

Debt Financing and Corporate Finance Performance: A Dynamic Investigation from Nigeria Quoted Firms

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Abstract

There are two components of corporate capital. This paper examined the effect of debt financing on the financial performance of quoted firms in Nigeria stock exchange using time series data from 2000-2017. The objective was to examine the controversial findings of scholars on the effect of capital structure on corporate performance of firms. Return on assets and return on equity was modeled as the function of debt equity ratio, debt ratio, equity ratio, total liability ratio and long term debt ratio. Multiple regressions with the aid of statistical package for social sciences were used as data analysis techniques. Model one found that a correlation coefficient (r) of .872 this implies that a very strong correlation exists between return on assets and explanatory variables. The coefficient of determination (r^2) is .678 which shows that 67.8% of the variation in Return on Assets is attributable to the variations in the financial leverage. Also, the F- value calculated of 8.338 has a correlation corresponding value of .004 which implies a good model utility. The test of significance conducted as shown in the tables above states that ROA has a calculated value of 242.032 and a corresponding significance value/probability value of .014. The positive sign of t-value (1.653) shows the direction of the variables. This therefore implies that when a financial leverage is well used, this leads to a better, reliable and fairer financial result that is objective and represent the true state of affairs in the food and beverage companies proportionately. Model two found that a correlation coefficient (r) of .772 this implies that a very strong correlation exists between return on assets and explanatory variables. The coefficient of determination (r^2) is .639 which shows that 63.9% of the variation in return on equity is attributable to the variations in the financial leverage. Also, the F- value calculated of 7.644 has a correlation corresponding value of .004 which implies a good model utility. The test of significance conducted as shown in the tables above states that ROE has a calculated value of 568.906 and a corresponding significance value/probability value of .003. The positive sign of t-value (3.310) shows the direction of the variables. This therefore implies that when a financial leverage is well used, this leads to a better, reliable and fairer financial result that is objective and represent the true state of affairs in the food and beverage companies proportionately. We recommend that management of the firms should work very hard to optimize the capital structure in order to increase the returns on equity and assets and that Management of Nigerian firms should increase their commitments into capital structure in order to improve earnings from their business transaction.

Keywords: Debt Financing, Corporate Finance Performance, financial leverage, return on assets, return on equity, Nigeria Quoted Firms.

INTRODUCTION

Every corporate organization exists to maximize shareholders wealth. This operational philosophy depended on internal factors of the firms such as financing decision and external factors such as monetary and macroeconomic variables. Financial leverage is traditionally viewed as the use debt component capital structure, through the use of fixed income securities, such as loans and bonds. It has a significant influence on the company's ability to achieve its ultimate goal, such as maximizing the shareholders wealth (Taani, 2012). Generally, increased in leverage results increase in return and risk (Tally, 2014). However, the use of leverage is associated with two different possible outcomes either positive such as maximizing the profit or negative such as minimizing the profits. Financing leverage is determined by profitability, corporate size, liquidity, cash flows, tax and dividend policy (Rajin, 2012). It is measured in terms of debt equity ratio, long term debt to total debt, total debt as percentage to of total asset and short term debt to total debt (Rehman, 2013). Financial leverage is intended to earn more on the fixed charges funds than their costs (Tally, 2014). The effect of financial leverage in maximizing the return of the

shareholders' is based on the assumptions that the fixed- charges funds such as the loan and debentures can be obtained at a cost lower than the firm's rate of return on net assets (Damouri, 2013).

According to the trade off theory (Kraus & Litzenger, 1973) the optimal capital structure is determined by balancing the positives & negative effects of financial leverage. In other words, balancing the benefits of debt financing, that includes: tax savings, reducing agency cost, with the cost associated with the debt, that include direct and indirect bankruptcy costs. Furthermore, the use of financial leverage is proven to be beneficial when the investment made by the leverage earn returns more than the cost of debt. These disadvantages are relatively small as compared to the tax shield that associates the use of financial leverage. On the other hand, financial leverage may have a negative impact if the investment that has been made did not achieve sufficient returns having no recognizable income to shield, meaning that returns is lower than the cost of debt the company will be at a higher risk due to the level of debt they undertook, resulting in reducing the overall value of the company.

