The Effect of Capital Structure on the Financial Performance of Manufacturing Firm's in Nigeria (2008-2014)

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Abstract
This research work investigates the effect of capital structure on the financial performance of manufacturing firms in Nigeria. The secondary data of which the published annual reports for the period 2008-2014 were employed as the key source of data collection for ten sampled manufacturing firms. The relationship between capital structure and financial performance was determined using panel data, variables of return on assets and returns on equity were used to measure the financial performance, also variables of debt-equity ratio, asset turnover and age of firm were used to measure capital structure of the sampled manufacturing firms. This study observed that debt-equity ratio has a negative but statistically significant effect on financial performance, further, asset turnover has a positive and significant effect on financial performance also age of firm has a negative insignificant effect on financial performance of the sampled manufacturing firms as measured by Return on assets. However, the study also revealed that the debt-equity ratio has positive and insignificant effect on financial performance, also asset turnover has a positive and significant effect on financial performance, and the age of firm has negative but statistically significant effect on financial performance of the sampled manufacturing firms as measured by Return on equity. The present study recommends that management should be careful when using debt as its source of financing its activities. The benefit of financing with debt is that there will be no tax duties accrued to borrowed funds in an organization. Therefore, management should seek to finance their activities with retained earnings and use debt as a last option as supported by the pecking order theory.

Key word: Capital Structure, Financial Performance, Manufacturing Firms, Nigeria, Return on Asset, Return on Equity

1.1   Background of the Study

Capital structure is the most significant part of financing for a firm and financing manager is concerned with the determination of the best financing decision in terms of the combination of debt and equity to be used for his firm. Capital structure decision is the mix of debt and equity that a company uses to finance its business which is very necessary for its efficient operation (Damodaran, 2001). According to Lim (2012), capital structure refers to the way a firm generates the money to finance its operations and the manner it assigns these financing

options that he has chosen to its balance sheet. It represents the total capital of a firm in terms of debt and equity combination to finance a firm's operations.

The idea of capital structure remains undiscovered until the Modigliani & Miller (1958) expatiated in its "Capital structure irrelevancy theory" That the market value of a firm is determined by its earning power and by the risk of its underlying assets, and that its value is independent of the way it chooses to finance its investments or distribute dividends. He affirms the irrelevant of debt equity ratio for the value of the firm.

Firms can obtain funds from either external or internal sources. Internal sources of funds include retained earnings while external sources include loans from financial institutions, trade credit, issuance of loan stock, and issuance of equity shares. The creation of capital structure can influence the governance structure of a firm, which, in turn, may influence the ability of a firm to make strategic choices (Jensen, 1986). Capital structure is an effective tool used to minimize the cost of capital. There have been considerable debates, both in theoretical and empirical researches on the nature of relationship that exists between a firm's choice of capital structure and its market value. Debates have centered on whether there is an optimal capital structure for an individual firm or whether the proportion of debt usage is relevant to the individual firm's value (Baxter, 1967).

The primary objective of a firm is to maximize the wealth of its shareholders. By way of maximizing it's earning per share or net income (Jensen and Meckling, 1976). A way to achieve that is to minimize its cost of financing. Firms nowadays maintain a mix of debt and equity, but the problem is that which is proportionate of debt and equity has greater benefits against lesser costs as both sources have different cost and rate of return. (Khan, 2012; Amjed, 2011) i.e. short term debts (STD) and long term debt (LTD), both of them have different rate of returns an investor will ask for, due to its duration difference and the risk attached.

According to Umar (2012), Debt and Equity are the main financing options used by all the firms. For the purpose of operating a firm, intensity of debt or equity option used by the firm to finance its operations represents the firm's capital structure. If the organization is financing through debt they have to pay the interest to the bank and if they are financing through equity they have to give the dividends to the shareholders from their profit and sometimes generate the retained earnings account that they did not distribute to the shareholders but is reflecting in their profit.

Financial performance evaluation is regarded as a useful step in attaining a self-evaluation method and consequently the improvement of accountability power (Mehragan and Golkani, 2012). Some scholars have considered performance evaluation as a part of the emerging movement of accountability. They believe that performance evaluation is one of the best methods of employing an accountability approach. Financial performance evaluation is itself in the need of some indexes through which to evaluate corporate performance. Performance evaluation indices are in fact an action guide from what it is towards what it should be. Evaluating the performance of firms and factories can act as a guideline that paves the way for future decisions concerning investment, development and most importantly, control and supervision (Tehrani and Rahnama, 2006).

