

Financial Leverage And Corporate Financial Performance: Empirical Evidence From The Nigerian Paint Industry (2007 - 2018)

¹Onuorah, Anastasia C. (Ph.D), ²ozurumba Benedict A. (Ph.D), Ojiaku, ³etelbert U. (Ph.D)

¹Department Of Accounting, Banking And Finance Faculty Of Management Sciences, Delta State University, Abraka, Asaba Campus, Delta State Nigeria

²Department Of Financial Management Technology, School Of Management Technology, Federal University Of Technology Owerri, Owerri Imo State, Nigeria

³Accountant General's Office, Owerri, Imo State.

Article Info

Volume 83

Page Number: 3872 - 3887

Publication Issue:

July - August 2020

Article History

Article Received: 06 June 2020

Revised: 29 June 2020

Accepted: 14 July 2020

Publication: 30 August 2020

Abstract:

Management decisions, which represent a core function of corporate performance have stimulated the interest of many researchers, as most firms are financially leveraged from creditors to increase sales volume and higher their earnings. It is one of the major issues in corporate financial management. Key financial leverage variables that can affect corporate performance were focused upon in this study over the study period of 2007 to 2018. Six Paint industries were selected concerning the leverage variables via quasi-experimental design. The study was evaluated using econometrics and the estimation test used was the vector autoregressive model. The findings reveal Debt Ratio, Interest Coverage Ratio, Debt-to-Equity Ratio positively affected while Debt Ratio has a negative effect on Returns on Equity. The result further implied that a unit increase in Debt Ratio, Interest Coverage Ratio, and Total Asset variables will increase Returns on Equity of painting industries' performance in Nigeria. However, a unit change in DBR will lead to a decrease in Returns on Equity in Nigeria's painting industries. A unit rise in DTR, ICR, and TAS will account for ROE by 65.68%, 14.41percent, and 0.003 percent increase, and a change in DBR resulted in a 24.0 percent ROE decrease. ICR and DTR are significant to ROE at 5 percent. DBR and TAS are not significant to ROE of painting industries' in Nigeria. The study recommended that ICR be increased to spur a positive increase in the financial performance of painting industries in Nigeria.

Keywords: Leverage, Debt Ratio, Paint Industry, Corporate Performance, Experimental Design

I. INTRODUCTION

The study of the value of financial leverage on Nigerian paint industries' corporate financial performance has its origins in the fact that the industry contributes enormously to the Nigerian economy's

growth and development. The industry (paint industry) creates a value chain, which expands the production capacity of entrepreneurs and has a positive or negative impact on the economy through the creation of consumer goods via the creative combination of production factor i.e. land,

labor, capital, and entrepreneurship. The value chain trickles through the service sector, where transport, maritime, and aviation industries either provide importation of raw materials or distribute finished goods locally, or exportation of the same.

The warehousing, transportation, middlemen, whole-sellers, and painters cannot be excluded from this discourse, even though accurate data on the populations of Nigerians working in the paint industry cannot be precisely determined, coupled with its immateriality to this article, it remains imperative to note that it provides more than 5 percent of Nigerian employment within the entire value-chain

Generally speaking, the role of the painting industry cannot be overemphasized in the growth and development of the Nigerian economy and therefore this article has been tailored to study how financial leverages affect corporate financial performance in the industry. The study specifically covers quoted paint companies such as; the Nigeria plc paints by Bergers Paints Nigeria Plc, African Paints Nigeria Plc, Paints & Coating Manufactures Plc.

Subsequent sections in this article are organized as follows: Section 2, Literature Review (3) Research Methodology (4) Analysis and Results (5) Discussion of Findings, and (6) Conclusion and recommendations. The remainder of the research work shall be organized as follows: Literature review, Research Methodology, analysis, and results, conclusion, and recommendation.

II. REVIEW OF RELATED LITERATURE

2.1 Financial Leverage

When a business is heavily leveraged rather than low-leveraged, its capital structure becomes more beneficial. Adenugba, Ige, and Kesinro (2016) pointed out two possible outcomes when it comes to

financial leverage, according to. These are; profit-maximization (making profit) or minimization of profit –No profit. They added that financial leverage is a decision tool that is widely used to improve a firm's rate of returns.

In Adenuga et al's (2016) study, financial leverage encapsulated some debt benefits in the capital structure of a company as those that maximize profits. They argued that the application of a high debt ratio leads to increased risk, although the returns of shareholders are increased by fixed loans and debentures. According to Ismail (2016), the usage of debt in the capital structure of the company concerns financial leverage more. The study also argues that overuse of leverage may result in a catastrophe if it is mismanaged. Also arguing for and identifying its merits were Enekwe, Agu, and Eziedo (2014) and Gill and Mathar (2014).

2.2 Measures of Financial Leverage

The following are some of the measures of financial leverage.

Debt Ratio

The debt ratio (DR) measures the amount of funds provided to creditors in ratio to the total assets of the company, as expressed by Ezeamama (2010). The total debt to the total assets is measured and used as the leverage proxy. It is shown as

Debt ratio = Total debt / total asset.