The ambiguity in the theories further deepens the controversies on the relationship between financing leverage and firms' value. The applicability of the theories can better work in the business environment where the degree of market imperfection is less compared to the high degree of market imperfection such as the financial market of the developing countries like Nigeria where the market is characterize with information asymmetric and risk that can affect the performance of the firms contrary to theories. financial leverage have the advantages of tax shield benefits and the risk level associated with the debt financing makes it less expensive than equity financing., from investors point of view investing in debt securities is less risky than investing in publicly trading stocks, as debt securities is not subjects to the risks associated with the stock market, through debt financing the company is no longer affected by changes in the interest rate that occur in the market, the cost of issuing long-term securities such as: bonds & loan contracting is lower than the cost of stock issuing while the disadvantages includes increase in the company's financial risk, the nature of some of the types of debt financing (bonds) requires the company to have a large amount of money at maturity, as a result of the high risk that associate the use of the use of debt securities, the company becomes subject to more restrictions and obtaining long-term loans may be difficult for small companies that are new in the market. While the effect of financial leverage has well been documented in literature, empirical findings remain controversial , inconclusive and difficult to be adopted for policy making, therefore this study investigated the effect of financial leverage on the financial performance of quoted Nigeria firms.

LITERATURE REVIEW

Theoretical Review

In the theory of firm's capital structure and financing decisions, the pecking order was first suggested by Donaldson in 1961 and it was modified by Myers and Majluf (1984). It states that companies prioritize their sources of financing (from internal financing to equity) according to the principle of least effort, or of least resistance, preferring to raise equity as a financing means of last resort. Hence, internal funds are used first, and when that is depleted, debt is issued, and when it is not sensible to issue any more debt, equity is issued. Pecking Order theory tries to capture the costs of asymmetric information. It states that companies prioritize their sources of financing according to the law of least effort, or of least resistance, preferring to raise equity as a financing means of last resort.

According to Myers (1984), due to adverse selection, firms prefer internal to external finance. When outside funds are necessary, firms prefer debt to equity because of lower information costs associated with debt issues. These ideas were refined into a key testable prediction by Shyam-Sunder and Myers (1999), that the financing deficit should normally be matched dollar-for-dollar by a change in corporate debt. As a result, if firms follow the pecking order, then in a regression of net debt issues on the financing deficit, a slope coefficient of one is observed. Fama and French (2002) tested some qualitative predictions of the pecking order theory as against the qualitative predictions of the tradeoff model. In their findings, they suggested that more profitable firms are less levered and it is consistent with the pecking order. And also, those firms with greater investment opportunities are less levered as predicted by the tradeoff theory.

The trade-off theory refers to the idea that a company chooses how much debt finance and how much equity finance to use by balancing the costs and benefits. Trade-off theory allows the bankruptcy cost to exist. It states that there is an advantage to financing with debt (namely, the tax benefit) and that there is a cost of financing with debt (the bankruptcy costs and the financial distress costs of debt). The marginal benefit of further increases in debt declines as debt increases, while the marginal cost increases, so that a firm that is optimizing its overall value will focus on this trade-off when choosing how much debt and equity to use for financing. Empirically, this theory may explain differences in D/E ratios between industries, but it doesn't explain differences within the same industry.

The agency theory concerns the relationship between the principal (shareholders) and the agent of the principal. This suggests that the firm can be viewed as a nexus of contracts (loosely defined) between resource holders. An agency relationship arises whenever one or more individual, called principals, hire one or more other individuals, called agents, to perform some service and then delegate decision-making authority to the agents. The agency theory concept was initially developed by Berle and Means (1932), who argued that due to a continuous dilution of equity ownership of large corporations, ownership and control become more separated. This situation gives professional managers an opportunity to pursue their interest instead of that of shareholders Jensen and Runback, (1983). In theory, shareholders are the only owners of a company, and the task of its directors is merely to ensure that shareholders' interests are maximized. More specifically, the duty of directors is to run the company in a way which maximizes the long term return to the shareholders, and thus maximizes the company's profit and cash flow Elliot, (2002).

The free cash flow (FCF) theory considers the internal source of a firm's funds. However, FCF has costs associated with the way firms' managers' deal with FCF. The focus of the FCF theory is how to balance cash flow and the costs of FCF. Scott (1981) stated that if a firm has enough cash flow to pay for their expenses, particularly debt, it will be able to survive. He argued that firms' managers will be able to use the firm's history of cash flows to predict the firm's health and future performance. He linked this with the ability of current cash flows to predict future financing status.

