

Short Term Debt and The Financial Performance of Quoted Manufacturing Company in Nigeria

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DOI: <https://doi.org/10.51244/IJRSI.2025.120700179>

Received: 06 July 2025; Accepted: 13 July 2025; Published: 15 August 2025

ABSTRACT

This study examined short term debt and financial performance in quoted manufacturing industry in Nigeria. This study used secondary data. The study covered 31 non-financial firms listed on the Nigerian Exchange Group. Five (5) quoted manufacturing firms were purposively selected to ease data capturing and effectiveness of the research work. Data on short term debt, over draft, trade credits and Profit after tax were collected from the audited financial statement of selected listed manufacturing firms from 2014-2023. Descriptive analysis involved the use of mean, median; standard deviation etc. to evaluate the selected variables was adopted. Inferential statistics was adopted on the panel regression model. This involved estimating a dynamic model using the system of fixed effect and Random effect. The fixed effect showed that t-stat and p-value of STD and ROA are -4.700738 and 0.0000 respectively. It means that p-value of t-stat (0.0000) is less than significance level of 0.05. it was decided that STD has significant negative effect on the financial performance of listed manufacturing firms in Nigeria. This study concluded that other sources of finance could be utilized to influence financial performance of quoted manufacturing firms in Nigeria.

Key words: Short term debt, Overdraft, financial performance, Return on asset

INTRODUCTION

The borrowed money is included in the short-term debt, which is due for payment by the end of the year. Manufacturing businesses are able to accrue the funds and repay them within a maximum of a year. For manufacturing businesses to survive and function, short-term debt is essential. Ezeagbe (2017) opined that the prudent utilization of short-term debts can magnify sustainable development.

Financial performance, in its widest definition, refers to the degree to which financial objectives are set or met, and it is an essential part of the management of finance risk. Financial performance is employed to evaluate a company's overall financial standing over a period of time. Additionally, it can be applied to compare sectors or industries collectively, as well as compare businesses within the same industry.

Statement of Problem

The short-term debt is a crucial metric for evaluating the financial risk of a company. A high figure indicates that a company has a significant portion of its assets financed through short-term debt, which increases its financial risk and consequently becomes a problem to the company, necessitating further investigation to determine the extent of current assets financed by short term debt. In contrast, a low figure indicates that a company has a conservative capital structure, which lowers its financial risk.

Research Questions

The following research question will be investigated in the course of the study:

What is the extent of short-term debt on the financial performance of listed pharmaceutical companies in Nigeria?

How does short-term debt affect the financial performance of listed pharmaceutical companies in Nigeria?

Objectives of the Study

The main aim of this study is to examine the impact of capital structure on the financial performance of listed manufacturing companies in Nigeria. The specific objectives of the study are to;

Determine the extent of short-term debt on the financial performance of listed manufacturing companies in Nigeria.

Examine the effect of short-term debt on the financial performance of quoted manufacturing companies in Nigeria.

Research Hypotheses

This study subjected the postulated hypothesis to the statistical test at 5% level of significance.

H₀₁: Short-term debt has no significant effect on the financial performance of quoted manufacturing companies in Nigeria.

Scope of the study

This study examined the effects of total debt to total asset on the financial performance of quoted manufacturing companies in Nigerian for the period of ten years from 2014 to 2023.

Significance of the Study

The discussion of short-term debt is an important aspect of financial management and corporate world. Researchers and financial experts have established that organization that have huge amount of short-term debt is likely to have liquidity and solvency problem which will consequently affect the financial performance of an entity. Hence, this study would be of great benefit to the numerous stakeholders such as:

Future Researchers: This study will give adequate and updated information about short term debt as well as how they affect ability of an organization to enhance financial performance. The findings provided by this study will serve as empirical evidence for subsequent studies.

Academia and Students: This study will provide important and priceless information for lecturers in the field of financial management and accounting in order to expose their student to how organizations source for finance in in order to be in good and healthy state.

Manufacturing company: Manufacturing companies need massive investment in order to contribute to the growth and development of Nigeria economy. Hence, this study will explain in detail the implication of adequate short-term debt to manufacturing companies. This study will give appropriate recommendations on what manufacturing firms should do to bring their short-term borrowing to the controllable level.

LITERATURE REVIEW

Conceptual Review

Short-term debts

According to Thenassoulis and Somekh (2016) the short-term debts is only accessible where the borrower and lender make a binding agreement. The borrower provides the lender with all relevant information regarding use and repayment capacity. Before approving short-term loans, the lender thoroughly investigates the borrower's capacity. The loans have a set interest rate and must be returned within a year. The short-term debts can help the company plan its business strategies and support its operational activities.