This ratio measures the debt share in the company's overall asset. Increased debt ratios mean high debt (Stephen, 2010). The balance sheet contains the total liability and assets for the calculation of the debt ratio. High Debt ratio value shows that the company is heavily exploited (Myers 2003).

Debt to Equity Ratio

Enekwe (2012) states that the debt to equity ratio reflects the capital and debt mix used to fund the assets of a company. Enekwe (2012) In addition observes that both debt to equity ratios also measure the portion of debt to equities in total corporate financing,

a proposition supported by Nwude (2003). The debt-equity ratio has some consequences for dividends and risk of the shareholders and affects the capital costs and the market value of the company (Pandey 2010).

Interest Coverage Ratio

This parameter also known as Coverage Ratio measures financial leverage. In addition, Pandey (2010) added that the financial leverage indicates the ratio of net operating incomes (or EBIT) and interest charges, which is recognized as a ratio of interest coverage in that many companies lease assets and have long-lasting obligations under rental contracts. Investors are generally aware of a company's financial risk by comparing the coverage ratios of similar companies with the industry standard accepted.

Total Assets

In the context of this study, the total assets represent the percentage of change in the value of all assets. Tangible and intangible assets are the value. It sums up all the assets for the operation of the enterprise (current and non-current assets).

Return on Equity (ROE)

ROE: ROE: This measures companies' net income over the entire year (Williams, 2010) compared with the average equity of the stockholder, and the higher the ROE, the greater the shareholder's profit.

Net income / Average equity

Under normal circumstances, shareholders to earn an average annual return of 12 or more from equity investments in large and financially strong companies. ROE of 30% or more is common especially in rapid growing companies with new or highly successful products (Williams, 2010). A company which earns a net loss is sure to provide no ROE to its shareholders.

The opposite obtains in a firm with high profit ratio.

Financial Performance

Financial performance according to Yahaya & Lamidi (2015) means the extent to which

the company meet its financial objectives. Kajirwa (2015) says that the financial performance of the company is an exploration of business assets and revenue generation by the company. The financial statement is seen as an analysis of financial performance, including dividend growth, sales turnover, capital employed, assets (Omondi & Muturi 2013). The financial statement provides an indication of how the company's fares in terms of divided growth.

Financial Leverage and Profitability

Profitability is the ability to gain a profit, i.e. more income than expenditure, according to Lakhtaria (2013). Financially, profitability refers to the earning capacity or capability of a company to earn profit currently and in the future (Lakhtaria, 2013). Though profitability is nearly the same as efficiency, it is considered an index or measurement of efficiency and a guide for management for greater efficiency (Enekwe, Okwo, & Ordu, 2013). Though used interchangeably, profit, and profitability are different terms (Ali & Imdadul, 2014). Profit is an absolute measurement of operational performance while profitability is a relative measurement of operational performance (Tulsian, 2014; Ali & Imdadul, 2014). Profit is not relevant in comparison to the efficiency of business while profitability analysis is considered the best technique to measure the productivity of capital employed and operational efficiency (Tulsian, 2014).

Theoretical Framework of Financial Leverage

The theory of financial management was based on the Modigliani and Miller (M&M) theory (1958). M&M theory supposed the company to finance a business based on cash flows consisting of some proportion of debt and equity. The theory of MM considers that a company's leverage does not impact the company's market value. Frank and Goyal (2005) said their theory

could be demonstrated in a wide range of circumstances.

As explained by Donaldson (1961), the theory of financial leverages runs counter to the idea of companies with a unique blend of debt and capital financing that minimizes their capital costs. He is the main candidate for the theory of trade-off. Under the pecking order model, suggests that a company has a definite preference order on the sources of financing they use when looking for ways to fund its long-term investment. The effect of asymmetric information as the mispricing of new securities has been identified by Pecking Order Theory developed by Myers and Majluf (1984). So the target debt ratio is not well-defined (Myers & Majluf; 2011). Investors generally perceived managers to be better informed about the price in order to avoid information-asymmetrical problems that usually fulfill their financing needs by taking retained earnings as their principal source of financing, and finally by borrowing from debt and final equity financing (Shaplinsky & Niehaus, 2013). Damodaran (2013) suggested that, generally, investors can see an overvaluation of the company when management issued new equities. Investors, however, know about this asymmetry of information and will react negatively to announcements, thereby making them less willing to finance new equity without any price cuts. In this way, managers will either miss positive investments in NPV or issue overly high debt levels which could threaten the company's future. The following arguments arise from these contradictions. First, in-kind funds are more favorable than external equities than retained profits. Secondly, financial slackness is possible, that is to say, disposal of real assets, cash or marketable securities. Finally, because debt is cheaper and less risky, it is more attractive than equity (Myers, 2014).

The Free Cash Flow Theory of Financial Leverage

Jensen (2016) proposed the free cash flow problem, which is based on Jensen and Meckling's (1976) principal-agency theory and on an analysis of conflicts between managers and shareholders. There are imperfection and asymmetrical information which brings about the agency problem; managers are the shareholders' agents, but this relationship is characterized by contradictory interests. The report says that management tends to be more interested than shareholders in the activities of the firm (Meyers, 2014).