Jensen (1986) introduced the FCF theory and its relationship with agency costs. He clarified the effect of cash flow and FCF on firms' performance. He argued that even if cash flow has a positive effect on corporate performance, FCF might have a negative effect on corporate performance. In the case of FCF, a firm's manager might waste it or invest it in negative net present value (NPV) projects. The role of debt in reducing the costs of FCF was first explained by Harris and Raviv (1990). Debt can reduce the agency costs of FCF because debt financing ensures that management is restricted to making efficient investment decisions. Furthermore, debt prevents managers from pursuing individual objectives, as this would increase the firm's default. As a result, according to this theory, high leverage would have a positive relationship with profitability. However, other studies have shown a negative relationship between debt and FCF. For example, Hart and Moore (1995) argued that long-term debt controls the ability of a firm's management to finance future investments. They stated that firms with high debt will find it hard to raise capital because new security holders will not want to have lower priority than existing creditors. Firms with low debt will attract new security holders because security holders will be the first priority to the firm. Hart and Moore (1995) believed that there is an optimal debt-equity ratio and mix of senior and junior debts if management undertakes unprofitable and profitable investments.

The market timing theory is one of the most recent theories discussing capital structure. It suggests that managers, depending on their definition of firm value, tend to issue equity when they feel that the market overvalues their company (Boudry, Kallberg & Liu 2010). Baker and Wurgler (2002) examined the effect of market timing on capital structure and found that low leverage firms are those that raise funds when their market valuations are high, while high leverage firms are those that raise funds when their market valuations are low. Thus, firms with low leverage are expected to be of high value. However, although issuing equity is often a result of good financial performance, it is not necessarily the reason for better financial performance, as this theory suggests. Rather, firms may use debt until the market overvalues their firm, and then will issue equity to obtain benefits from the firm's rising share price. This theory contrasts with theories such as the pecking order and trade-off theories.

Recent Studies of Mansor and Bhatti (2011) and of Mansor, Bhatti and Khan (2012) have showed that the reaction of Islamic mutual funds' performance relative to their conventional peers and to their benchmarks either in bullish or bearish markets is similar. During bullish times, they both have positive return, but during bearish markets they have

negative returns. However, the study of Mansor and Bhatti (2011) has proven that the return performance of the Islamic mutual funds is slightly better than the return performance of the conventional mutual funds during the bullish market. These findings support the idea of market timing theory from the perspective of financial firms.

Empirical Review

Rehman (2013) studies the relationship between financial leverage and financial performance in listed sugar companies of Pakistan. The results shows positive relationship of debt equity ratio with return on asset and sales growth, and negative relationship of debt equity ratio with earning per share, net profit margin and return on equity. This negative relationship between debt equity ratio and earnings per share (EPS) support the fact that as debt increases, the interest payment will also rises, so EPS will decrease.

Rajin (2012) investigates the influence of financial leverage on shareholders return and market capitalization, evidence of telecommunication sector companies in India. He found out that the nature of relationship and the state of influence of the financial leverage on shareholder's return and market capitalization individually indicates positive relationship between financial leverage and shareholder return but negative relationship between financial leverage and market capitalization.

Ujah and Brusa (2013) suggest that financial leverage and cash flow impact the degrees to which firms manage their earnings. They continue that it depends on economic group or industry a firm belongs to their degree and extent of managed earnings varies.

Obradovich and Gill (2013) indicates that larger board size negatively impacts the value of American firms and CEO duality, audit committee, financial leverage, firm size, return on assets and insider holdings positively impact the value of American firms. Pandey (2010) says that the variance and covariance and therefore beta depend on three fundamental factors such as; the nature of business, the operating leverage and financial leverage.

Enuju and Soocheong (2005) examine the effect of financial leverage on profitability and risk of Restaurant firms. They find that financial leverage does not influence the restaurant firms' profitability. It is noteworthy that the sign of financial leverage is positive meaning that more leveraged firms had more profits on average even though it was not statistically significant.

Nazir and Saita (2013) studies financial leverage and agency cost, an empirical evidence of Pakistan. The study found out that general and admin expense into to sales ratio is negatively related to all four leverage ratio.

Taani (2012) investigates impact of working capital management policy and financial leverage on financial performance. The study shows that firm's working capital management policy, financial leverage and firm size have significant relation to net income and also no significant impact on return on equity (ROE) and return on Assets (ROA).

