IMPACT OF EQUITY AND DEBT FINANCING ON FINANCIAL PERFORMANCE OF QUOTED MANUFACTURING COMPANIES IN NIGERIA.

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Abstract
Empirical studies have shown that equity and debt financing is one of the important determinants affecting the performance of a company. This study sought to examine the impact of equity and debt financing on performance on quoted manufacturing companies in Nigeria using the Panel Fully Modified Least Square on secondary data on earnings per share, debt and equity covering the period 2010-2018. To increase earnings, findings show that equity positively influences earnings per share while a negative relationship exists between earnings per share and debt. The study recommends that firms should finance their company majorly with equity shares rather than debt.

KEY WORDS: Corporate governance, Equity, Debt, Earnings per share, and Firm’s performance.

1.0 Introduction

The combination of equity finance and the debt finance represent a company’s capital structure. The capital structure is said to be the relative proportion of funds from various sources used in a business. Capital structure refers to the proportion of different long-term financing sources. In other words, it refers to the combination of debt and equity but giving priority over each other in a financial decision of a firm to invest in pursuit of maximizing value of the firm and its shareholders wealth.

Modigliani and Miller (1958) assert that the value of a firm is entirely independent of its capital structure under perfect capital markets. Therefore, debt and equity

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finance can substitute perfectly for each other. Modigliani and Miller (1963) later found that the presence of taxes and information asymmetry lead to the choice of capital structure and significantly affect the value of the firm. Accordingly, the choice of capital structure increases and decreases the value of companies. A right combination of debt and equity builds an optimal capital structure that maximizes their value. Therefore, the study on ‘The Effect of Equity and the Debt Financing on Quoted Selected Manufacturing Firms in Nigeria’ is necessary to provide companies in making an optimal choice between debt and equity to achieve the maximum value of firms.

The financing decision of capital structure is not only concerned with finding the right kind of finance, but is also with choosing the best overall mixture of these funding options for commencement and running of the operations of business. Management of corporate capital structure is one of the primary financial decisions that are related to corporate value maximization. But, how does a firm decide on its optimal capital structure? Should the managers use more debt or equity? Is there an optimal equity and debt financing pattern? If so how do the managers determine the target debt level? These questions as faced by managers today constitute a problem to most organizations. How they will go about it becomes a recurrent issue which is what the study is all about that is, to provide a reliable and valid point on the best optimal capital structure to follow in order to achieve organization goals.

This study aims to examine the effect of equity and debt financing on the financial performance of quoted manufacturing companies in Nigeria.

2.0 Literature Review

The issue of equity and debt financing remains a puzzle to scholars, although many studies have been carried out to resolve the puzzle.

(Harris and Raviv, 1991). The theories of capital structure were first propounded in the 1950s(Durand, 1952; Modigliani and Miller, 1958). Durand, (1952) put forward the relevant theory stating that capital structure affects the value of firms because of the impact of relative different costs of debt and equity have on the weighted average cost of capital. In contrast, Modigliani and Miller’s (1958) irrelevant theory states that capital structure does not affect the values of firms under perfect capital condition because it is the return to asset rather than the cost of capital that determines the values of the firms.
The modern theory of capital structure started with MM (1958). The MM theory states that in the absence of transaction costs, corporate income taxations, or other market imperfections, the value of firms are independent of its financial structure. A firm’s value is determined by real assets. It cannot be changed purely by financial transactions. Therefore, if markets are perfect, it should not be possible to create value by merely shuffling the paper claims on a firm’s assets. However, markets are not perfect and asymmetric information problems exist even in the developed financial markets like United States. Thus, if there are imperfections such as taxes, underdeveloped financial markets and inefficient legal systems, financial structure become relevant to the firms. Firms have to decide whether to issue debt or equity to minimize the costs affected by these imperfections. Existing theories have focused on two different financing choices made by firms. The agency theory stresses on conflicts of interests between owners, creditors, and managers. Other theory gives emphasis on tax effects and corporate strategies. Empirical evidences show that differences in the capital structures of firms in develop and developing countries can be attributed to asset composition, liquidity constraints, industry classification, growth opportunities, and uniqueness as well as to the tax advantages of debt financing. In view of the restriction on the assumptions imposed on the MM theory various theories have been developed to explain the capital structure of the company in the existing studies.