Costs of Agency, equity costs of Agency, and debt costs of the agency are divided into two categories. The agency costs of equities are based on the fact that whilst managers are responsible for and expensive for a performed business, they can not profit from Damodaran's overall profit (2013). They are therefore more likely to gain advantages and translate the assets of the company into personal benefits rather than managing the company in the best way (Pike & Neale 2014). Dividend payouts reduce the management's free cash flow and thereby reduce the risk of cash flow wasting on negative NPV projects. Free cash flow is the more than necessary cash flow for all projects with a positive NPV. In contrast, managers, despite their NPV, are more interested in investing in projects to grow their companies.

Meyers (2014) argues that growth improves the capacity of managers because they control more resources. In addition, growth increases the demands of managers, as compensation is usually linked to growth. This problem is generated by large free cash flows in organizations. The problem is how managers are encouraged to efficiently implement this cash flow (Fama and French, 2013). This will strengthen the influence of agency cost on the capital structure since the debt incurred in the capital structure will replace dividend

payments but reduce the problem of the agency by reducing the resources controlled by management. Inanga and Ajayi, (2014) suggested that debt should be more efficient in reducing agency costs than a dividend payment. The payment of cash and dividend promises to shareholders is not static but may change in the future. But in debt issuance managers must pay interest and principal in a way that can not be modified, otherwise, default costs will increase, threatening the Organization's future (Meyers, 2014). (Meyers, 2014). More debts are also an effective way to encourage managers to use the free cash flow better in order to repurchase stocks. Increased leverage will however have an impact on firm value, thus increasing financial distress costs (Jensen, 2016). The second type of agency costs, i.e. the agency's debt costs, can be another problem. The cost of debt in the agency focuses on the relations between shareholders, bondholders, and managers in order to attain personal interests (Huang & Song, 2015). When debt increases in the company's capital structure, it transfers default risk to bondholders while the investment decisions of the company are taken by management and shareholders. The problems occur when managers begin to act on behalf of bondholders in a manner that benefits themselves or shareholders. However, bondholders are aware of such contradictions and can restrict the use of their money to alleviate their financial failure potential, (Rajan & Zingales, 2013). The "control hypothesis" describes the introduction of debt to the capital structure to manage the company (Jensen, 2016). It does not necessarily apply to all types of organizations, however. In big mature firms with high free flows but low prospects of growth or investments with positive NPV, this is more important. The impact of agency costs could be very serious for such organizations (Jensen, 2016).

Resource-Based Theory of Financial Leverage

In this theory, the competitive advantage of the company is dependent on the availability of both tangible and intangible resources, which other companies can find difficult or costly to obtain. These resources must be useful, rare, unfair and non-replaceable to support the Company's competitive advantage (Miller, 2012). The resource-based theory makes a major contribution by explaining long-term industrial difference (Pike & Neale 2013).

2.3 Literature Review

The relationship between financial leverage and the value of companies was evaluated in the works of Adenugba, Ige, and Kesinro (2016). Five (5) enterprises were sampled from the annual reports of selected companies, listed on the Nigerian Stock Exchange for six years 2007-2012. The test was used for the statistical analysis of data and hypothesis by Ordinary Least Square (OLS). The study showed that leverage has a major impact on the value of companies. This indicates that financial leverage is better than equity sources for firms when long-term projects need to be financed. Olayinka and Taiwo (2012) studied profitability and leverage: proof for 1999 to 2007 from Nigerian firms. Abdul and Badmus (2017) investigated the effect of leverage on the company's performance in Nigeria: a sample of three companies randomly picked from a total of 9 enterprises listed in the sector over 10 years, 2000 to 2009, in the case of listings of chemicals and paint companies in Nigeria. The sample size of around one-third of the study population is considered sufficient to generalize the results for the sector in question. As an estimating method for data secondarily derived from the NES fact book covering the study period for the chosen firms in the study, Ordinary Least Square (OLS) was employed. The Asset Return (ROA) was presented in performance measure, while Equity (EQT)

and Debt Ratio (DR) in models 1 and 2 respectively were proxies for capital structure. The results showed that EQT funding has a significant and positive impact on ROA, while DR has a negative and unimportant performance-measurement relationship.

The leverage impact on firms' profitability was studied by Nawaz, Atif, and Aamir (2015), as related to the Pakistani cement field. In the study, the causal relationship between variables was tested with the ordinary least square model. The study found that the statistically significant reverse statistical impact on profitability is statistically significant at an interval of 99 percent confidence.

The impact of the financial leverage on banks' performance was studied by Thaddeus and Chigbu (2012) using six Nigerian banks. The study employed secondary Nigerian stock exchange data and sampled banks' financial statements. The debt and coverage ratios were used to measure financial leverages that represented performance as a dependent variable, the independent variables while earning per share (EPS). Multiple techniques of regression have been used to determine if the financial leverage and performance of the sampled banks existed. The results have been mixed. Whereas some banks showed a good leverage-performance relationship, some revealed a negative leverage-performance relationship. The study improves the coverage of the number of banks participating in a post-bank consolidation era.