Trade Credit

When money is transferred between the vendor and the buyer, the purchase and sale are considered finalized. Nonetheless, vendors can use trade credit to increase sales and keep devoted clients. Trade credit may be paid in full, in installments, or as a constant amount plus interest, according to Zeitun and Titan (2014). The client promises to pay in the near future while using trade credit to obtain goods. Delaying payment until a later time is a buyer-seller strategy. It is an option for making quick cash payments. Sanghani (2014) suggested using trade credit to guarantee business continuity. With many products they can resell and pay the vendor for, it can help SMEs grow.

Theoretical Review

Trade-off Theory

The theory coined by Miller and Modigliani (1958) and later expounded by Myers (1984) is useful in the setting of debt-equity ratio that is optimum and valuable to the business. In order to take advantage of debt and the different costs associated with leverage, the corporation seeks to achieve a balance between equity and debt. SMEs find and use debts just like everyone else. In order to take advantage of investment opportunities, optimal debts are helpful. It is advised that SMEs take out short-term loans that have the potential to be very valuable.

The tradeoff theory shortcomings raised a lot of concerns about whether there was a sufficient trade-off that wouldn't force the company to take on excessive debt. The theory emphasizes the need to strike a balance between costs and benefits, but it offers no concrete, empirical measures to support this claim. Additionally, because the firms differ in certain ways, their financial mixes also do. The examination of the unique trade patterns of banking, energy, and SMEs is essential prior to determining the appropriate debt-to-equity ratio.

Empirical Reviews

Nguye (2020) investigated the relationship between profitability and capital structure. The study's focus was on quoted non-financial companies. The focus of the study was Vietnamese companies. Furthermore, it focused on 488 businesses and used secondary sources for data. The study's time frame was from 2013 to 2018. The results showed that capital structure had a substantial and adverse impact on profitability.

The Narang (2018) study looked into how performance is impacted by capital structure. The primary backdrop was India, and the objective was to offer factual statements to mirror the existing relationship. The capital structure was best expressed using short-term debt, long term debt and total debt on return on asset. The researcher's primary focus was on Indian enterprises that are publicly traded. Twenty distinct firms' five years' worth of data were used in the study. The positive correlation between short-term debt and return on assets was the main focus of the investigation.

METHODOLOGY

Research Design

Ex-post facto research design was used by the researcher for this investigation. This design was used because of the association, which was predicated on a cause-and-effect analysis of the data, additionally, secondary data was used.

Area of study

The impacts of short-term debt on the financial performance of the Nigerian manufacturing companies that were quoted on the exchange group were the main subject of this study. The years 2014–2023 were covered by the study. The field of study typically makes a contribution and establishes the scope of the investigation. The selected time frame aims to encompass the national events of that era and their impact on the stock market.

Population of study

The study covered 78 manufacturing companies quoted on the Nigerian Exchange Group

Sample size and sampling Technique

The sample consists of five manufacturing companies quoted on the Nigerian Exchange Group. Convenient/purposive sampling was employed to enhance the efficiency of data collection and the overall efficacy of the study.

Data collection Technique

The research project utilized secondary data derived from audited accounts of the manufacturing companies listed on the Nigerian Exchange Group. This source was selected due to the quantitative nature of the study's subject area. The audited annual reports and publicly available financial statements of the chosen companies for the years 2014–2023 provided the data required for this investigation.

Sources of Data

The Facts book of the Nigerian Exchange group and the annual reports and accounts of the quoted manufacturing companies were the sources of secondary data used in the study.

Measurement of Variable

S/No	Variable	Symbol	Measurement of Variables
1.	Financial Performance	ROA	Profit After Tax/ Total Asset
2.	Overdraft	OD	Natural log of aggregate overdraft
3.	Short term debts	STD	Short term loans/Total liabilities
4.	Trade Credits	TC	Trade credits/Total firm's credit
4.	Profit After Tax	PAT	Profit After Tax

Dependent variable

This study used return on Asset (ROA) as a dependent variable. It was used as a proxy for financial performance.

Independent Variable

This study used Overdraft, short term loans and Trade credits as independent variables.