In this study, analysis is centered on two famous theory of capital structure called the Static Trade-off Theory and Pecking Order Theory. The static trade-off theory states that a firm decides the mixture of debt-equity that optimizes its value. The trade-off theory argues for the existence of an optimal capital structure by adding various imperfections to capital markets assumed by the MM theory. It retains the assumptions of market efficiency and symmetric information. Major imperfections that lead to an optimal capital structure are as follows: first, higher taxes on dividends will lead to more leverage as suggested by MM. Second higher cost of financial distress will lead to more equity. These two imperfections constitute the trade-off between benefits and cost from borrowing.

Under the pecking-order theory, a company has no well-defined target capital structure. The perking-order theory assumes that market inefficiency and asymmetric information exist in the financial market. And these imperfections influence corporate finance policy. Myers and Majluf (1984) revealed that external investors discount a firm’s equity when managers issue equity instead of debt. In order to avoid issuing equity at a discount, managers will prefer to use internal finance rather than external finance.
Several studies have shown that equity and debt financing are one of the important determinants affecting the performance of a company. Wong (2004) showed that capital structure (i.e. equity and debt) is positively related to common stock returns and risk. Furthermore, Wong (2004) also found that a company’s performance measured by return on equity (ROE) has negative relationship with long-term debt ratio in construction companies. It is obvious that managing capital structure is one of the primary financial decisions that are related to corporate value maximization.

Eldomiaty (2008) investigated the determinants of corporate leverage in Egypt, using panel data of 99 non-financial firms from period 1998-2004. The results showed that company growth is significantly inversely related to the debt ratio. The findings fit well with the agency theory that assumes the high agency cost of debt. On the other hand, growth can increase the firm’s borrowing ability in the future, because as a company expands, the company will acquire more assets and this will lead to higher leverage of the company. Hall, Hutchinson, and Michaelas, (2000) suggested that growth is likely to increase retained earnings in the future and push firms to borrow and thus be positively related to leverage. Gupta (1969) suggested that a company with rapid growth will tend to finance the growth with debt financing. In addition, the pecking order theory predicts that high growth firms with large financing needs, will have high debt ratio because of manager’s reluctance to issue equity.

Singh, Wallace, and Suchard (2003), employed panel data of 1127 US firms over period 1994-1996 and tested the impact of corporate diversification strategies on the debt ratio. Their results showed that company’s growth is positively related to the debt ratio of domestic companies, while multinational companies’ growth has no significant relationship with leverage. They proposed that growth itself causes uncertainty of future cash flows. Such uncertainty they argued, will be more severe in the case of growth in multinational operations. In this scenario, one should expect the relationship between future growth opportunities and leverage to be negative for MNCs and positive for domestic firms.

In China, the study by Chen (2004) revealed that Chinese-listed company’s growth has a positive relationship with the debt ratio. Under the hypothesis of Static Trade-off theory, firms holding future growth opportunities, which are a form of intangible assets, tend to borrow less than firms holding more tangible assets because growth opportunities cannot be collateralized. The Static Trade-off theory cannot fit in such a situation because most of the listed companies are in the manufacturing sectors. They possess more tangible assets like machinery and
manufacturing plants compared and less intangible assets such as good will, advertising, and thus have limited growth opportunity. This is a reflection of low technological expertise level in the general Chinese firms. On the determinants of capital structure in India Chakraborty (2010) indicated that tangibility has positive relationship with the debt ratio of Indian firms. The findings are consistent with the Static Trade-off theory which postulates a positive relationship between long-term debt ratio and tangibility. The result implies that the firms with more fixed assets which can be used as collateral have a higher leverage ratio. Sheikh and Wang (2011) tested the factors influencing capital structure of manufacturing firms in Pakistan and revealed that tangibility is inversely related to the debt ratio. However, this finding is consistent with the assumptions of the agency theory which predicts that the tendency of managers to consume more than the optimal level of pre-requisites may produce an inverse relationship between collateral assets and the debt levels.

Bevean and Danbolt (2002) and Suto (2003) used tangible fixed assets over total assets as a proxy for tangibility of a firm and showed a significant result in their studies. Therefore, this proxy will be adopted in this study as well.