The effects of financial leveraging on companies' performance were worked on by Zahoor, Huma, Bader, and Muhammad (2015): In Pakistan. Use the ordinary least square technique. The results reveal a negative association between leverage and business effectiveness.

In the analysis of the relationship between leverage and earnings per share, Mangalam

& Govindasamy (2010) analyzed and understand the impact of leverages on the profitability of the firm. He analyzed leverage in three ways: leverage, leverage, and combined leverage. In his study, he used Variance Analysis (ANOVA) as an analytical tool. According to Adenugba, Ige, and Kesinro (2016), the findings showed that financial levies are caused by the fixed financial costs infirm in the company's ability to use fixed financial charges to widen the EBIT impact on earning per share. The financial leverage and income per share are closely related to the company. If the financial leverage is high and investment returns are higher than the debt capital cost, then the impact on EPS is good,

Several of the study studies were focused on profitability in the other economic sectors, notably the Mangalam & Govindasamy sectors (2010), the Olayinka and Taiwo sectors (2012), the Zahoor sectors, Huma, Bader and Muhammad industries (2015), the Adenugbe, Ige and Kesinro sectors (2016), and the Abdul and Bad Mus industries (2017). In Nigeria, the financial impact of corporate performance on the painting industry is seldom studied. The study thus identified a gap between the current literature and sought to fill in the perspective of the Painting Industry within 12 years (2007-2018) through research into the financial leverage and corporate performance of Nigeria's companies.

III. METHODOLOGY

3.1 Research design

The Quasi-experimental research design is deployed and applied in this study. Yomere and Agbonifoh, (2012) in quasi-experimental design, stated that the researcher is interested in observing what is happening to sample subjects without any attempt to manipulate or control them. The

functional and model specifications for the study are stated as follows:

3.2 Study variables and Model Specification

The study's model is expressed and stated as follow:

$$Y = f(X_1, X_2, X_3, X_4) \text{ equ (1)}$$

Where: Y = dependent variable and X_s = Independent variables

$$ROE = f(DBR, ICR, DER, TAS) \text{ equ (2)}$$

$$ROE = a_0 + a_1DBR + a_2ICR + a_3DER + a_4TAS + e \text{ equ (3)}$$

Where,

ROE = Returns on Equity,

DBR = Debt Ratio,

ICR = Interest Coverage Ratio,

DER = Debt-to-Equity Ratio

TAS = Total Asset

e = Error Term

a_{1-4} = Parameters

3.3 Measurement of Variables

The study variables were classified into independent and dependent variables. The independent variable (financial leverage), while its financial performance is based on the Debt ratio, interest rate cover, debt to equity ratio and total asset.

Debt ratio: The debt ratio measures the leverage of a firm. It is a percentage or decimal ratio between total debt and total assets. It can be construed as the share of the debt-financed assets of a company.

Interest coverage ratio: The interest coverage ratio is employed to determine the extent to which an interest on an outstanding debt can be paid by an undertaking. The ratio is calculated by division for the same period of the company's earnings before interest and imposition (EBIT).

Debt to equity ratio: The debt-to-equity ratio is derived by establishing the relation between the creditors' share capital and the shareholders' share capital. It also shows to what extent shareholders' shareholders can

meet their creditor obligations in the event of liquidation.

Total asset: Assets are whatever is owned and valuable and convertible into cash by a company. Assets are divided into two principal categories which are classified as total assets. Total assets shall be the sum of all assets currently and non-current and shall equal the sum of total liabilities and equity.

Return on Equity: Return on Equity (ROEs), which are known to be the ratio of net income to equity, is a measure of the profitability of an equity-based business. ROE measures the extent to which an enterprise uses investments to produce profit growth.

3.4 A priori Expectation

The underlying study is expected to show a positive relationship amongst employed variables. To this end,

The mathematical expression is represented as $a_1 - a_4 > 0$ ($a_4 > 0$) implying that a unit increase in the independent variables will be led to an increase in ROE by a unit.

3.5 Data Collection Approach

This study focused on the financial leverage and Corporate Firm's Performance in Nigeria over the period 2007-2018, which is twelve years of time series frame. Paint firms such as Berger Paints, African Paints, Paints and Coating, Portland Paints, Premier Paints, and Meyer Plc. The data employed for the study were generated from the financial statements of the selected firms at 1stquarter, 2019 obtainable on the CBN statistical bulletin. Data collected via the secondary sources were categorized into the variables of financial leverage and firm's performance. Financial leverage captured by debt ratio, interest coverage ratio, debt to equity ratio, and total asset from 2007 to 2018 (12 years) study and the firm performance was captured by return on equity. The aggregated values of seven (7) selected firms' data are presented in the following table.

