest and Tax (PBIT)) is accepted. This result is consistent with the findings of (Adesina et al., 2015; Avdalovic and Milenkovic, 2017; Stiglitz, 1972; Thanila and Arulvel, 2013 and Otekunrin et al., 2018).

Hypothesis two:
- H₀: There is no relationship between CURLIAB and its determinants

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Discussion of findings on hypothesis: The result of the regression analysis shows that Current Liabilities (CURLIAB) and Shareholder Equity (SHEQUITY) are negatively and significantly related. Based on the regression analysis results, the null hypothesis is hereby rejected and the alternative hypothesis which states that there is a relationship between CURLIAB and its determinants [proxied by Shareholder Equity (SHEQUITY)] is accepted. The significant relationship is negative. This result is in line with this study’s priori expectation that the higher the level of SHEQUITY, the lower the Current Liabilities (CURLIAB). This result is consistent with the findings of Vatavu (2015). Current Liabilities (CURLIAB) and Profit Before Interest and Tax (PBIT) are also positively and significantly related. Based on the regression analysis results, the null hypothesis is hereby rejected and the alternative hypothesis which states that there is a relationship between CURLIAB and its determinants [proxied by Profit Before Interest and Tax (PBIT)] is accepted. This result is consistent with the findings of Alipour et al. (2015) and Voulgaris et al. (2004) findings of Adesina et al. (2015).

CONCLUSION

This study examined the relationship between capital structure proxied by NCURLIAB and CURLIAB and its determinant proxied by Shareholder Equity (SHEQUITY), Profit Before Interest and Tax (PBIT) in the post IFRS era in Nigeria using agriculture and agro-allied sector of the Nigerian economy. The result indicates that Non-Current Liabilities (NCURLIAB) and Shareholder Equity (SHEQUITY) are negatively and significantly related. The result of the regression analysis also shows that Current Liabilities (CURLIAB) and Shareholder Equity (SHEQUITY) are negatively and significantly related. This shows profitable firms with sufficient Shareholder Equity (SHEQUITY) do not depend on either Non-Current Liabilities (NCURLIAB) or Current Liabilities (CURLIAB) to fund its business operation. Non-Current Liabilities (NCURLIAB) and Profit Before Interest and Tax (PBIT) are also negatively and significantly related. This further shows profitable firm does not depend on either Non-Current Liability (NCURLIAB) to fund its business operation. This result support the pecking order theory which opined that firm should finance their assets and operations firstly, from their internally generated cash, then follow by issuance of debt if necessary and finally, issuance new equity if necessary. Pecking order theory opined that cost of debt will have negative impact on the level of profitability of the firm and issuance of new equity will dilute the ownership structure of the firm and reduce the percentage of profit due to existing shareholders on the long run. Hence, the most preferred source of finance to minimize cost of capital, maximize profit and maximize of firm value is internal source.

RECOMMENDATIONS

It is therefore, recommended that management of firms should generate sufficient reserves for all their future business needs. Current Liabilities (CURLIAB) and Profit Before Interest and Tax (PBIT) are also positively and significantly related. This suggests that most of CURLIAB are at little or no cost to firms involved agriculture and agro-allied sector of the Nigerian economy during period under study, hence, they are more like internal source of fund.

ACKNOWLEDGEMENT

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REFERENCES


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