Model Specification

The functional relationship of the effect of short term debts on the financial performance of quoted manufacturing companies.

$$ROA_{it} = f(\text{financial performance}) \dots\dots\dots 1$$

An econometric model used for the study is expressed as follows:

$$ROA = \beta_0 + \beta_1 OD + \beta_2 STD + \beta_3 TC + \varepsilon \dots\dots\dots 2$$

Where:

ROA = dependent variable (financial performance)

OD = independent variable (overdraft)

STD = Short term debts

TC = Trade credits

PAT = Profit after tax

β = regression coefficient

ε = error term

This model can be used to examine the relationship between short term debt and financial performance.

Data Analytical Techniques

In this study, two analytical methodologies were used to accomplish the stated objectives. These comprised inferential statistics as well as descriptive statistics. In a descriptive study, the chosen variables were assessed using metrics like mean, median, minimum, etc. Other descriptive metrics, including standard deviation, were used to gauge how variable these estimations were. With the panel regression model, inferential statistics were used. This required utilizing the fixed effect and random effect systems to estimate a dynamic model.

Data Presentation and Analysis

Descriptive Statistics

Table 4.1 indicates that mean and median values of ROA are 0.033903 and 0.036377 respectively. The maximum and minimum values of ROA are 0.174561 and -0.133574 respectively. The standard deviation and skewness value of ROA are 0.064230 and -0.394536 respectively. It means that data distribution of ROA is negatively skewed. It could be seen that kurtosis value (3.114410) is less than normal kurtosis value (3). Therefore, it is established that data distribution of ROA is leptokurtic and it does not mirror normal distribution.

Descriptive result shows that bank overdraft has mean and median values of 3553074 and 390220.5 respectively. the result indicates that highest and lowest values of OD are 28386435 and 0.000000 respectively. The standard deviation and skewness values of OD are 6650853 and 2.132552 respectively. This skewness value of OD is positively skewed. The kurtosis value of OD is 6.591492 and this value of OD is greater than normal kurtosis of 3. Hence, it is affirmed that OD is leptokurtic and it does not mirror normal distribution.

Short-term debt (STD) shows that mean and median values are 0.253442 and 0.236886 respectively. The maximum and minimum values of STD in the data set are 0.738022 and 0.000000 respectively. It could be seen that standard deviation and skewness value of STD are 0.209518 and 0.597321 respectively. This means that data distribution of STD is positively skewed toward right tail. The kurtosis value of STL (2.300072) is less than kurtosis of 3. Therefore, it is established that data distribution of STD is platykurtic and it mirror normal distribution.

Lastly, it was deduced that mean and median values of trade credit (TC) are 0.345490 and 0.307780 respectively. The maximum and minimum of TC are 0.688820 and 0.018520 respectively. The standard deviation and standard deviation values of TC are 0.151119 and 0.394583 respectively. This means that data

distribution of TC is positively skewed. Descriptive result shows that kurtosis of TC (2.780318) is less than normal kurtosis of 3. It is obvious that data distribution of TC is platykurtic and there are more value lower than sample mean. This means that data distribution of TC mirror normal distribution.

Table 4.1: Descriptive Statistics

	ROA	OD	STD	TC
Mean	0.033903	3553074.	0.253442	0.345490
Median	0.036377	390220.5	0.236886	0.307780
Maximum	0.174561	28386435	0.738022	0.688820
Minimum	-0.133574	0.000000	0.000000	0.018520
Std. Dev.	0.064230	6650853.	0.209518	0.151119
Skewness	-0.394536	2.132552	0.597321	0.394583
Kurtosis	3.114410	6.591492	2.300072	2.780318

Author's Computation (2024)

Analysis of Normality Test

Table 4.2 shows that kurtosis value is 3.769462 and this value is greater than normal kurtosis of 3. This means that data distribution of bank overdraft (OD), return on asset (ROA), short-term loan/total liabilities and trade credits is leptokurtic and it does not mirror normal distribution. Normality test shows that Jarque-bera and Prob. value are 3.016013 and 0.221351 respectively. It could be seen that p-value of (0.221351) is greater than significance level (0.05). Therefore, it is found that bank overdraft (OD), return on asset (ROA), short-term loan/total liabilities and trade credit (TC) are statistically and normally distributed.

Table 4.2: Normality Test

Kurtosis	3.769462
Jarque-bera	3.016013
Prob. Value	0.221351

Author's Computation, (2024)

Analysis of Unit Root

It has long been maintained that financial and macroeconomic data exhibit a stochastic tendency that, if unchecked, affects estimators' statistical behavior. Therefore, this research examines the stochastic aspects of the series in the model by examining their order of integration using a series of unit root tests, prior to examining the relationship between short-term debt and financial performance of quoted manufacturing companies in Nigeria. As demonstrated in Table 4.3 the unit root tests for non-stationarity (i.e., the PP-Fisher

Chi-square and Levin, Lin, and Chu t tests) generally reject the null hypothesis that any variable in first difference terms is non-stationary at the 5% level.