Table 4.1: Aggregate data for the five selected paint firms in Nigeria

	Dependent Variable	Independent Variables			
YEAR	Returns on Equity (ROE) %	Debt Ratio (DBR) %	Interest Coverage Ratio (ICR) %	Debt to Equity Ratio (DER)	Total Asset (TAS) N'000
2007	31.24	2.52	5.47	13.51	1,088,245
2008	83.35	2.21	36.63	3.62	1,185,928
2009	93.06	1.06	46.33	3.32	1,445,603
2010	47.31	2.28	20.52	3.84	1,468,383
2011	116.41	2.36	12.19	11.56	1,657,689
2012	161.21	2.72	105.89	4.13	1,760,732
2013	51.26	1.15	8.90	12.69	1,891,039
2014	52.58	1.41	5.81	3.17	2,067,018
2015	54.86	2.78	6.59	3.68	1,608,691
2016	57.9	2.64	6.51	4.18	1,807,653
2017	57.05	2.72	7.23	4.51	2,185,809
2018	62.13	2.95	7.45	5.01	2,452,107

Source: Researcher's Computation, 2019. Statistical analysis of data were performed using a diagnostic check procedure, unit root testing, vector-autoregressive regression analysis approach to estimate the implication of the independent variables such as TAS, DBR, ICR and DER on the dependent variable (ROE), with E-Views version 9.0.

IV. ANALYSIS AND RESULTS

Table 4.2 Diagnostic Test Results

Diagnostic Check	Test	Value	Prob.<0.05	Conclusion
Normality	JB	5.0990	0.0791	Not normally distributed
Serial Correlation	LM	0.2527	0.0649	No presence
Heteroskedasticity	ARCH	0.8340	0.8093	Homoskedasticity
Stability	Ramson Reset	0.3214	0.0760	Functional form

Source: E-views 9.0 Extracts
The diagnostic test of variables in Table 4.2 confirms the normal distribution of residual variables under study. Serial correlation and heteroscedasticity are not present. In functional form, too, the variables. Thus the

4.1 Results of Data analysis

Various tables are used to present the results of the analysis of financial leverage and the paints performance in Nigerian paint industry. The behavior of the interacting variables under study must be diagnostically monitored for analysis of financial leverage and performance in Nigeria. The diagnostic test results for the variables used in this study are shown in table 4.1.

root unit was used to examine whether the series was stationary or non-stationary.

Test of Stationarity of Variables

The study conducted a stationarity test for variables with the use of the Augmented Dickey-Fuller (ASF) intercept with and

without trend, which is presented in Table 4.3, to examine the stationarity of variables for reliable results. Tables show that at the

first difference I(1), two of these variables, series, were stationary.

Table 4.3 Unit Root Test Results

Variable	Order	ADF	Critical Value at 5%	Prob.<0.05	Decision	Conclusion
ROE	I(1)	-3.7456	-3.3209	0.0287	No unit root	Stationary
DBR	I(1)	-3.3858	-3.2598	0.0419	No unit root	Stationary
ICR	I(1)	-3.6073	-3.3209	0.0344	No unit root	Stationary
DTR	I(1)	-4.2902	-3.2127	0.0065	No unit root	Stationary
TAS	I(2)	-3.1990	-3.0412	0.0318	No unit root	Stationary

Source: E-views 9.0 Extracts

All employed variables determining the financial leverage and the paint's industry performance are stationary at order 1, I(1) expect total assets (TAS) that is Stationarity at order 2, I(2) indicating Cointegration. However, co integration test fail because of number of sample size. All the variables

Vector Auto regression Estimates

Date: 07/10/19 Time: 16:47

Sample (adjusted): 2009 2017

Included observations: 9 after

Adjustments

Standard errors in () & t-statistics in []

Table 4.4 Vector Autoregressive Model (VAR) Results

	ROE
ROE(-1)	-0.632541 (0.03226) [-19.6071]
ROE(-2)	-0.024462 (0.02849) [-0.85867]
C	55.09318 (7.13863) [7.71761]
DBR	-2.404116 (1.54571) [-1.55535]

ICR	1.449153 (0.03426) [42.2972]
DTR	6.568664 (0.29016) [22.6383]
TAS	3.68E-06 (3.9E-06) [0.94983]
R-squared	0.899092
Adj. R-squared	0.896368
Sum sq. resids	11.16300
S.E. equation	2.362520
F-statistic	366.8190
Log likelihood	-13.73966
Akaike AIC	4.608813
Schwarz SC	4.762210
Mean dependent	76.84889
S.D. dependent	39.20389

Source: E-views 9.0 Extracts

The results from the VAR equations in Table 4.4 suggested that DTR, ICR, and TAS impacted positively on ROE while DBR has a negative effect on ROE. A unit increase in DTR, ICR and TAS variables will increase the ROE of firms in Nigeria. However, a change in DBR will bring about a decrease in ROE in Nigeria firms. Magnitude impact of financial leverage on the firm's performance in Nigerian. A unit increase in DTR, ICR, and TAS accounts for ROE by 65.68 percent, 14.41 percent, and 0.003 percent increase. Change in DBR brings about a 24.0 percent decrease in ROE. This is in line with the finding of Rehman (2013) that financial leverage is about how entities employ debt and equity as far as financing their assets are concerned. Also, the firm is exposed to risk because of high debt levels which should be repaid at a cost. The model estimate is excellently fitted at 89.9 percent and can explain the total variation in the firms' performance by 89.6 percent. ICR and DTR

are statistically significant to ROE at 5 percent. DBR and TAS are not significant to ROE of sampled paint firms ' in Nigeria..

