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Manufacturing Firms' Profitability and Management of Credit: A Study of Unilever Nigeria, PLC and Nigeria Breweries PLC

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Abstract

This study examines the effect of credit management on the returns of manufacturing firms using two quoted firms on the Nigerian stock exchange as a case study. This study determines whether a credit management mechanism using the receivable collection period, liquidity management, and payable payment period, have an effect on the profitability of a manufacturing firm which was measured using Return on Assets (ROA). Data were sourced from annual reports of the two firms, which provide empirical evidence for the two (2) manufacturing firms in Nigeria from 2013 to 2018. In other to achieve the objectives of the study, data collected were analyzed using descriptive statistics and Linear Regression to test for normality of variables on data obtained from annual accounts of the Companies under study. Data obtained were further analyzed by the use of financial ratios while the three hypotheses formulated were tested with ANOVA using SPSS statistical package 17.0 Version. From the analysis made, it was discovered that there is a significant relationship between credit management and the profitability of manufacturing firms, based on their Receivable collection period, Payable payment period, and Liquidity management. From the result, the researcher recommended that the sales department of the manufacturing firms must know about credit management to encourage the sales of their products and firms should not be scared of credit sales because it assists in the increase in the firm's profitability performance. For proper management, credit should be converted to cash in the shortest possible period.

Keywords: *Receivables, Payables, Profitability, Profits, Return on assets*

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Background to the Study

For firms to remain profitable, the business must make proper provisions for the management of accounts receivables, if it fails to make allowance for them; receivables can build up to excessive levels leading to declining cash flows. Mismanagement of receivables can amount to increased bad debt incidence that leads to a reduction in the business's profits (Foulks, 2015). Credit decision becomes more difficult when the financial conditions of the country where the firm operates are typically uncertain, a company's credit policy refers to the actions taken by a business to monitor, and collect the cash for outstanding accounts receivable (Maysami, 2010 as cited in Raymond et al. 2015). Policy on credit collection of most business enterprises comprises their collection policy, cash discount, credit period, and credit standard, where Schilling (2014), described this policy in terms of the firm's credit limits, credit terms, deposits, customer information, and documentation. Components of a business's credit policy are instruments for monitoring account receivables that occur from credit sales.

There is no particular universal credit policy that should be adopted by every organization. The credit policy of an organization should therefore be based on its particular standards, current economic conditions, and the degree of risk involved. Pandey (2004**),** in his study, found that bad debt losses arise when the firm is unable to collect its accounts receivable as a problem of credit management. The size of bad debt losses depends on the quality of accounts accepted by the firm. Uchegbu (2014), explained that it is wise to discourage bad debts by adopting a very good credit management system. When a firm sells its products or services and does not receive cash for it, the firm is said to have granted trade credit to its customers. Trade credit creates accounts receivables that the firm is expected to collect in the future (Kungu, Wanjau, Waititu and Gekara, 2014). Trade credit is very important to a firm because it helps to protect its sales from being eroded by competitors and also attracts potential customers to buy at favorable terms. As long as there is competition in the industry, selling on credit becomes inevitable. A business will lose its customers to competitors if it does not extend credit to them. Therefore, investment in accounts receivables may not be a matter of choice but a matter of survival (Kakuru, 2015). Investment in receivables has both benefits and costs; it becomes important to have such a level of investment in receivables at the same time observing the double objectives of being liquid and profitable. Trade payable is a form of credit enjoyed by the firm from its customers, how well the firm can manage its payables also have an impact on his profit and liquidity. Payables are the amount on purchases made by the firm or organization where the cash payment is in a future period. The management of trade payables is a form of credit management by the company, in other to ensure and maintain the loyalty of their customers, those trade activities that involve purchases of goods, raw materials, and other services that do not involve payment of cash are also relevant to the survival of the business. The credit Management function consists of all of a company's activities aimed at ensuring that customers pay their invoices within the defined payment terms and conditions, while effective Credit Management serves to prevent late payment or non-payment. Getting it right reinforces the company's financial or liquidity position, making it a critical component in any business.

