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## **DEBT STRUCTURE AND FINANCIAL PERFORMANCE OF LISTED MANUFACTURING GOODS FIRMS IN NIGERIA**

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### **Abstract**

This study investigated debt structure and financial performance of listed industrial goods firms in Nigeria. The sample size for the study consisted of thirteen (13) listed industrial goods firms in Nigeria. The study used secondary data collection method. The secondary data were obtained from the listed industrial goods firm's annual reports and accounts. Data were analyzed using descriptive and Pearson correlation coefficient statistical tools with the aid of statistical package for social sciences. The findings reveal that debt capital was found to have very strong relationship with return on asset. Also, debt capital had significant and positive impact on return on equity of listed industrial goods firms in Nigeria. Based on the findings, it was concluded that debt capital structure significantly affects financial performance. Therefore, the study recommends that when capital is raised through debt instruments, more focus should be channeled towards other areas for performance enhancement instead of relying on returns from owners' capital employed alone. Finally, Management should strive to improve on the ratio of assets to its liabilities

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**Keywords:** Capital Structure, Debt Capital, Financial Performance, Return on Asset, Return on Equity.

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### **Introduction**

Capital structure decision is very important to increase the value of the company as it aims to maximize its profits and at the same time minimize its costs. Capital structures have become highly innovative and competitive. The capital-mix of a firm can take many forms, but the most realistic is that which combines both a certain percentage of debt and equity in the capital structure and thus, the advantages of leverage (if any) is exploited (Olokoyo, 2012). In the view of Obara and Dagogo (2017), achieving an optimal capital structure often requires trade-off between debt and equity, which are shown in the statement of financial position as liability and owners' equity. Optimal debt capital of firms has always been a critical issue in analyzing its performance vis-a-vis other factors relating to its growth such as firm's size, sale growth, the asset structure and tangibility (Ohaka et al., 2020). The separation of ownership from management means that owners' investment must generate return which depends on corporate policies such as the financing policy, the dividend policy, the investment policy and the capital structure policy. How well a firm achieves its operational objective have a lot to do with these policies. Debt is an important component in capital structure along with equity and retained earnings. One of the main debates in corporate finance is the impact of debt on a firm's investment. Organizations need to evaluate the amount of debt capital they require by examining their needs and the financial market. To achieve this, they can decide on the appropriate capital structure policy on the basis of the financial instruments available in the financial market. The use of financial leverage varies according to the functions of business activities. The evaluation of the capital market structure is important for the success of the organizational process. However, borrowing incurs interest expense and risk, it can also yield rewards. Even debt capital indicates the risk due to interest and unexpected bankruptcy and helps to increase organization's routine business activities. Therefore, an examination of the

capacity for leverage in an organization is important for the sustainability and success of its organizational activities (Kaluarachchiet et al., 2021).

The debt capital structure decisions of an organization depend mainly on its company policy. Some organizations are interested in both equity capital and debt capital, while some are highly interested in the former and not so much the latter, and vice versa (Kaluarachchiet et al., 2021). Company policy on capital structure can be affected by market conditions and the capacity of the company. Therefore, the percentage of debt capital and equity capital in the capital structure is essential for the progress of business operations and the sustainability of the business process.

Therefore, a balance needs to be maintained. The cost of capital (interest plus dividends) serves as the benchmark for a company's capital budgeting decisions; therefore, the optimal mix of debt and equity is vital. Furthermore, the shareholders wealth maximization theory also indicates that firms should maintain the ideal combination of debt and equity capital, the optimal capital structure, which maximize returns as well as the firm's value and which reduce significantly the cost of capital. In other words, the one which best helps the business to achieve its main goal (profitability in most case). Therefore, this study seeks to evaluate the effect of debt structure on the financial performance of listed Nigerian industrial goods firms. The following research hypotheses were formulated for the study.

**Ho<sub>1</sub>:** There is no significant relationship between debt capital and return on assets of listed manufacturing firms in Nigeria.

**Ho<sub>2</sub>:** There is no significant relationship between debt capital and return on equity of listed manufacturing firms in Nigeria.