Discussion of Finding

The study confirmed that DTR, ICR, and TAS were the financial leverage variables that influence the ROE positively. The findings were in line with the previous studies of (Rehman 2013, Otaibi, 2013, Adenugba, Ige, & Kesinro, 2016). This is also similar to the findings of Thaddeus and Chigbu (2012) and Zahoor, Huma, Bader, and Muhammad (2015) that research on financial leverage effect on the performance of firms whose results indicate that leverage has a negative association with the efficiency and firm's performance. In this result, the DBR impact on firm performance negatively. DTR and ICR drive the company's financial performance in terms of employed financial leverages.

V. CONCLUSION

The study concludes that the interest coverage ratio and debt-to-equity ratio were the paint industry's most significant financial leverage from the analytical findings. Also, it was observed that the level of debt-to-equity ratios and the ratio of interest coverage drives the performance of Nigerian companies. In the current year (-1), the return on equity (ROE) was significant, and therefore, a short-term relationship was observed to exist between the financial leverages and performance of the sampled paint industry firms. Thus, in the study, the interest coverage ratio and debt-to-equity ratios should be increased in order to enhance the performance of companies in Nigeria, as recommended by the study.

Policy to favor and promote expenditure and acquisitions of assets should be implemented to encourage the valuation of total assets of companies in Nigeria, and the practice of stable interests and exchange rates must be emphasized, so as to contribute to the working and survival of businesses. The study has created awareness and contributed to the importance of financial leverage to investors.

VI. REFERENCES

1. Abdul, J., & Badmus, O. (2017). Effect of leverage on firm performance in Nigeria: A Case of Listed Chemicals and Paint Firms in Nigeria. *Global Journal of Management and Business Research*, 17(2), 15-24.
2. Abeywardhana D. K. Y (2015) capital structure and profitability: An empirical Analysis of SME in the UK. *Journal of emerging issues in economics, Finance and Banking JEIEFB* 4 (2) 1661 - 1675
3. Abubakar, A. (2015). Relationship between financial leverage and financial performance of deposit money banks in Nigeria. *International Journal of Economics, Commerce and Management*, 3(10), 759 – 778.
4. Adenugba, A. A., Ige, A. A. & Kesinro, O. R. (2016). Financial leverage and firms' value: A Study of Selected Firms in Nigeria. *European Journal of Research and Reflection in Management Sciences*, 4(1), 14-32.
5. Akintoye, I.R (2014). Effect of capital structure on firms' performance: The Nigerian Experience. *European J. Economics, Finance, and Administrative Sciences*, 10, 233-43.
6. Ali, A., & Imdadul, M. (2014). Ratio analysis: A Comparative Study of National Petrochemicals Co., & Sahara Petrochemicals Co. of Saudi Arabia. *International Journal of Management Academy*, 2(4), 53–61.
7. Al-Jafari, M. K., & Al Samman, H. (2015). Determinants of profitability: Evidence from Industrial Companies Listed on Muscat Securities Market. *Review of European Studies*, 7(11), 303–311.
8. Alkhatib, K. (2012). The determinants of leverage of listed companies. *International Journal of Business and Social Science*, 3(24), 78-83.
9. Al-Otaibi, R. (2015). Impact of financial leverage on the company's financial performance. Saudi Arabia.
10. Asika, N. (2004). *Research methodology: A Process Approach*, Lagos: Mukugamu Publishers, Company Ltd.
11. Barakat, A. (2014). The impact of financial structure, financial leverage, and profitability on industrial companies shares value (Applied Study on a Sample of Saudi Industrial Companies). *Research Journal of*