Harris and Raviv’s (1991) found that the results of the effect of the profitability are in conflict. Chang (1999) showed that profitability is positively related to debt ratio, while Ross (1977) and Panno (2003) showed that profitability is negatively related to debt ratio.

The conflicting results of the relationship between profitability and financial leverage can be explained from different points of view based on static trade-off theory and pecking-order theory. Firstly, the static trade-off theory predicts a positive relationship between profitability and leverage because a firm with higher profit would require a greater tax shelter and would be able to take up a higher financial leverage.

According to pecking-order theory, managers will prefer internally generated funds to external financing when they cannot credibly convey inside information to outsiders. First, managers will choose internal finance. Secondly, managers will choose to borrow when their investment cannot be met by internal finance. The managers will only issue the equity as the least preferred choice when the options of borrowing are exhausted. Furthermore, as mentioned earlier, debt financing is obligated to a fixed interest payment regardless of the company’s performance. Thus, in the short run, if debt financing is the dominant mode of external financing, the changes in profitability will be negatively correlated with changes
in leverage. Rajan and Zingales (1995) showed that firm profitability has a negative relationship with debt ratio in 4 of 7 industrial countries. From their study of firms in Malaysia, Suto (2003) and Wong (2004) showed that capital structure of the firm is inversely related to the profitability of companies in different industries in Malaysia. As profitable firms are likely to have more retained earnings, we expect a negative relationship between profitability and leverage.

Chen and Yu (2011) examined the effects of FDI, export and firm-related characteristic variables on the debt ratio of 566 Taiwanese firms. Their results showed that profitability has inverse relationship with debt ratio. It provides further confirmation to the Pecking-order theory that suggests firms with higher profitability had large amounts of internally-generated funds that they used for their operations, as opposed to external debt financing. But Chen (2004) investigated the determinants of capital structure in Chinese-listed firms and found that profitability decreases the debt ratio of companies. This is in line with the Pecking-order theory. However, Chen (2004) explained that there are maybe other reasons for this negative relationship rather than those proposed by Pecking order theory. The listed firms are attracted by equity finance due to the substantial capital gains in the secondary markets. In addition, the corporate governance problems and the lack of enforcement of company laws provide no adequate investment protection to the individual shareholders. Share capital has become a “free” source of finance. Management prefers equity financing rather than debt financing. Tax effects predicted by the trade-off model are rather limited in China. This is because the state is still the controlling stakeholder of firms and the owner of banks as well as the beneficiary of tax, which reflects China’s status as a centrally planned economy. This induces firms to use equity finance as much as possible.

Sheikh and Wang (2011) tested the determinants of manufacturing firms in Pakistan using panel data for a sample of 160 companies listed on Karachi Stock Exchange during 2003 -2007. They found that profitability is inversely related to the debt ratio of firms in Pakistan, which confirms that firms finance their activities following the financing pattern implied by the pecking order theory. Moreover, high cost of raising funds also restricted Pakistani firms to rely only on internally generated funds because of relatively limited equity markets combined with lower levels of trading. This result is supported by the finding by Chakraborty (2010) which suggests negative relationship between profitability and debt ratio of Indian companies.
Schmukler and Vesperoni (2000) studied the relationship between firm’s financing choices and financial integration from emerging countries. The explanatory variables of financial leverage are grouped into four different categories: (1) firm specific characteristics, (2) access to international capital markets, (3) macroeconomic factors (namely financial liberalization, crises and financial development), and (4) country effect. The specific variables included are logarithm of firms’ net assets (which is proxy for size of the firm), the ratio of firm’s net assets over total assets to represent the asset tangibility, profitability defined as the ratio of firms profits after tax over total sales and production mix which is a time-invariant dummy variable that takes a value of one if the firm is a producer of tradable goods and zero otherwise. The results of the study showed that larger firms with more tangible assets extend their debt maturity. Higher profits are associated with more internal financing, less leverage and shorter debt maturity. Firms producing tradable goods in East Asia have shorter maturity and higher internal financing. The data suggest that firms with access to international markets increase their long-term debt and lengthen their debt maturity structure. And when more equity is traded in international markets, firm increases short-term loan. According to Harris and Raviv (1991), the consensus is that “leverage increases with the fixed assets, non-debt tax shields, investment opportunities, and firm size decreases with volatility, advertising expenditure, the probability of bankruptcy and uniqueness of the product.