Financial performance is a subjective measure of how fit a firm can utilize its' assets from its' primary business to generate revenues. In particular, Erasmus (2008) noted that financial performance measures the profitability and liquidity among others and as such provided a valuable tool to stakeholders to appraise the past financial performance and the current position of a firm. Brigham and Gapenski (1996) argued that in theory, the Modigliani and Miller (1958) model was valid however in practice, bankruptcy costs did exist and that these costs were directly proportional to the debt levels in a firm. This conclusion implied a direct

relationship between capital structure and financial performance of a firm. In other words, Capital structure is an important aspect of a company in decision-making and evaluation of financial performance. As capital is an uncertain but critical resource for all firms, suppliers of finance are able to exert control over firms (Harris and Raviv, 1991).

The issue of finance is so necessary that it has been identified as one of the reasons for business failure in Nigeria today. Debt and equity are the two major classes of liabilities, with debt holders and equity holders representing the two types of investors in the firm. Each of these is associated with diverse levels of risk, benefits, and control. While debt holders exert lower control, they earn a fixed rate of return and are protected by contractual obligations with respect to their investment. Equity holders are the residual claimants, bearing most of the risk and have greater control over decisions. An appropriate capital structure is a critical decision for any business organization. Therefore it is important that a firm chooses an appropriate capital structure that will enable it achieve financial performance as it competes in an increasingly challenging business environment. This is so as capital structure is a crucial factor for a firm if it is expected to boost its financial performance significantly.

There have been conflicting results on the study of the relationship between capital structure and financial performance. While some discovered a positive correlation (Javed and Akhtar, 2012; and (Mubeen and Akhtar, 2014; Yung Chien, 2013). On the other hand, some authors noted a negative relationship between capital structure and financial performance (Khalaf, 2013; Robert, 2013; Lawal and Edwin, 2014). We equally noted that, most studies applied descriptive analysis or correlation analysis which does not provide convincing evidence on the nature of the relationship between capital structure and financial performance.

Arising from the above gap is the need to proffer alternative approach to this study on the examination of the effect of capital structure on the financial performance of a firm which is the main focus of this study so as to derive better result. In achieving the goal stated above, the study will focus mainly on the empirical review of ten (10) manufacturing firms quoted on the Nigeria Stock Exchange. This study will examine the variables from the annual reports of selected manufacturing firm's for the periods 2008-2014 (seven years).

2.1 Literature Review

The review of literature will focus on theoretical and empirical perspective. The basis of the study is to ascertain the role capital structure played in determining financial performance.

2.2 Theoretical Review

The first theory of interest is Modigliani and Miller (1958) theorem, which specifies that how a firm finances its operations is irrelevant. In particular, it states that the value of a firm is independent of its' capital structure making capital structure irrelevant to the firms. Thus the value of a firm remains the same regardless of whether it finances its operations with debt or equity because the cost of capital is constant making capital structure irrelevant. The assumptions made by Modigliani and Miller are; Perfect and frictionless markets, no transaction costs, no default risk, no taxation, both firms and investors can borrow at the same interest rate; there is homogeneous expectation homogeneous risk and equal access to all relevant information.

However in criticizing and improving Modigliani and Miller, Baxter (1976) added the issue of bankruptcy costs and their impact on the value of the indebted firm. These costs include liquidation fees, legal fees and reorganization costs, which would result from the firm going bankrupt. Hence a firm with a higher debt would incur higher bankruptcy costs than one with less debt. Berens and Cuny (1995) on the other hand criticized the theorem proposition from corporate tax point of view. He argued that if a firm's value is an increasing function of indebtedness, due to tax deductibility of the interest payments on debt, then it implies that the

more debt a firm employs the less tax it would pay, indicating that the value maximizing (optimal) capital structure should be all debt, since the tax benefits are maximized.

The second theory of interest is the Tradeoff Theory propounded by Myers (1984) stipulates that the firm's capital structure will involve the trade-off between the tax advantage of debt and various leverage related costs. Due to differences in the characteristics of firms, target leverage ratios will vary from firm to firm. Institutional distinctions, such as different financial systems, tax rate and bankruptcy law etc., will also lead the target ratio to vary across countries. The theory predicts that firms with more tangible assets and more taxable income to shield should have high debt ratios. Firms with more intangible assets, whose value will dissolve in case of liquidation, should rely more on equity financing. In terms of profitability, trade-off theory predicts that more profitable firms should mean more debt-serving capacity and more taxable income to shield, thus a higher debt ratio will be anticipated. Under trade-off theory, the firms with high growth opportunities should borrow less because they are more likely to lose value in financial distress.