Akbarian (2013) examines the investigation effect of financial leverage and environment risk on performance of firms of listed companies in Tehran stock exchange. The result shows that there is a negative relation between financial leverage and dividend per share and between market risk and economic risk with free cash flow per share positive significant. It also indicates that financial leverage, market risk and economic risk with return of equity have positive significant relationship.

Alcock, et al (2013) examines the role of financial leverage in the performance of private equity real Estate funds. The results indicates that funds overall are unable to deliver significant positive out performance on the basis of managerial skill that is unrelated to the exposure to the variation in the underlying market return. It also reveals that the impact of transaction costs, fees and other market frictions that are especially prevalent in the direct real estate investment industry, given the relatively low level of liquidity of the underlying assets. It further shows that excess fund return were approximately proportional to the excess market return, implying that these fund offers their investors effective exposure to the performance of the underlying property markets.

Akhtar, (2012) conducted a study aiming to discover the impact of leverage on corporate financial performance, answering whether the “companies with high rates of profitability are seeking to increase leverage, using a sample from the oil & energy companies sector, to measure the effect of leverage on the different performance measures, including: rate of return on assets index, return on equity, the number of times to cover benefits and debt, the ratio of dividends to equity, net operating profit, growth in sales, and earnings per share. The study concluded that the use of financial leverage results in improved financial situation, in other words showing that there is a positive relationship between leverage & the performance of the companies.

Subai'i (2012) also studied the relationship between financial leverage & return on assets in the Kuwaiti economic sector, having a sample that consisted of fifty-four companies from the Kuwaiti public shareholding companies. The study results showed that there is a positive relationship between financial leverage & return on investment for all of the economy sectors.

Al-Tally (2014), have also researched the effect of financial leverage on firms' financial performance in Saudi Arabia's public listed companies. The study sample was 57 publicly trading firms listed in Saudi stock exchange for the years 2002-2010. Independent variable used in the study was financial leverage & zakat whereas financial performance was used as dependent variable. To discover the relationship among the variables several techniques were used including: maximum & mean factor analysis, standard deviation, ANOVA and SPSS Software. The overall results concluded that positive relationship between financial leverage and performance. The studies mentioned above provided empirical evidence supporting the theory of the financial leverage positive effect on the performance of the company; however other studies that have been conducted on different samples showed different results.

Jameel (2013), where he concluded that the financial leverage negatively affects the accounting performance measures and the market value of the firms and this impact extends for several subsequent years. The objective of the study was to examine the impact of financial leverage on the different performance measures, and to discover which one of them would be the more affected by financial leverage. Testing the hypothesis on a sample that was extracted from firms listed at Palestinian Security Exchange (consisting of twenty publicly listed corporations during the period 2004-2011), using the multi regression model, and return on assets (ROA) return on equity (ROE), return on sales (ROS), and sales growth as accounting performance measures, and Tobin's q to measure & represent the market value of the company.

Hashemi and Zadeh (2012), also concluded from their study that companies that have high leverage will distribute less profits to shareholders when compared to companies with low leverage, as a result of the reversed correlation between financial leverage & dividend policy. The above was concluded when they conducted a study aiming to test the effect of financial leverage on dividend policy, using multiple regressions on a sample of 74 public joint stock companies of the companies listed on Tehran Stock Market in the period between 2003-2010.

Tanni, (2012) tested the effect of working capital policies & financial leverage on the performance of 45 Jordanian firms listed in the ASE stock exchange. Aiming to find the relationship between debt, size, and profitability using the SPSS statistics to determine the nature of the relationships mentioned above, test of correlation, ANOVA, and multiple regression analysis were performed. The finding indicated that firm's working capital management policies, financial leverage, and size have a significant relationship to the net income, ROE, and ROA. Furthermore, the study concludes that working capital policies and size have a positive effect on profitability/ performance, while financial leverage has a negative effect on profitability.

RESEARCH METHODOLOGY

The study adopted quasi experimental research design; relevant data were sourced from annual reports and financial statements of 10 selected firms in Nigeria stock exchange from 2000 to 2017.