Therefore, in this study, we examine the effects of credit management practices on a firm's profitability. The objective of this research is to measure the effect of credit management on the profits of the manufacturing firms under study. This study provides answers to the following questions: Does credit policy affect firm profitability? Does liquidity management affect firm profitability? Does account receivable on turnover affect firm profitability? The effect of credit management on the profitability of manufacturing companies quoted in the Nigerian stock exchange. Six (6) years (2013-2018) account period was adopted, the two companies used for the study were the Nigeria Breweries PLC and the Unilever Nigeria PLC. Besides, these companies were selected based on the availability of their annual report to enable the researcher to analyze the objectives.

The more the risk and enterprise are involved in; the more profitable it's adjudged to become. and vice-versa. Profitability is determined by the capital structure, size, growth, market discipline, risk, and reputation of a firm. Corporate profitability is measured using ratio analysis, profitability can be measured using sale through ratios like; Gross profit margin, Net profit margin, Operating expense ratio, etc.

Profitability to investment measures the efficiency and performance of business organizations by employing the following accounting ratios; Return on Investment (ROI), Return on Equity (ROE), Earnings per Share (EPS), Dividend Per Share (DPS), Dividend Pay-Out Ratio (DPR), Dividend Yield (DY) And Earnings Yield(EY), Price-Earnings Ratio (P/E), Market Value To Book Value Ratio (MV/BV). In Oladipupo and Okafor (2013) it was found that profitability and liquidity efficiency management are positively associated. Where there is poor current profitability, it usually signals danger for current management efficiency, also poor management efficiency threatens profitability.

ROA gives an idea as to how efficiently management uses its assets to generate earnings (Khatab, Masood, Zaman, Saleem and Saheed, 2011), it can be calculated by dividing Earnings before Interest and Tax (EBIT) by total assets. Gakure, Onyango, Cheluget, and Keraro (2014) studied the relationship between working capital management and the performance of 15 manufacturing firms listed at the Nairobi Stock Exchange from 2006 to 2010. Using a regression model, they found that there was a strong negative relationship between a firm's performance and liquidity of the firm. However, the effects of the independent variables except the average payment period were not statistically significant though the overall model was statistically significant.

Transactions costs theory was first developed by Schwartz (1974), this theory conjectures that suppliers may have an advantage over traditional lenders in checking the real financial situation or the credit worthiness of their clients. Suppliers also have a better ability to monitor and force repayment of the credit. All these superiorities may give suppliers a cost advantage when compared with financial institutions. Three sources of cost advantage possessed by suppliers were classified by Petersen and Rajan (2014) as follows: information acquisition, controlling the buyer, and salvaging value from existing assets. The first source of cost advantage can be explained by the fact that sellers can get information about buyers faster

and at a lower cost because it is obtained in the normal course of business. That is, the frequency and the number of the buyer`s orders give suppliers an idea of the client`s situation; the buyer`s rejection of discounts for early payment may serve to alert the supplier of a weakening in the credit-worthiness of the buyer, and sellers usually visit customers more often than financial institutions.

Methodology

The study examines the impact of profitability and credit management on manufacturing companies in Nigeria. The analysis is conducted based on secondary data from the financial statement of two selected manufacturing companies in Nigeria, (Unilever Nigeria PLC. and Nigeria Breweries PLC.), their shares are listed on the Nigeria Stock exchange Fact Book with the sample period of 6years i.e. (2013 – 2018). Nigeria breweries PLC is a Public Limited Liability Company established in 1946 in Lagos, Nigeria. The company rolled out its first product in 1949, "star lager beer". It has plants in some other part of the country, apart from the production of other brands of lager, its into the production of malt drinks. Unilever Nigeria PLC was incorporated as Lever Brothers (West Africa) Ltd on the 11th of April, 1923 but the company started with the founder's trading interests in Nigeria and West Africa in the 19th century. Unilever Nigeria PLC started as a soap manufacturing company and is today one of the oldest surviving manufacturing organizations in Nigeria. The company changed its name to Unilever Nigeria PLC in 2001, The Company is into the manufacture and marketing of household toiletries, tea, and food seasoning which are manufactured in their various factory locations in Nigeria, they are into consumer goods.