The third theory of importance is the pecking order theory as propounded by Myers (1984) which stated that firms prefer internal sources of finance, they adapt their target dividend payout ratios to their investment opportunities although dividends and payout ratios are gradually adjusted to shifts in the extent of valuable investment opportunities. In addition, Myers (1984) stated that in the occurrence that external finance is required, firms are most likely to issue the safest security first that is to say they start with debt then possibly convertible debt then equity comes as last resort. In summary, Myers' argument was such that businesses adhere to a hierarchy of financing sources and prefer internal financing when available. If external financing were necessary, debt would be preferred over equity. Pandey (2005) also agreed with Myers' argument when he noted that managers always preferred to use internal finance and would only resort to issuing shares as a last resort. He proceeded to add that the pecking order theory was able to justify the negative inverse relationship between profitability and debt ratio within an industry.

However the theory has some limitations since it does not explain the influence of taxes, financial distress, security issuance costs, agency costs, or the set of investment opportunities available to a firm upon that firm's actual capital structure. It ignores the problems that can arise when a firm's managers accumulate so much financial slack that they become immune to market discipline. As such the theory is offered as a complement to, rather than a substitution for, the traditional trade-off model.

The last theory to be considered here is the Agency Costs Theory propounded by Hunsaker (1999) which hinges firm's capital structure on agency costs. The costs related to equity issue may include; the monitoring expenses of the principal (the equity holders), the bonding expenses of the agent (the manager), reduced welfare for principal due to the divergence of agent's decisions from those, which maximize the welfare of the principal. Besides, debt issue increases the owner-manager's incentive to invest in high-risk projects that yield high returns to the owner-manager but increase the likelihood of failure that the debt holders have to share if it is realized. If debt holders anticipate this, a higher premium will be required which in turns increase the costs of debt. The agency costs of debt include the opportunity costs caused by the impact of debt on the investment decisions of the firm, bond expenditures by both bondholders and the owner-manager and the costs affiliated with bankruptcy and reorganization Hunsaker (1999). Since both equity and debt incur agency costs, the optimal debt-equity ratio involves a tradeoff between the two types of cost. Agency costs are due to the conflicts of interest between firm's owners and managers. Jensen and Meckling (1976) introduced two types of conflicts: These are Shareholder-managers Conflict which emanates from separation of ownership and control and shareholders – bond holders

conflict which arise from shareholders or the representatives making decision to transfer wealth from bond holders to shareholders.

2.3   Empirical Review

Examination of various studies on the effect of capital structure on the financial performance of firms present divergent views. While some noted a positive relationship between capital structure and firm performance (Mubeen and Akhtar, 2014;Mwangi, 2010; Yung Chien, 2013;Salim, 2012; Margratis & Psillaki, 2002; Gill, 2011;Kannad-Hasan, 2011; Javed and Akhtar 2012; Adesina, Nwidobie & Oluwatosin, 2015). However other studies obtained negative relationship between capital structure and financial performance (Robert, 2013; Khalaf, 2013; Jude Leon, 2013; Muhammad and Madiha, 2015; Lawal and Edwin, 2014; Naizuli, 2011; Osuji&Odita, 2012; Mykhalio. L, 2013; Mwangi. M &Birundu. E.M, 2015; Do Xuan. Q and Wu Zhong. X, 2014; Zertun and Tian, 2007). Nevertheless, some research work have revealed mixed results of both positive and negative correlation on the relationship between capital structure and financial performance using several proxies for capital structure on both long and short terms (Krishnan and Moyer, 1997; Al-Taani, 2013;Ebaid, 2009; Abor, 2005;Tianyu, 2013; Saeedi and Mahmoodi, 2011; Abdullah, 2014)**.**

This empirical study commence with the literatures that have found a positive relationship between capital structure and financial performance of a firm. Mubeen and Akhtar (2014) examined the effect of capital structure on the financial performance of 155 Textiles firms between 2006 and 2011 using ROA, ROE and EPS as proxy for financial performance. The results of regression analysis shows that the capital structure positively impact the firm's financial performance and shareholders Wealth. Following similar result the study by Mwangi (2010) on capital structure of firms listed at the Nairobi Stock Exchange identified a strong positive relationship between leverage and return on equity, liquidity, and return on investment. Yung (2013) in his study on the relationship between capital structure and financial performance of Taiwan listed Photovoltaic companies using structural equation modeling (SEM) noted a significantly positive relationship.