The result of panel regression shows that return on asset (ROA) and short-term debts (STD) are stationary at order (I), bank overdraft is stationary at order (0) and remaining trade credit (TC) is stationary at order (II). Therefore, it is established that all variables are not stationary at order (0) and it has become important to conduct co-integration test.

Table 4.3: Panel Unit Root

Variable	At Level		1st Difference		2nd Difference		Order of Integration
	Levin, Lin & Chu t**	ADF-Fisher Chi-square**	Levin, Lin & Chu t**	ADF-Fisher Chi-square**	Levin, Lin & Chu t**	ADF-Fisher Chi-square**	
ROA	0.0153	0.1164	0.0012	0.0165	-	-	I(I)
OD	0.0000	0.0057	-	-	-	-	I(0)
STD	0.0846	0.2288	0.0515	0.0264	-	-	I(I)
TC	0.5405	0.4825	0.0804	0.0691	0.0000	0.0005	I(II)

Source: Author Compilation (2024)

Analysis of Kao Residual Co-integration

In order to remove distortion in the data distribution, Kao Co-integration test was conducted. When p-value of ADF statistic is less than 0.05, therefore reject null hypotheses. The result on table 4.3 showed that p-value of t-stat (0.0279) is less than pre-determined level of 0.05. Therefore, it is established that there is no long-term relationship between bank overdraft (OD), return on asset (ROA), short-term loan/total liabilities (STD) and trade credit (TC) of quoted manufacturing firm in Nigeria

Table 4.3: Panel Co-integration

			t-Statistic	Prob.
ADF			-1.913059	0.0279
Residual variance			0.002261	
HAC variance			0.001663	

Source: Author Compilation (2024)

Analysis of Hausman Test

Hausman test was conducted to determine the most appropriate panel least square to generate interference for the study. It could be seen on table 4.4 that Chi-Sq. Statistic and Prob. value were 36.533396 and 0.0000 respectively. The result means that p-value of Chi-sq. Stat (0.0000) is less than significance level of 0.05. This means that the fixed effect model is the most appropriate statistical technique for this study.

Table 4.4: Hausman Test

Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random		36.533396	3	0.0000

Author's Computation, (2024)

Analysis of Coefficient of Determination

The panel least square result on table 4.5 showed that R-square and adjusted R-square were 0.544336 and 0.468392 respectively. This means that proportion of variation in the level of financial performance which is measured with return on asset (ROA) that can be explained with bank overdraft (OD), short-term debt (STD) and trade credit (TC) is 46.8%. Therefore, it was deduced that 53.2% of remaining variation in the level of financial performance will be explained by other determinants not included in the econometric model for this study.

Analysis of Durbin Watson Statistics

Durbin Watson statistic is a test of determining the level of auto-correlation between two or more variables within the threshold of 1.5 – 2.0. The diagnostic table 4.5 shows that DW stat is 0.000012 and this value is outside threshold of 1.5 – 2.0. Therefore, it is affirmed that there is no auto-correlation problem between overdraft (OD), short-term debt (STD), trade credit (TC) and return on asset (ROA) for the period under reviewed in this paper.

Analysis of F-Statistics

The table extracted from fixed effect of panel least square showed that f-stat and p-value were 7.167589 and 0.000000 respectively. It is very obvious that p-value of f-stat (0.000000) is less than significant value (0.05). Therefore, it was established that bank overdraft (OD), short-term debt (STD) and trade credit (TC) are statistically fit to predict the outcome of financial performance of quoted manufacturing companies in Nigeria.

Table 4.5: Diagnostic Test

Feature	Values
R-square	0.544336
Adjusted R ²	0.468392

F-Stat	7.167589
P-value	0.000000
Durbin Watson	0.000012

Author Computation, (2024)

Analysis of Econometric Model

$$ROA = \beta_0 + \beta_1 OD + \beta_2 STD + \beta_3 TC + \varepsilon \dots \dots \dots 2$$

$$ROA = 0.108000 + 1.05E-09(OD) - 0.191123(STD) - 0.085077(TC) + \varepsilon \dots \dots 3$$

From equation 3, it showed that increase in the utilization of bank overdraft will enhance return on asset. Therefore, it is deduced that there is positive relationship between bank overdraft and financial performance of quoted manufacturing companies in Nigeria.