## **Review of Related Literature**

### ***Debt Structure***

Capital structure is the mixture of debt and equity capital maintained and used by a firm to finance itself. Debt is the amount owed for borrowed funds from sources such as individuals, banks, or other financial institutions. The debt capital structure decisions of an organization depend mainly on its company policy. Some organizations are interested in both equity capital and debt capital, while some are highly interested in the former and not so much the latter, and vice versa (Kaluarachchiet et al., 2021). Business enterprises use debt in their businesses, because it offers them potential to increase the volume of their operations and increase the average return on their equity funds. The use of debt will have this effect only if the rate of return on the investment is greater than the rate of return on the debt (Wald 2002). The borrowing firm takes a chance to use debt in the hope that it will elevate the firm to a more valuable level, by increasing the turnover and therefore increase the profits. The financial leverage chance will arise if the rate of interest charged to the firm is lower than the internal rate of return (IRR) for the company in which case the firm will be making enough to pay the interest charged and the principal repayment and retain the surplus for the shareholders.

On the other hand, the firm may experience a financial leverage risk that the returns of the business are not enough to cover the interest charged. This occurs when the rate of interest exceeds the internal rate of return of the company. To avoid liquidation, the firm will have to use part of the shareholders' funds to repay the interest and principal. This could eventually lead to erosion of the equity and the collapse of the business. The simplest way to assess whether borrowing has increased the return on equity is to contrast the return on the investment with the loan interest rate. When the return is higher than the loan interest rate, there is positive leverage that is the return on equity increases as more is borrowed (Rowland, 2002).

### ***Financial Performance***

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of

business and generate revenues. It has also been the primary concern of business practitioners in all types of organizations since financial performance has implications to organization's health and ultimately its survival (Kenton, 2021). It is important to take into consideration that the corporate performance is an important indicator for investors and stakeholders. It means that the firm's performance indicates whether the company is worth investing in or not. According to Sharma (2012), corporate performance is a product of the quality and skills of human resource available. A quality and skilled human resource also known as human capital will provide the organization with the much-needed competitive edge over its rivals in the industry. In this study, corporate performance is measured by return on asset (ROA).

### Empirical Review

Chukwu et al. (2022) examined the relationship between capital structure (CS) and corporate financial performance (CFP) of deposit money banks (DMBs) listed on the Nigerian Stock Exchange. The study also examined the moderating effect of board diligence on the relationship between CS and CFP. The study used the ex post facto research design and data from thirteen (13) DMBs over the period 2010 to 2018, and multiple regression was used to analyze the data. The results revealed a negative and insignificant relationship between debt ratio and return on assets (ROA), a negative and insignificant relationship between debt ratio and net profit margin (NPM), and a positive and significant relationship between equity ratio and ROA. It further revealed a positive and significant relationship between equity ratio and NPM. Firm size had a significant, positive relationship with firm performance, while firm age was negatively related to both ROA and NPM. The results further showed that board diligence positively moderates the relationship between capital structure (CS) and financial performance (CFP) in the banking industry.

Ohaka et al. (2020) examined the effect of debt financing on firm's financial performance in Nigeria. The study adopted the random sampling techniques to arrive at the sample size of the study. The secondary data was used in the study. Panel econometric tools were used to analyze the panel data of various companies across sectors in the capital market. The results of the analysis revealed that, size of the firm; short term debt and long-term debt have positive and significant impact on the financial performance of listed firms in Nigeria capital market. The study concluded that debt financing is very important in firm's financial performance since there is a positive and a significant relationship between the variables.

Olarewaju (2019) examined the dynamic relationship between capital structure and quoted manufacturing firms' performance in Nigeria from 1990-2016. Secondary data were obtained from the Nigerian Exchange Group Fact book, 2016. A sample size of thirty (30) quoted manufacturing companies in Nigeria were chosen. Panel unit root test, Padroni cointegration tests and Panel Vector Error Correction Method (PVECM) were used to analyze data. The study revealed that there is evidence of long run relationship between capital structure and firms' performance in Nigeria. The study, therefore, recommended that manufacturing firms should be pragmatic when choosing capital structure outlays to enhance performance in their activities.

Ezuma (2022) examined the relationship between capital structure and financial performance of listed pharmaceutical companies in Nigeria from 2013–2017. The ex post facto research design was adopted for the study with a population of ten (10) listed pharmaceutical companies in Nigeria as listed by the Nigerian Exchange Group in 2021. Data were retrieved from the annual reports of the selected listed pharmaceutical companies for the period 2013–2017. Multiple regression analysis was used to analyze the data gathered with the aid of Stata12 statistical software. The study revealed a positive and significant relationship between equity capital and profit before tax of listed pharmaceutical companies in Nigeria. It also revealed the existence of a positive and significant relationship between equity capital and return on assets of listed pharmaceutical companies in Nigeria.