Advancing this study further, Salim (2012), investigated the relationship between capital structure and firm performance in Malaysia using panel data of 237 listed companies in Bursa Malaysia Stock exchange between 1995 and 2011 which he dichotomized into six sectors and his Tobin's Q result revealed that capital structure dichotomized into long and short term positively impacts on the firm's financial performance.

The study by Margaritis and Psillaki (2010) in France and that of Samuel (201 using panel data of 257 firms in South Africa anaysed with GMM noted positive significant relationship between financial leverage and firm performance. In similar study by Abhor (2005) and Gill (2011) on the effect of financial leverage on 272 American services and manufacturing firms listed in New York stock exchange shows also positive relationship between short term debt and total assets and profitability. This trend of positive relationship between financial leverage and performance of firms was also noted in the study by Kannad-hasan (2011) using pooled regression on 95 Indian Pharmaceutical firms.

In Nigeria, Adesina, Nwidobie and Oluwatosin (2015) in their study on the impact of capital structure on the financial performance of banks in Nigeria using sampled 10 banks quoted in Nigerian stock exchange between 2005 and 2012 using Ordinary least square regression analysis noted a significant positive relationship with the financial performance of banks in Nigeria.

The study on the effect of capital structure on financial performance was not a story of complete relationship as many studies discovered a negative relationship. For instance, Robert (2013) in his investigation of the relationship between capital structure and the financial performance of 61 firms listed on the Nairobi Securities Exchange, Kenya observed

an inverse relationship. In the same vein, Khalaf (2013) in his study of the relationship between capital structure and firm performance of 45 manufacturing companies listed in the Amman Stock Exchange in Jordan used multiple regression analysis to establish a negative relationship. Muhammad & Madiha (2015), in their study of the impact of capital structure on firms' financial performance in Construction and Material (Cement) Sector of Karachi Stock Exchange also noted negative relationship. Jude Leon (2013) investigated the relationship between capital structure and the financial performance of 30 listed manufacturing firms in Sri Lanka from 2008 to 2012 discovered significant negative relationship between leverage and return on equity.

Do Xuan. and Wu Zhong. (2013) investigates the impact of ownership structure and capital structure on firms' financial performance in the context of emerging transitional economy. It covers 134 non-financial companies listed on the Ho Chi Minh Stock Exchange (HoSE), from 2009-2012. Multi regression analysis was used to test the impact of ownership structure, capital structure on firms' financial performance. The result obtained indicated that capital structure is significantly inversely correlated with firms' financial performance. Equally Zertun and Tian (2007) investigated the effect of capital structure on corporate performance using panel data of 167 Jordanian companies during 1989- 2003. The study showed that a firm s capital structure had significantly negative impact on the firm's performance measures, in both the accounting and markets measures.

The studies from Nigeria were not left out of this discussion. Lawal and Edwin (2014), examined the effect of capital structure on firm's performance with a case study of 10 manufacturing companies in Nigeria from 2003-2012 noted a negative relationship between capital structure and firms financial performance. In a related study by Osuji and Odita, (2012), on the impact of capital structure on financial performance of Nigerian firms using a sample of thirty non-financial firms listed on the Nigerian Stock Exchange during the seven year period, 2004 -2010. The result of panel data for the selected firms shows that a firm's capital structure has a significantly negative impact on the firm's financial performance proxy with Return on Asset,(ROA), and Return on Equity,(ROE).

Some other studies came up with mixed results due to the effect of each component of debt. For instance, Ebaid (2009) carried out a study to investigate the impact of choice of capital structure on the performance of firms in Egypt. Performance was measured using ROE, ROA, and gross profit margin while Capital structure was measured by short-term debt to asset ratio, long-term debt to asset ratio, and total debt to total assets. Multiple regression analysis was applied to estimate the relationship between the leverage level and performance. The study indicated that capital structure has little or no impact on a firm's performance. On the other hand, in the study by Abor (2005) the ratio of short-term debt to total asset (STD) and total debt to total asset (TTD) were positively correlated to the company profitability, while a negative relationship was found between ratio of long-term debt to total asset (LTD) and profitability. Tianyu (2013) in his own study examined the influence of capital structure on firm's performance in both developed and developing economies. A sample of 1200 listed firms in Germany and Sweden and 1000 listed firms in China for the period 2003-2012 was used in his study.