3.0 Methodology

Method of Data Collection

The study made used of secondary data. The secondary data were generated from financial statements of five manufacturing companies namely: Flour Mills Plc, Honey-Well Plc, Dangote Floor Mills, Cadbury Nigeria Plc and Nestle Foods Plc Covering the period 2010-2018.

Model Specification

This study made used of Pooled-Ordinary Least Square method. This method was chosen simply because of the result of the unit root test on all the variables which shows that the variables are stationary at levels. This conforms to rules of application of the tool. Also, the variables in question are good for predicting and forecasting because of their stationarity. The model for this study is shown below;

\[ Y = F(X_1, X_2) \]

Model Re-specification
EPS = f(E, D) ii

Model Equation ii Model in Regression Form:
EPS\_i = \alpha_0 + \beta_1 E + \beta_2 D + \epsilon_i iii

Where;
EPS = Earnings Per Share
E = Equity,
D = Debt
\alpha_0 = Constant Term
\beta_{1-2} = Slope

Note that, \alpha_0, \beta_{1-2} are parameters of explanatory variables.
\mu = Error Term

The a-priori expectation provides expected signs and significance of the values of the coefficient of the parameters under review on the part of the empirical evidence and theoretical assertions. All the incorporated variables in the modified model are expected to contribute either positively or negatively to manufacturing sector (Flour Mills Plc, Honey-Well Plc, Dangote-Group Plc, Cadbury Plc, and Nestle Plc).

This can be expressed symbolically as follows:
\alpha_0 > 0
\beta_1 > 0
\beta_2 > 0
\beta_3 > 0
\beta_4 > 0

4.0 Data presentation and analysis

Descriptive Statistics

The summary statistics of Earnings per share (EPS), Equity and Debt are shown and interpreted below;

<table>
<thead>
<tr>
<th></th>
<th>DEBT</th>
<th>EPS</th>
<th>EQUITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>7.218265</td>
<td>1.519903</td>
<td>7.742838</td>
</tr>
<tr>
<td>Median</td>
<td>7.259300</td>
<td>1.243250</td>
<td>7.654100</td>
</tr>
<tr>
<td>Maximum</td>
<td>8.343000</td>
<td>2.745800</td>
<td>8.885700</td>
</tr>
<tr>
<td>Minimum</td>
<td>6.079100</td>
<td>1.000000</td>
<td>7.043600</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.720478</td>
<td>0.482495</td>
<td>0.637319</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.065670</td>
<td>1.127787</td>
<td>0.623594</td>
</tr>
</tbody>
</table>

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The summary statistic indicated that the average growth of earnings per share (EPS), Equity (E), and Debt (D) stood at 1.51, 7.74, and 7.21 respectively. This implies that the earnings per share (EPS) of the companies, Equity (E) and Debt (D) average growth of 1.51, 7.74, and 7.21 respectively within 2010 to 2017.

Furthermore, Table 1 also indicated that the standard deviation of Earnings per share (EPS), Equity (E) and Debt (D) stood at 0.48, 0.63, and 0.72 respectively. It means that annual deviation of annual growth of Earnings per share (EPS), Equity (E), and Debt (D) from its long-run are 0.48, 0.63, and 0.72 respectively.

**Panel Unit Root Test Summary:**

In view of the time dependent feature of our data, the variables were tested for unit root using the summary panel unit root test at level series. The null hypothesis was accepted showing that there’s unit root meaning that the variables are not stationary which connotes that the variables cannot be used for forecasting. As a result of this, the variables were examined under the first difference. The null hypothesis was rejected which connotes that there’s no unit root test that is, the variable are stationary that they can be used for forecasting. The results of the first difference summary panel unit root tests are presented below:

<table>
<thead>
<tr>
<th>Variable</th>
<th>ADF Test Statistic</th>
<th>Order of Integration</th>
<th>Decision</th>
<th>PP Test Statistic</th>
<th>Order of Integration</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt</td>
<td>77.4934 (0.00)</td>
<td>1(1)</td>
<td>Stationary</td>
<td>71.8248 (0.00)</td>
<td>1(1)</td>
<td>Stationary</td>
</tr>
<tr>
<td>EPS</td>
<td>53.2129 (0.00)</td>
<td>1(1)</td>
<td>Stationary</td>
<td>54.0584 (0.00)</td>
<td>1(1)</td>
<td>Stationary</td>
</tr>
<tr>
<td>Equity</td>
<td>73.2627 (0.00)</td>
<td>1(1)</td>
<td>Stationary</td>
<td>82.2616 (0.00)</td>
<td>1(1)</td>
<td>Stationary</td>
</tr>
</tbody>
</table>

The above result shows that the p-values of all the variables in the study is less than 5%, which means that result is in compliance to the principle which state that null hypothesis should be rejected when p-value < 5% and accepted if reverse is the case. However, it is in lieu of this decision that the null hypothesis is rejected
in each table and an alternative hypothesis is accepted to show that the variables are stationary at first difference.

Co-Integration Test:

In this study, Kao residual model and Pedroni model of panel co-integration was employed to examine if there’s long association among the variables that is Earnings Per Share (EPS), Debt and Equity. The result shows that the p-value (0.0033) is less than 5%. Meaning we reject null hypothesis that says there’s no co-integration and accept the alternative ones. That is there’s long association or relationship among the variables. Find below is the output of Kao residual model.

Kao Residual Co-integration Test

Table 3: EPS EQUITY DEBT

<table>
<thead>
<tr>
<th></th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADF</td>
<td>-1.246365</td>
<td>0.0033</td>
</tr>
<tr>
<td>Residual variance</td>
<td>0.052207</td>
<td></td>
</tr>
<tr>
<td>HAC variance</td>
<td>0.021655</td>
<td></td>
</tr>
</tbody>
</table>

Summary Result of FMOLS

Table 4: Panel Fully Modified Least Squares result
Method: Panel Fully Modified Least Squares (FMOLS)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EQUITY</td>
<td>0.390330</td>
<td>0.172464</td>
<td>2.263259</td>
<td>0.0316</td>
</tr>
<tr>
<td>DEBT</td>
<td>-0.076438</td>
<td>0.184307</td>
<td>-0.414730</td>
<td>0.6815</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.870289</td>
<td>Mean dependent var</td>
<td>1.525693</td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.842494</td>
<td>S.D. dependent var</td>
<td>0.492568</td>
<td></td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>0.195485</td>
<td>Sum squared resid</td>
<td>1.070008</td>
<td></td>
</tr>
<tr>
<td>Long-run variance</td>
<td>0.025491</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above table is the summary of output of Fully Modified Least Square method employed in the study where the result shows that Equity has positive (0.39 or 39%) relationship with Earnings per share. That is a unit increase in equity will make earnings per share to increase by 39% or 0.39. Also, equity has significant effect in influencing earnings per share this is because the probability value of equity (0.0316) is less than 5%.
However, debt has negative relationship with earnings per share with a negative coefficient of -0.07. This means that a unit increase debt will make earnings per share to fall by 7% or 0.07. Debt is not statistically significant because it is probability value (68.15%) is more 5%. This connotes that debt has influence on earnings per share.

5.0 Conclusions
This study investigated the impact of equity and debt financing on firm’s performance of quoted manufacturing companies in Nigeria. The findings show that equity and debt have positive and negative relationship respectively with earnings per share but only equity is capable of influencing earnings per share. This is because, it is statistically significant. The literature of the study has shown clearly that equity is better but if debt can be better managed. In synopsis, equity financing has more tendencies to increase the size, profit and growth of the entity that is manufacturing firms in Nigeria.

5.1. Recommendation:
Considering the observed nature and findings discovered from this study:

i. Manufacturing companies should finance their company majorly by equity shares rather than debt.

ii. Reliable source of debt might be embraced and room should be given to convert debt to equity in order to reduce negative effects of growth or size of the companies.

iii. Good corporate governance principles and effective internal control system should be embraced by manufacturing companies so as to assist them in managing their limited financial resources.

References


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