### Methodology

The research design adopted for this study is the correlation research design. The population of the study

comprises of fourteen (14) quoted industrial goods firms listed on the floor of the Nigerian Stock Exchange (NSE) while only thirteen (13) of the fourteen (14) firms will be considered as the sample for this study. Data were retrieved from published financial report of the selected listed industrial goods firms. Pearson correlation and multiple regression were used for data analysis within aid of SPSS 22.0 software.

### Data Presentation & Analysis/discussion of Results

**Table 4.1: Correlation analysis showing the relationship between debt capital and return on asset Correlations**

		Debt capital	Return on Asset
Debt capital	Pearson Correlation	1	.894*
	Sig. (2-tailed)		.000
	N	10	10
Return on Asset	Pearson Correlation	.894*	1
	Sig. (2-tailed)	.000	
	N	10	10

\*. Correlation is significant at the 0.05 level (2-tailed).

Table 4.1 showed a correlation coefficient of 0.894\* significant at  $0.000 < 0.05$  level of significance. The correlation coefficient is very strong from the categorization in table 4.5, thus indicating a very strong relationship between debt capital and return on asset. The observed positive correlation coefficient indicates that an increase in return on asset is associated with an improvement in debt capital. Accordingly, the researcher concludes that there is a significant relationship between debt capital and return on asset of listed industrial goods firms in Nigeria.

**Table 4.2: Correlation analysis showing the relationship between debt capital and return on equity**

		Debt capital	Return on Equity
Debt capital	Pearson Correlation	1	.600*
	Sig. (2-tailed)		.000
	N	10	10
Return on Equity	Pearson Correlation	.600*	1
	Sig. (2-tailed)	.000	
	N	10	10

\*. Correlation is significant at the 0.05 level (2-tailed).

Table 4.2 showed a correlation coefficient of 0.600\* significant at  $0.000 < 0.05$  level of significance. The correlation coefficient is strong from the categorization in table 4.5, thus indicating a strong relationship between debt capital and return on equity. The observed positive correlation coefficient indicates that an increase in return on equity is associated with an improvement in debt capital. Accordingly, the researcher concludes that there is a significant relationship between debt capital and return on equity of listed industrial goods firms in Nigeria.

### Test of Hypothesis 1

The analysis revealed that debt capital had the observed significant t value of  $0.000 < 0.05$  level of significance, therefore the researcher rejects the null hypothesis and conclude that debt capital had significant and positive impact on return on asset of listed industrial goods firms in Nigeria.

### Test of Hypothesis 2

The analysis revealed that debt capital had the observed significant t value of  $0.016 < 0.05$  level of significance,

therefore the researcher rejects the null hypothesis and conclude that debt capital had significant and positive impact on return on equity of listed industrial goods firms in Nigeria.

### Discussion of Findings

From the analysis and discussion of results, the following findings were reached;

#### ***The Effect of Debt capital on Return on Assets***

Regression output indicates that debt capital has significant positive impact on financial performance (ROA) of listed industrial goods firms in Nigeria, which implies that increase in debt capital of industrial goods firms in Nigeria, brings about a proportional increase in the financial performance (return on assets) of the firm. This result was consistent with the findings of Nwidobie, et al. (2015). Kalsoom and Mubeen (2014), Kavita (2015), Javed and Akhtar (2012), the results of the study are however not consistent with the findings of Khalifa (2014), Khanam et al. (2014), Al-Tani (2013), Iropev and Kwanum (2012) and Osuji and Odita (2012).

#### ***The Effect of Debt capital on Return on Equity***

The result of the regression analysis indicates that there is a significant but negative relationship between debt capital and return on equity. This however implies that although there is a positive relationship between debt finance and return on assets debt finance on the other hand is a reason for reduction in the return on equity. The negative relationship between debt capital and return on equity is consistent with the studies of Eouraghajan (2012), Muritala (2012). Olokoyo (2012), lavorskyi (2013), Soumadi and Havaineh (2010). Opoko, et al. (2013). Akeem. et al. (2014), HasanAhsan, et al. (2014). it however contradicts the study of Mwangi and Birundu (2015).

The conclusions of this study were drawn based on the results of the study. The study concluded that debt capital enhances return on assets of listed industrial goods firms in Nigeria. Also, it concluded that debt capital enhances return on equity of listed industrial goods firms in Nigeria.

The following recommendation were made in respect to the findings;

- i. When capital is raised through debt instruments, more focus should be channeled towards other areas for performance enhancement instead of relying on returns from owners' capital employed alone.
- ii. Management should strive to improve on the ratio of assets to its liabilities.

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