Applying OLS regression method, it was documented that capital structure has a significant negative effect on firm's performance in China a sample of Asia country, whereas, significant positive effect was noted in two European countries, of Germany and Sweden, before financial crisis. Saeedi and Mahmoodi (2011) examined the relationship between capital structure and performance of 237 listed firms in the Tehran Stock Exchange in

Malaysia. Tobin's Q reports that there is a significantly positive relationship between short term debt (STD) and long term debt (LTD) while significant negative relationship was noted between total debt (TD) and the performance of the firm. According to the study market measures of performance are positively related to capital structure and whereas ROA is positively related to capital structure, no significant relationship exists between ROE and capital structure. The findings by Saeedi and Mahmoodi (2011) indicate that financial leverage may affect different measures of performance in different ways.

Abdullah (2014) empirically investigates the impact of capital structure on the performance of non-financial firms operating in Saudi Arabia as one of emerging or transition economies. Panel econometric technique called fixed effect regression was used for the period between 2004 and 2012.Sample data includes 74 companies. The study analyzes the relationship between capital structure proxy with short-term debt (STD), long-term debt (LTD) and total debt (TD) and the operating performance was proxy with return on assets (ROA) and return on equity (ROE). The firm's size that was found in the literature to have an influence on the performance of a firm is used as a control variable. The study finds that STD, LTD and TD have significant impacts on ROA. While only LTD has significant impacts on ROE. Firm size has significant impacts on firm performance when ROE is a dependent variable and no impact on firm performance when ROA is dependent variable.

3.1 Theoretical Framework

For the purpose of this study we will adopt the Pecking order theory by Myers (1984) as modified by Oke and Afolabi (2010) to suit the objective of this study.

This theory maintains that business adhere to a hierarchy of financing sources and prefer internal financing when available and debt is preferred over equity if external financing is required (equity would mean issuing shares which meant "bringing external ownership" into the company). Thus, the form of debt a firm chooses can act as a signal of its need for external finance. The pecking order theory is popularized by Myers (1984) when he argued that equity is a less preferred means to raise capital because when managers (who are assumed to know better about the true condition of the firm than investors) issue new equity, investors believe that managers think that the firm is overvalued and managers are taking advantage of this over-valuation. As a result, investors will place a lower value to the new equity issuance.

3.2 Model Specification

The explict model specification is as follow:

ROA= F(DR,AT, AGE)

Implicitly the model becomes;

$$ROA_{it} = \beta_0 + \beta_1 DR_{it} + \beta_2 AT_{it} + \beta_3 AGE_{it} + \mu_{it} \text{------------------ (i)}$$

$$ROE_{it} = \alpha_0 + \alpha_1 DR_{it} + \alpha_2 AT_{it} + \alpha_3 AGE_{it} + \mu_{it} \text{------------------- (ii)}$$

Where:

ROA = Return on Assets.

ROE = Return on Equity.

DR = Debt-Equity Ratio.

AT = Asset Turnover.

AGE = Age Of Firm.

μ = Error term.

i = Selected Company.

t = Time Series.

β_0 & α_0 = Constants.

$\beta 1, \beta 2, \beta 3, \alpha_1, \alpha_2, \alpha_3 =$ Coefficient variables.

The a priori expectation of the coefficient is as shown below;

$$\beta_0 > 0, \alpha_0 > 0 \; \beta_1 < 0, \alpha_1 < 0, \beta_2 > 0, \beta_3 >, \alpha_2 > 0, \alpha_3 > 0$$

3.3   Method of Data Analysis

This study uses panel data analysis as the data involved are both time series combined with cross sectional data. The panel data monitors a given sample of companies over time.

3.4 Data Sources and Measurement of Variables

Date for this study were sourced from financial reports of the selected companies for the period specified. We present the data and their measurement below:

S/N	VARIABLES	DESCRIPTION	SOURCE	MEASUREMENT
1	ROE	Return on Equity	Financial Reports of selected companies.	PBIT Divided by Shareholders fund
2	ROA	Return on Assets	Financial Reports of selected companies.	PBIT divided by total assts employed
3	D/E RATIO	Debt Equity Ratio	Financial Reports of selected companies.	Long term debt divided by shareholders fund
4	AT	Assets turn over	Financial Reports of selected companies.	Revenue divided by Total Assets.
5	AF	Age of Firms	Financial Reports of selected companies	Numbers of years of form from date of incorporation.