In addition, equation 3 showed that decrease in the short-term debt (STD) will improve return on asset. This means that there is negative association between short-term debt and financial performance within the period under-reviewed in this study.

Finally, it could be seen from equation 3 that decrease in the level of trade credit will lead to increase in the level of return on asset. Hence, it is affirmed that trade credit has inverse relationship with financial performance of quoted manufacturing companies in Nigeria.

Analysis of Hypothesis

H₀: Short-term loan has no significant effect on the financial performance of quoted manufacturing companies in Nigeria.

The result from table 4.6 showed that fixed effect indicates that t-stat and p-value of STD and ROA are -4.700738 and 0.0000 respectively. Therefore, it is affirmed that null hypothesis is rejected and there is sufficient statistical evidence that short-term loan has significant effect on the financial performance of quoted manufacturing companies in Nigeria.

Fixed Effect of Panel Least Square

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.108000	0.022544	4.790606	0.0000
OD	1.05E-09	1.06E-09	0.994934	0.3255
STD	-0.191123	0.040658	-4.700738	0.0000
TC	-0.085077	0.053851	-1.579856	0.1216

Author Computation, (2024)

DISCUSSION OF FINDINGS

It was revealed that all variables adopted in this study are normally and statistically distributed. Levin, Lin & Chu t and ADF-Fisher Chi-square of panel unit root revealed that all variables are not stationary at order (0).

Kao co-integration revealed that there is no long-run relationship between bank overdraft (OD), return on asset (ROA), short-term loan/total liabilities (STD) and trade credit (TC) of quoted manufacturing companies in Nigeria.

It was discovered that there is negative relationship between short-term debt and financial performance of manufacturing companies in Nigeria. This means that decrease in the use of short-term source of finance will improve financial performance of quoted manufacturing companies in Nigeria.

Hypothesis tested disclosed that short-term debts have significant and negative effect on financial performance of quoted manufacturing companies in Nigeria. This posits that short-term debt with associated finance cost have negative effect on financial performance of quoted manufacturing companies in Nigeria.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary

This study examined short term debt and the financial performance of quoted manufacturing companies in Nigeria. The study specifically examined the extent of short-term debt to total asset on the financial performance of listed manufacturing companies in Nigeria and the effect of short-term debt on the financial performance of quoted manufacturing companies in Nigeria. The study adopted return on asset (ROA) as a measure of financial performance. The study covered the period of ten (10) years spanning from 2014 – 2023. Ex-post facto research design was utilized in the study and five (5) quoted manufacturing firms in Nigeria were selected as sample. Secondary source of data was employed and collected from the audited annual reports and financial statements of the selected firms. The annual reports and financial statements were gathered from the Nigeria Exchange Group. E-view was used as a statistical tool and descriptive statistics which included mean, median, standard deviation were used to analyze the characteristics of all the variables. Panel least square which included Hausman, Fixed Effect and Random Effect tests were used to test hypotheses at 5% level of significance.

Conclusion

It was discovered that there is negative relationship between short-term loan and financial performance of manufacturing companies in Nigeria. This means that decrease in the use of short-term source of finance will improve financial performance of quoted manufacturing companies in Nigeria.

Finally, it is concluded that short term debt has negative significant effect on the financial performance of listed manufacturing firms in Nigeria. This means that it's imperative to ensure that other internal sources of finance are utilized, for example retain earning and equity to influence financial performance of listed manufacturing firms in Nigeria. The implication for financial management suggests that the working capital management is inefficient, this may be due to poor cash flow management, inadequate account receivable and payable management problem or inefficient inventory control.

Recommendation and policy Implication

The quoted manufacturing companies should not rely on short term debt as a source of finance because of associated cost and negative effect on financial performance of the quoted manufacturing firms in Nigeria. This can be done by issuing shares to the public and utilization of retain earnings as a source of fund.

Contribution to the Knowledge

This study had contributed to the body of knowledge by given empirical evidence on effect of short term debt and the financial performance of quoted manufacturing company in Nigeria. Insightful recommendations were also given by this study to concerned stakeholders in quoted manufacturing companies in Nigeria.

Suggestion for further Research

This study suggested that future researchers that want to embark on similar subject matter should adopt other determinants of financial performance such as return on capital employed, return on investment etc.

The subsequent studies should also focus on other sources of capital such as equity, retained earnings and increase sample size beyond the number adopted in this study in order to have adequate understanding of how short term debt and other sources of capital influence financial performance of the whole of the industry.

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