Model Specification

In this study, the independent and dependent variables will be used in an equation called multiple regressions. This study is a time series study that covers 1990-2016.

$$CP = F(FL)$$

3.1

Disaggregating equation 1 to achieve the objective of the study, we have the following regression models

$$ROA = F(DER, DR, ER, TLR, LTDR) \quad 3.2$$

$$ROE = F(DER, DR, ER, TLR, LTDR) \quad 3.3$$

Transforming the equations above, to a testable form, we have the following equation

$$ROA = \beta_0 + \beta_1 DER + \beta_2 DR + \beta_3 ER + \beta_4 TLR + \beta_5 LTDR + \mu \quad 3.4$$

$$ROE = \beta_0 + \beta_1 DER + \beta_2 DR + \beta_3 ER + \beta_4 TLR + \beta_5 LTDR + \mu \quad 3.5$$

Where

ROA = Return on assets

ROE = Return on capital employed

DER = Debt Equity Ratio

DR = Debt Ratio

ER = Equity Ratio

TLR = Total Liability Ratio

LTDR = Long Term Debt Ratio

β_0 = Regression intercept

μ = Error term

Statistical Approach

The statistical approaches used in this study include:

- (i) **Coefficient of Determination (R^2):** This is used to measure the extent to which the independent variables in the model can explain changes on the dependent variable.
- (ii) **Correlation Coefficient (R):** This measures the strength and the extent to which the dependent and the independent variable are related.
- (iii) **T-Test:** This is used to measure the significance of the independent variables to the dependent variable and the hypothesis was tested at 5% level of significance and at 95% confidence interval. The hypothesis for this test is stated as follows:

Null Hypotheses; $H_0: \beta = 0$, (Statistically not significant)

Alternate Hypotheses; $H_1: \beta \neq 0$. (Statistically Significant)

And the decision rule states that “ H_0 ” should be rejected when T-statistics is greater than the critical value. But when the T-statistics is lower than the critical value, the “ H_0 ” is accepted with its conclusion.

- (iv) **F-Test:** This is used to find out the overall significance of the regression model at 5% level of significance. The hypothesis for this test is stated as:

Null Hypotheses; $H_0: \beta_1 - \beta_6 = 0$ (all slope coefficients are equal to zero)

Alternative Hypotheses; $H_0: \beta_1 - \beta_6 \neq 0$ (all slope coefficients are not equal to zero)

The decision rule for this test is that “ H_0 ” should be rejected when F-statistics is greater than the critical value of F. but when the F-statistics is lower, then the “ H_0 ” is accepted while the H_1 is rejected.

- (v) **Test for Autocorrelation**

The Durbin Watson statistics is used in this research to test for the presence of autocorrelation. When there is presence of autocorrelation, the First order autoregressive scheme will be employed to correct it. The hypotheses states that:

H_0 : $P = 0$ (There is serial independence in the errors)

H_1 : $P > 0$ (There is first order (AR) positive autocorrelation.)

When the Durbin Watson Statistics (DW-Stat) is lesser than lower Durbin Watson (D_L), the null hypothesis (H_0) is being rejected but if the Durbin Watson statistics is greater than the upper Durbin Watson (D_U), the null (H_0) is then accepted.

ANALYSIS AND DISCUSSIONS OF FINDINGS

The chapter deals with the presentation and analysis of the data collected. To test the hypotheses of this study, a multiple regression model is used. This is deemed as suitable due to the nature of the variables which are continuous rather than dichotomous categorical variables. The table that follows contains the data extracted from the financial statement of the quoted food and beverage firms which was used in running the regression and obtaining the results of the study. Multiple regressions have been used to estimate the relation between the independent variables of the study. The technique of ordinary least square was used to estimate the regression coefficient in the model of the study.

Presentation of Results

Test of Colinearity and Autocorrelation of the Variables

Table i: Tolerance and Variance inflation factor (VIF)

| | Tolerance | VIF |
|-------------|-----------|-------|
| DER | .905 | 1.104 |
| DR | .726 | 1.378 |
| ER | .746 | 1.340 |
| TLR | .834 | 1.198 |
| LTDR | .823 | 1.215 |

Source: SPSS 20.0

The tolerance value and the variance inflation factor (VIF) are two advanced measures of assessing multicollinearity between the independent variables of the study. In table 4.2, the variance inflation factors are consistently smaller than ten indicating complete absence of multicollinearity (Neter *et al*; 1996 and Johansen, 1999). This shows the appropriateness of fitting the model of the study within the four independent variables. In addition, the tolerance values are consistently smaller than 1.5 thus further substantiating the fact that there is no multicollinearity between independent variables (Tobachmel and Fidell, 1996).