NOTE: Selected companies are; Dangote flourmillPlc, Dangote Sugar Plc, Nigeria Breweries, Cadbury NigPlc, A.G. LeventisNigPlc, Unilever NigPlc, PZ Cussons Nigeria Plc, Guinness Nigplc, Dangote Cement Plc, Flour Mill NigPlc.

4.0.   Data Analysis;

This chapter presents the result of the data analyzed and outlines findings of the study. The findings are summarized from secondary data obtained from the financial reports of manufacturing firms under review in Nigeria. The relationship between the variables was determined using panel data.

4.1.   Empirical Analysis of the Relationship between Capital Structure and Financial Performance;

Table 1: Regression Results of Independent variables on ROA

Dependent Variable: ROA
Method: Panel EGLS (Cross-section weights)
Date: 04/25/16   Time: 14:34
Sample: 2008 2014
Periods included: 7
Cross-sections included: 10
Total panel (balanced) observations: 70
Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.

DR	-0.054014	0.023482	-2.300208	0.0251
AT	0.169392	0.022781	7.435597	0.0000
AGE	-0.004628	0.002443	-1.894754	0.0632
C	0.222161	0.128101	1.734270	0.0883

R-squared	0.904677	Mean dependent var	0.254814
Adjusted R-squared	0.884610	S.D. dependent var	0.238419
S.E. of regression	0.055194	Sum squared resid	0.173645
F-statistic	45.08082	Durbin-Watson stat	1.718437
Prob(F-statistic)	0.000000		

The result in Table 1 above shows the examination of effect of capital structure on the financial performance proxy by Return on Assets of manufacturing firms. The result shows that 90.47 percent of the variation in financial performance was jointly explained by the explanatory variable as demonstrated in the R-squared of 0.904677. The adjusted R-squared of 0.884610 shows that the model is statistically fit. Durbin Watson of 1.72 is approximately 2.0, which implies that there is no presence of auto-correlation in the estimated model. The prob (F-statistics) of 0.000000 indicates that the F-statistic of the model is statistically significant as it is less than 1%, which means the model is correctly specified. The co-efficient of DR (Debt-Equity ratio) has a negative effect and it is statistically significant at 5% level of significance. This means that there is a negative but statistically significant relationship between ROA (Return on Assets) and DR (Debt-Equity Ratio). This also implies that a unit increase in DR (Debt-Equity Ratio) will result to 0.054 decreases in ROA. This is in agreement with apriori expectation. Increased debt may adversely affect firm performance to the extent that such debt is used to finance unproductive investment rather than investment in firm expansion which will consequently result in a boost to firm performance. High levels of debt require the firm to re-pay creditors the amounts borrowed when due with interest but to the extent that the firm invests borrowed funds in unproductive firm investment the debt will have to be re-paid out of firm revenues from its activities and this reduces the funds available to the firm to finance firm operations as they pursue increased performance.

There is significant positive effect of asset turn over on financial performance as shown in the positive of 0.169392 and probability of 0,0000. This also implies that a unit increase in AT (Asset Turnover) will result to 0.169 increases in performance represented by ROA (Return on assets).

The Age of firm has a statistically insignificant negative effect on financial performance (ROA) at as shown by the negative coefficient of 0.004628 and probability of 0.0632. This means that a unit increases in AGE (Age of firm) will result to 0.005 decrease in ROA (Return on assets). This is against the a priori expectation which postulate that age of the firm should have positive relationship with financial performance. This result shows that capital structure variable of Debt-Equity ratio and Asset turnover significantly affect the performance of manufacturing firms sampled in this study.