- Finance and Accounting*, 5(1), 55 – 66.
12. Chaplinsky, S., & Niehaus, G. (1990). The Determinants of inside ownership and leverage. *Working Paper, University of Michigan*.
 13. Dimitris, M., & Psillaki, M. (2015). Capital structure, equity ownership, and firm performance. department of finance, University of Nice-Sophia Antipolis, France.
 14. Dufera, A. (2010). Financial performance evaluation: A Case Study of Awash International Bank. Unpublished MSc Project. Mekelle University, Ethiopia.
 15. Enekwe, C. I., Agu, C. I. & Eziedo, K. N. (2014). The effect of financial leverage on financial performance: Evidence of Quoted Pharmaceutical Companies in Nigeria. *IOSR Journal of Economics and Finance*, 5(3), 17-25.
 16. Enekwe, C. I., Okwo, I. M., & Ordu, M. M. (2013). Financial ratio analysis as a determinant of profitability in the Nigerian Pharmaceutical Industry. *International Journal of Business and Management*, 8(8), 107–118.
 17. Enekwe, C.I., Agu, C. I., and Eziodo, K.N. (2014). The effect of financial leverage on financial performance: evidence of quoted pharmaceutical companies in Nigeria. *IOSR Journal of Economics and Finance (IOSR-JEF)*, 5(3), 17-25.
 18. Gang, D. (2014). Capital structure and corporate performance: Evidence from Jordan. *Australasian Accounting Business and Finance Journal*, 15(3), 42-48.
 19. Gill, A. & Mathur, N. (2011). Factors that influence the financial leverage of Canadian Firms. *Journal of Applied Finance & Banking*, 1(2), 19-37.
 20. Gitman, L. J. (2009). *Principles of the managerial finance* 12th edition. Addison Wesley, Prentice-Hall.
 21. Graham, JR (2000), ‘How big are the tax benefits of debt?’, *The Journal of Finance*, 55(5), 1901–1941.
 22. Harrison, B. & Widjaja, T. (2013). Did the financial crisis impact on the capital structure of firms? Discussion Papers in Economics, Nottingham Trent University, 1 – 45.
 23. Huang, O.I., & Song, O.A, (2015). Weak form efficiency of the Asia deposit money banks and its capital structures: Further Evidence. *Asia Development Review*, 21(1), 94-98.
 24. Ismail Bishar Mohamed (2016) Effect of Financial Leverage on Financial Performance on Non-Financial Firms Listed at the Nairobi Security Exchange, *A Research Project of Master of Science in Finance School of Business, University of Nairobi*.
 25. Jensen, M, and Meckling, H. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics*, 3, 305-360.
 26. Kajirwa, H. I. (2015). Effects of debt on firm performance: A Survey of Commercial Banks Listed on Nairobi Securities Exchange. *Global Journal of Advanced Research*, 2(6), 1025-1029.
 27. Kothari, C. R (2004) *Research methodology methods and techniques*. New Delhi: New Age International Publishers Limited.
 28. Lakhtaria, N. J. (2013). A comparative study of the selected public sector banks through the CAMEL Model. *Indian Journal of Research*, 2(4), 37–38.
 29. Luvembe, L., Njangiru, M. J., & Mungami, E. S. (2014). Effect of dividend payout on the market value of Listed Banks in Kenya. *International Journal of*

- Innovative Research and Development*, 3(11), 350–370.
30. Maghanga, E. N & Kalio, A. M. (2012). Effects of leverage on the financial performance of Parastatals: A Case Study of Kenya Power. *International Journal of Science and Research*, 3(10), 990 – 994.
 31. Modigliani, F., & Miller, M. H. (2012). The cost of capital, corporate finance and the theory of investment. *American Economic Review*, 48, 261-97.
 32. Modigliani, Franco. (1980). Financial market; lecture presented for the industrial

Appendix

Firm A

Table 4.2.1: Berger Paints Nigeria Plc.

	Dependent Variable	Independent Variables			
Year	Returns on Equity (ROE) %	Debt Ratio (DR) %	Interest Coverage Ratio (ICR) %	Debt to Equity Ratio (DER)	Total Asset N'000
2007	10.26	9.67	10.26	1.810	2,016,033
2008	198.58	8.49	198.58	1.395	2,040,688
2009	260.07	0.773	260.07	1.311	2,281,279
2010	100.3	7.63	100.3	1.186	2,605,447
2011	48.1	7.24	48.1	1.092	2,673,008
2012	612.06	8.673	612.06	1.422	2,906,601
2013	5.19	0.691	5.19	1.013	3,627,598
2014	3.44	0.710	3.44	1.047	3,640,145
2015	5.43	8.66	4.66	1.321	3,895,870
2016	7.95	9.30	5.30	2.924	4,102,265
2017	8.22	9.42	9.55	3.232	5,430,102

Source: Annual Report and Accounts of Berger Paints Nigeria Plc. 2017.

Table 4.2.2: African Paints Nigeria Plc.

Firm B

	Dependent Variable	Independent Variables			
Year	Returns on Equity (ROE) %	Debt Ratio (DR) %	Interest Coverage Ratio (ICR) %	Debt to Equity Ratio (DER)	Total Asset N'000

2007	98.1	1.944	0.43	70.22	292,711
2008	199.72	1.736	0.85	13.20	375,990
2009	124.39	1.561	0.59	7.12	377,688
2010	20.403	1.616	0.42	8.43	357,121
2011	274.10	1.895	0.42	36.21	347,535
2012	23.53	1.424	3.10	4.953	403,553
2013	3.19	0.767	4.9	1.244	394,864
2014	4.29	2.102	5.1	2.341	399,727
2015	3.33	2.562	5.4	3.593	402,911
2016	3.19	2.560	5.9	4.243	482,101
2017	2.28	2.784	6.0	4.220	482,338

Source: Annual Report and Accounts of African Paints Nigeria Plc. 2017.

Table 4.2.3: Paints & Coating Manufacturer Plc.