Table ii: Durbin Watson and autocorrelation test

| Variables | Eigen Value | CONDITION INDEX | CONSTANT | DER | DR | ER | TLR | LTDR |
|-----------|-------------|-----------------|----------|-----|-----|-----|-----|------|
| 1 | 5.912 | 1.000 | .00 | .00 | .00 | .00 | .00 | .00 |
| 2 | .046 | 11.290 | .06 | .06 | .00 | .77 | .00 | .00 |
| 3 | .024 | 15.703 | .70 | .70 | .00 | .06 | .10 | .01 |
| 4 | .013 | 21.342 | .09 | .09 | .07 | .01 | .58 | .03 |
| 5 | .003 | 44.193 | .02 | .02 | .90 | .10 | .11 | .27 |
| 6 | .001 | 70.018 | .12 | .12 | .12 | .06 | .22 | .70 |

Durbin Watson Model

2.402

Source: SPSS 20.0

The table above illustrated a co linearity and autocorrelation; the results found that the Eigen values that correspond with the highest condition index and variance constants are less than 0.5 rule of the thumb. The Durbin Watson statistics of 2.402 shows the absence of multicollinearity, portraying a significant relationship between the dependent and the independent variables in the model.

Table 4 Correlation Matrices of coefficient of the variables

| | ROA | DER | DR | ER | TLR | LTDR |
|------|-------|-------|-------|-------|-------|-------|
| ROA | 1.000 | | | | | |
| DER | .186 | 1.000 | | | | |
| DR | .184 | .169 | 1.000 | | | |
| ER | 0.43 | .091 | .357 | 1.000 | | |
| TLR | -.164 | -.063 | -.122 | .300 | 1.000 | |
| LTDR | .056 | -.169 | .333 | .144 | -.121 | 1.000 |

Source: SPSS 20.0

When explanatory variables in the model have correlation of sufficient magnitude to negatively impact the model especially beta weight (via standard errors and statistical significance levels associated with beta weight), we say there exists collinearity or multi collinearity. According to Gujarati (2004). If multicollinearity is perfect in the sense of (exact linear relationship among variables), the regression coefficients of the X variables are indeterminate and their standard errors are infinite. If multicollinearity is less than perfect, as in (explanatory variable are inter-correlated but not perfectly), the regression coefficients, although determinate, possess large standard errors (in relation to the coefficients themselves), which means the coefficients cannot be estimated with great precision or accuracy.

A prior correlation analysis was carried out of the variables in order to detect multicollinearity problems and mitigate against the possible effects it could have on the study. Gujarati (2004), explained the existence of collinearity if the pair-wise correlation coefficient is high, and established a threshold of 0.5 and below to explain the acceptability of use of the variable in the model. The researcher therefore set a margin of below 0.5 (-0.5) to show weak linear correlation (positive or negative) between variables, hence higher degree of acceptability for use in the model due to weak possibility of multi-collinearity. Between 0.5 (-0.5) to 0.8 (-0.8) indicates a moderate collinearity and 0.8 to 1.0 strong multicollinearity and low acceptability to include the variables within the same models. There is no clear method to employ to eliminate multicollinearity, but expansion of observations, aggregating similar variables, and eliminating redundant variables from the equation, and so on, may reduce the problem of multicollinearity. However, variables need not to be eliminated from the model due to multicollinearity problems, because each explanatory variable has a special piece of information about the dependent variable.

Table 5 Effect of Financial Leverage on Return on Assets

| Variables Coefficient | DER | DR | ER | TLR | LTDR |
|-----------------------|--|---------|---------|---------|-------|
| Unstandardized Beta | .556 | -47.872 | -10.984 | -97.310 | .256 |
| Std Error | .799 | 120.830 | 176.097 | 423.200 | .388 |
| Standardized Beta | .157 | -0.50 | -.008 | -0.037 | .256 |
| T-Statistics | .695 | -3.96 | -.062 | -.230 | -.162 |
| Sig. T | .495 | .730 | .956 | .840 | -.898 |
| Constant α_0 | 242.032, T = 1.653, T-Sig = .114, | | | | |
| R | .872, R ² = .678, Adj R ² = .453 | | | | |
| F Ratio | = 8.338, F.Sig = .004 | | | | |

Source: SPSS 20.0

Interpretation

Table 5 above shows a correlation coefficient (r) of .872 this implies that a very strong correlation exists between return on assets and explanatory variables. The coefficient of determination (r^2) is .678 which shows that 67.8% of the variation in Return on Assets is attributable to the variations in the financial leverage. Also, the F- value calculated of 8.338 has a correlation corresponding value of .004 which implies a good model utility. The test of significance conducted as shown in the tables above states that ROA has a calculated value of 242.032 and a corresponding significance value/probability value of .014. The positive sign of t-value (1.653) shows the direction of the variables. This therefore implies that when a financial leverage is well used, this leads to a better, reliable and fairer financial result that is objective and represent the true state of affairs in the food and beverage companies proportionately.