Table 2: Regression Results of Independent variables on ROE
Dependent Variable: ROE
Method: Panel EGLS (Cross-section weights)
Date: 05/02/16 Time: 12:57
Sample: 2008 2014
Periods included: 7
Cross-sections included: 10
Total panel (balanced) observations: 70

Linear estimation after one-step weighting matrix
White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DR	0.034862	0.032059	1.087425	0.2814
AT	0.230565	0.079730	2.891836	0.0054
AGE	-0.019687	0.003897	-5.051393	0.0000
C	1.055470	0.148294	7.117414	0.0000

R-squared	0.850423	Mean dependent var		0.472717
Adjusted R-squared	0.818934	S.D. dependent var		0.354735
S.E. of regression	0.135496	Sum squared resid		1.046467
F-statistic	27.00629	Durbin-Watson stat		1.520254
Prob (F-statistic)	0.000000			

We present the result of regression analysis of the effect of Return on Equity on the financial performance In the table 2 above. The R-squared of 0.850423, shows that changes in ROE is jointly explained by the explanatory variables by 85.04 percent. The Adjusted R-squared of 0.818934 shows that the model fits the data well. Durbin Watson of 1.52 is approximately 2.0, which implies that there is no presence of auto-correlation in the estimated model. The prob (F-statistics) of 0.000000 indicates that the F-statistic of the model is statistically significant as it is less than 1%, which means the model is correctly specified.

The debt – equity ratio has insignificant effect on ROE as demonstrated in the positive co-efficient of 0.034862 and probability of 0.2814. This implies that a unit increase in DR (Debt-Equity Ratio) will result to 0.03 increases in ROE (Return on equity). This is against apriori expectation. The co-efficient of AT (Asset Turnover) has a positive effect and it is statistically significant at 5% level of significance. This means that there is a positive significant relationship between ROE (Return on equity) and AT (Asset Turnover). This also implies that a unit increase in AT (Asset Turnover) will result to 0.231 increases in ROE (Return on equity). The co-efficient of AGE (Age of firm) has a negative effect and it is statistically significant at 5% level of significance. This means that there is a significant negative relationship between ROE (Return on equity) and AGE (Age of firm). This also implies that a unit increase in AGE (Age of firm) will result to 0.002 decreases in ROE (Return on equity). This is contrary to the apriori expectation

5.0 Summary, Conclusion and Recommendation.

This study examines the effect of capital structure on financial performance of quoted manufacturing firms in Nigeria. This research work covered ten (10) listed manufacturing firms in Nigeria over the periods 2008-2014. Financial performance is examined with respect to both ROA and ROE. In relation to ROA, there is significant negative effect of debt equity ratio on financial performance in agreement with apriori expectation. The asset turnover has significant positive effect on financial performance and also in agreement with apiori expectation. Finally age of the firm has insignificant negative effect on the performance. However in relation to ROE Debt equity ratio has insignificant positive effect on financial performance contrary to apriori expectation. Also the asset turnover has significant positive effect on the financial performance. Finally age of the firm has significant negative effect on financial performance contrary to the apriori expectation.

Taking the findings of the study as regards ROA and ROE together the fact that the coefficient of debt-equity ratio is significant for ROA rather than ROE the result of the study

suggests that ROA is a better measure of performance than ROE. The findings are in line with previous research work such as; Robert, 2013; Lawal and Edwin, 2014;Zertun and Tian, 2007; Jude Leon, 2013; Muhammad and Madiha, 2015; Naizuli, 2011; Osuji and Odita, 2012; Mykhalio. 2013; Mwangi and Birundu, 2015, among others.

This study therefore concludes that capital structure variable of Debt-Equity ratio has a significant negative effect on financial performance of manufacturing companies in Nigeria. Manufacturing companies should relying less on debt and more on equity as a source of finance so as to boost their financial performance. Furthermore in relation to company performance, asset turnover is found in this study to have a significant positive effect on the financial performance of manufacturing companies.

Based on the findings of the result, the following actions are recommended;
  i.   Management should be careful when using debt as its source of financing its activities. The benefit of financing with debt is that there will be no tax duties accrued to borrowed funds in an organization. Therefore, management should seek to finance their activities with retained earnings and use debt as a last option as supported by the pecking order theory.
  ii. The capital structure of a firm should be adequately planned to safeguard the interest of the equity holders, shareholders and financial requirements of the firm.
  iii. A most optimal capital structure is the debt-equity mix that best maximizes firms' value. Therefore, firms should therefore endeavor to optimize their capital structure by an appropriate mix of debt-equity capital. The firms should strike a balance between their choice of capital structure and the effect on its performance as it affects the shareholders risks, returns and cost of capital.
  iv. Political changes are very important factor in the share market. It also determines the firm performance. Therefore, stable economic and political atmosphere should be possible to increase the financial performance of the listed companies.
  v.   Identifying weaknesses of investments may be best one to improve the firm's financial performance, because it indicates the area which decision should be taken.

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