Firm C

	dependent variable	Independent Variables			
Year	Returns on Equity (ROE) %	Debt Ratio (DR) %	Interest Coverage Ratio (ICR) %	Debt to Equity Ratio (DER)	Total Asset N'000
2007	12.11	0.0181	9.101	0.2321	899,011
2008	14.20	0.1661	10.12	0.3294	900,102
2009	17.90	0.3933	10.78	0.9911	1,495,020
2010	20.61	0.8552	11.09	1.4941	1,578,695
2011	10.49	0.6201	13.49	0.8988	1,699,348
2012	20.70	0.6679	14.70	1.0028	1,995,093
2013	19.22	0.6980	41.04	1.0722	2,337,220
2014	12.99	1.0034	23.45	2.0135	3,333,118
2015	13.41	1.0012	23.49	2.1918	2,315,817
2016	14.46	0.3983	21.22	3.2028	2,440,617
2017	16.1	0.1911	20.01	3.1211	2,540,393

Source: Annual Report and Accounts of Paints & Coating Plc. 2017.

Table 4.2.4: Portland Paints & Products Nig. Plc.

Firm D

	Dependent Variable	Independent Variables			
YEAR	Returns on Equity (ROE) %	Debt Ratio (DR) %	Interest Coverage Ratio (ICR) %	Debt to Equity Ratio (DER)	Total Asset N'000
2007	44.92	1.1348	8.91	2.6233	1,237,423
2008	39.71	1.0186	4.80	2.0760	1,463,440
2009	33.69	1.3404	0	4.0640	1,647,690
2010	25.91	0.7735	5.43	1.2612	1,553,731
2011	23.47	1.0947	4.81	2.3199	2,286,067
2012	25.65	1.3491	1.87	4.1451	2,386,022
2013	9.47	1.2514	1.75	3.3436	2,073,222
2014	21.01	1.1881	2.57	2.9266	2,277,559
2015	23.29	1.1191	3.89	3.2992	2,312,891
2016	24.40	1.2303	3.88	3.2982	3,102,109

2017	25.55	1.2005	4.03	3.992	3,782,281
------	-------	--------	------	-------	-----------

Source: Annual Report and Accounts of Portland Paints & Products Nig. Plc. 2017.

Firm E
Table 4.2.5: Premier Paints Plc.

	Dependent Variable	Independent Variables			
YEAR	Returns on Equity (ROE) %	Debt Ratio (DR) %	Interest Coverage Ratio (ICR) %	Debt to Equity Ratio (DER)	Total Asset N'000
2007	8.22	0.9581	2.38	1.84	163,651
2008	7.82	0.9162	4.01	1.69	226,127
2009	65.20	0.9138	5.46	2.03	218,918
2010	77.15	1.2647	5.78	3.44	201,373
2011	330.51	1.8385	6.03	22.8	211,476
2012	280.91	2.7495	3.04	7.34	291,702
2013	263.11	2.0646	0.27	63.9	285,772
2014	257.32	2.0079	0.23	5.08	288,982
2015	266.29	1.9101	1.10	5.91	341,289
2016	278.30	0.9181	1.32	5.43	318,532
2017	270.00	0.7832	1.56	5.88	423,434

Source: Annual Report and Accounts of Premier Paints Plc. 2017.

Firm F
Table 4.2.6: Meyer Plc.

	Dependent Variable	Independent Variables			
YEAR	Returns on Equity (ROE) %	Debt Ratio (DR) %	Interest Coverage Ratio (ICR) %	Debt to Equity Ratio (DER)	Total Asset N'000
2007	13.81	1.37	1.78	4.37	1,920,638
2008	40.12	0.96	1.42	3.06	2,109,223
2009	57.14	1.39	1.09	4.44	2,653,022
2010	39.52	1.57	0.07	7.25	2,715,103
2011	11.83	1.51	0.33	6.06	2,728,698
2012	4.43	1.50	0.59	5.97	2,581,419
2013	7.39	1.43	0.30	5.62	2,627,559
2014	16.44	1.48	0.09	5.63	2,462,578
2015	17.44	1.48	1.01	5.78	383,368
2016	19.10	1.47	1.44	6.03	400,292
2017	20.20	1.99	2.25	6.64	456,303

Source: Annual Report and Accounts of Meyer Plc. 2017.

Aggregate Data for Paint Firms in Nigeria

Table 4.2.7

	Dependent Variable	Independent Variables			
YEAR	Returns on Equity (ROE) %	Debt Ratio (DR) %	Interest Coverage Ratio (ICR) %	Debt to Equity Ratio (DER)	Total Asset (TA) N'000
2007	31.24	2.52	5.47	13.51	1,088,245
2008	83.35	2.21	36.63	3.62	1,185,928
2009	93.06	1.06	46.33	3.32	1,445,603

2010	47.31	2.28	20.52	3.84	1,468,383
2011	116.41	2.36	12.19	11.56	1,657,689
2012	161.21	2.72	105.89	4.13	1,760,732
2013	51.26	1.15	8.90	12.69	1,891,039
2014	52.58	1.41	5.81	3.17	2,067,018
2015	54.86	2.78	6.59	3.68	1,608,691
2016	57.9	2.64	6.51	4.18	1,807,653
2017	57.05	2.72	7.23	4.51	2,185,809

**Source: Researchers Computation
2019**