Table 6 Correlation Matrices of coefficient of the variables

| Table 6 | ROE | DER | DR | ER | TLR | LTDR |
|-------------|-------|-------|-------|-------|-------|-------|
| ROE | 1.000 | | | | | |
| DER | .57 | 1.000 | | | | |
| DR | -.115 | .169 | 1.000 | | | |
| ER | .052 | .091 | .357 | 1.000 | | |
| TLR | -.004 | -.063 | -.122 | .300 | 1.000 | |
| LTDR | -.343 | -.169 | .333 | .144 | -.121 | 1.000 |

Source: SPSS 20.0

As explained in table 3 above when explanatory variables in the model have correlation of sufficient magnitude to negatively impact the model especially beta weight via standard errors and statistical significance levels associated with beta weight), we say there exists collinearity or multi collinearity. According to Gujarati (2004) if multicollinearity is perfect in the sense of exact linear relationship among variables, the regression coefficients of the X variables are indeterminate and their standard errors are infinite. If multicollinearity is less than perfect, as in explanatory variable are inter-correlated but not perfectly, the regression coefficients, although determinate, possess large standard errors in relation to the coefficients themselves, which means the coefficients cannot be estimated with great precision or accuracy. A prior correlation analysis was carried out of the variables in order to detect multicollinearity problems and militate against the possible effects it could have on the study. Gujarati (2004), explained the existence of collinearity if the pair-wise correlation coefficient is high, and established a threshold of 0.5 and below to explain the acceptability of use of the variable in the model. The researcher therefore set a margin of below 0.5 (-0.5) to show weak linear correlation (positive or negative) between variables, hence higher degree of acceptability for use in the model due to weak possibility of multi-collinearity. Between 0.5 (-0.5) to 0.8 (-0.8) indicates a moderate collinearity and 0.8 to 1.0 strong multicollinearity and low acceptability to include the variables within the same models. There is no clear method to employ to eliminate multicollinearity, but expansion of observations, aggregating similar variables, and eliminating redundant variables from the equation, and so on, may reduce the problem of multicollinearity. However, variables need not to be eliminated from the model due to multicollinearity problems, because each explanatory variable has a special piece of information about the dependent variable.

Table 7: Effect of Financial Leverage on Return on Equity

| Variables Coefficient | DER | DR | ER | TLR | LTDR |
|---|--------|--------|-------|--------|--------|
| Unstandardized Beta | -.061 | -2.661 | 1.674 | -2.864 | -5.374 |
| Std Error | .938 | 10.465 | 2.538 | 6.262 | 3.411 |
| Standardized Beta | -.014 | -.062 | .158 | -.104 | -.360 |
| T-Test | -9.465 | -8.254 | 6.660 | -.457 | -1.576 |
| Sig. T | .009 | .002 | .007 | .652 | 0.031 |
| Constant α_0 568.906, T = 3.310, T-Sig = .003, | | | | | |
| R .772, R2 = .639, Adj R2 = .477 | | | | | |
| F Ratio = 7.644, F.Sig = .009 | | | | | |

Table 7 above shows a correlation coefficient (r) of .772 this implies that a very strong correlation exists between return on assets and explanatory variables. The coefficient of determination (r^2) is .639 which shows that 63.9% of the variation in return on equity is attributable to the variations in the financial leverage. Also, the F- value calculated of 7.644 has a correlation corresponding value of .004 which implies a good model utility. The test of significance conducted as shown in the tables above states that ROE has a calculated value of 568.906 and a corresponding significance value/probability value of .003. The positive sign of t-value (3.310) shows the direction of the variables. This therefore implies that when a financial leverage is well used, this leads to a better, reliable and

fairer financial result that is objective and represent the true state of affairs in the food and beverage companies proportionately.

The results reveal a positive relationship of 5.5% between the value of debt equity ratio and return on assets and a positive relationship of 2.5% between long term debt ratio and return on assets but negative relationship of 47.8%, 10.9% and 97.3% between debt ratio, equity ratio and return on assets. The positive impact of the variables confirms the a-priori expectation of the results and validates the agency theory, the stakeholders' theory and the tradeoff theory as formulated by Mayer in 1983. The positive impact confirm the findings of Akhtar, et al (2012) whose result shows that there is a general perception that a relationship exists between the financial leverage and the performance of the companies' most of the financial performance indicators have positive relationship among leverage and the financial performance when compare with debt to equity ratio while the gearing ratio indicates negative relationships with the leverage indicators. However, equity ratio, total liability ratio and long term debt ratio have positive and significant impact on return on equity of the selected food and beverage firms. This finding is expected and confirms corporate theories such as the agency theory and the stake holders' theory. It validates existing empirical findings such as Akhtar, (2012) that the use financial leverage results in improved financial situation, in another words showing that there is a positive relationship between leverage & the performance of the companies, Subai'i (2012) that there is positive relationship between financial leverage & return on investment for all of the economy sectors,

Al-Tally (2014) that positive relationship between financial leverage and performance and the findings of Krivogorsky et al (2009) but contradict the findings of Enuju and Soocheong (2005) that financial leverage does not influence the restaurant firms' profitability, Nazir and Saita (2013) that general and admin expense into to sales ratio is negatively related to all four leverage ratio, Akbarian (2013) that there is a negative relation between financial leverage and dividend per share and between market risk and economic risk with free cash flow per share positive significant, Rao et al. (2007) also confirm the negative relationship between leverage and performance result, Jelinek (2007) that firm experiencing an increase in financial leverage during a five year period gradually compared to those which had high leverage degree in the same period has performed less earnings management and the findings of Alcock, et al (2013) that funds overall are unable to deliver significant positive out performance on the basis of managerial skill that is unrelated to the exposure to the variation in the underlying market return.

The result implies that the more quoted manufacturing firms mix their equity and debt properly, the more return to be generated on equity, assets and investments. The study reveals that the performance indicators of the sampled quoted food and beverage firms can be explained by the influence of financial leverage In addition, Nigerian quoted firms performed remarkably well within the period of the study as shown by the data computed from the financial statement. Leverage has significant effect on their profitability.

CONCLUSIONS AND RECOMMENDATIONS

This study investigates the effect of financial leverage on the profitability of quoted food and beverage firms in Nigeria. The problem of the study therefore emanated from at least two reasons: First, the reform in the Nigerian financial market was aimed at simplifying the source of both equity and debt capital for better performance of the quoted firms. For instance the deregulation of interest rate and the financial market was aimed at reducing the cost of capital which is the prerequisite for corporate profitability, second, to validate existing studies on the relationship between financial leverage and profitability of food and beverage firms.

In view of the above, the study hypothesized a no significant relationship between measures of financial leverage and two profitability indicators of the quoted food and beverage firms namely; return on equity and return on assets. The findings of the research are based on the result of the tested hypotheses. The result of the study reveals that financial leverage measures have a significant effect on the profitability of the quoted food and beverage firms.

In accordance with the research finding that financial leverage explain the variables of quoted firm's profitability, the study concludes as follows. Firstly, both empirical and statistical evidence on the effect of financial leverage on the two profitability indicators namely return on equity and return on assets of the quoted food and beverage firms have significant effect on profitability. From the financial leverage measures, debt equity ratio, debt ratio have negative impact on return on assets, while equity ratio, total liability ratio and long term debt ratio have positive impact on the dependent variable. Debt equity ratio and long term debt have positive impact on return on capital employed while debt ratio, equity ratio and total liability ratio have negative impact on the dependent variable.

Secondly, the study also concludes that concludes that financial leverage measures of the quoted food and beverage firms fluctuates over the period covered in the study. This may be because of management attempt to formulate optimal capital structure of the firms.

Recommendations

- The management of the firms should work very hard to optimize the capital structure in order to increase the returns on equity and assets. They can do that through ensuring that their capital structure is optimal.
- The Management of Nigerian firms should increase their commitments into capital structure in order to improve earnings from their business transaction.
- There is need to caution against the apparent benefits of greater leverage simply as a device for controlling managerial opportunistic behavior. First, debt and equity represent different constituencies with their own competing, and often mutually exclusive, goals. Second, as the level of debt increases, the capital structure can change from one of internal control to one of external control.
- Investors and stakeholders of the quoted food and beverage firms should also
- consider the leverage level of any firm before committing their hard earned money as the strength of a firm financing mix determine the quantum of their returns.

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