Descriptive design research was adopted, the sample size is the portion of the total population which the researcher used for the study. This study used six years of the audited annual report of the two manufacturing companies. The technique of sampling used is the random sampling technique; the random sampling is applied because of the need to select a sample based on the availability of required information and data to achieve the objective of the study. The major source of data is the secondary source which is the data collected from the annual financial reports and accounts of companies, the Nigerian Stock Exchange factbook. The annual reports and accounts are sourced from an internet database addressed to the various companies' websites respectively. Data is collected from already audited annual reports from the year 2013 to 2018 of two manufacturing firms quoted in the Nigerian Stock Exchange (NSE).To ensure the reliability and validity of the research study, the Durbin-Watson statistics under regression was adopted. The Dublin-Watson is used to test for the reliability and validity of the variables employed to investigate the research problems by testing for the presence or absence of auto-correlation among the variables. For the test of hypotheses, a statistical nonparametric test called Analysis of Variance (ANOVA) was used because it measures or tests three or more independent means. The data are presented in the tables and the results together with the interpretation are presented below.

The profitability variable used for this study is (Return on Asset), while the Credit Management Variables are the Receivables Collection Period (RCP), and the Payables payment period (PPP). The data are presented in tables, collected from the annual reports and accounts of the year (2013-2018) of the companies under study. Data obtained were subjected

to statistical analysis using Analysis of Variance (ANOVA). Hypotheses formulated for the study were tested with the ANOVA for opinion differences, using the Statistical Package for Social Sciences (SPSS) version 17.0 software package.

Model Specification

The general form of the panel data analysis model is specified as:

$$Y = \alpha + \beta Ft + \mu \quad \ldots\ldots\ldots\ldots \quad (1)$$

Where:
Y = dependent variable (firm performance measures)
α= constant
β = is the coefficient of the explanatory variable (Credit Management mechanism)
Ft = explanatory variable in the estimation model
μ = error term

FUNCTIONAL FORM
ROA = F (PPP, RCP.).

Where;
ROA is the dependent variable.
PPP is payable Payment Period
RCP is Receivables Collection Period
PPP and RCP are the independent variables

$$ROA = \alpha + \beta 1PPP + \beta 2RCP + \mu \ldots\ldots\ldots\ldots (2)$$

ROA is the Return on Asset (profit after tax/ total asset) for the assessable period

Presentation of Results and Discussion

This study presents, analyze, and interpret the result of the data collected. This focused on data presentation, analysis, and interpretation of results likewise the discussion of findings. The results are presented in tables and subsequently analyzed. The interpretation of the data showed the usefulness of the data for the research topic. An analysis of the effect of credit management on the profitability of manufacturing firms in the Nigerian stock market using descriptive statistics which comprises Mean, standard deviation, Variance, and linear regression technique.

Presentation of Results

Table 1: Descriptive Statistics

	N	Minimum	Maximum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
ROA	10	2.4	17.0	8.610	1.3958	4.4140
RCP	10	10.8	139.8	55.020	12.7137	40.2044
PPP	10	5.3	99.1	36.820	9.0550	28.6345
LIQMT	10	48.8	79.8	60.783	3.2339	10.2265
Valid N (listwise)	10					

Source: Output from SPSS using secondary data collected from case studies, 2018.

It was observed on the average over five years' period (2013-2018) covered in this study, the mean of the average ROA shows 8.610, which the maximum ROA is depicted by 17.0 and the minimum of 2.4. The table also shows that the average Receivables collection period value was 99.1 on maximum while the minimum value stood at 5.3.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.822[a]	.676	.514	3.0780	.676	4.169	3	6	.065	2.024

a. Predictors: (Constant), LIQMT, RCP, PPP

b. Dependent Variable: ROA

Source: Output from SPSS using secondary data collected from case studies, 2018

It shows how much of the variance in the dependent variable (Return on Asset) is explained by the independent variable (Receivables collection period, Payables payment period). The R Square value is 0.676. This means that the Receivable collection period explains 67.6% of the variance of return on assets. The adjusted R Square shows .514, while the standard error of estimate indicates 3.0780 which represents the error term that was not captured in the model.

Table 3: ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	118.503	3	39.501	4.169	.065[a]
	Residual	56.846	6	9.474		
	Total	175.349	9			

a. Predictors: (Constant), LIQMT, RCP, PPP

b. Dependent Variable: ROA

Sources: Output from SPSS using secondary data collected from case studies, 2018

The table showed the sum of the square, degree of freedom (n – 1), F-statistical probability. The F-statistical probability is shown as 4.169 which is statistically significant. Hence, Since F-Value is greater than the "Sig" value, we reject the Null hypothesis and accept alternative then it is appropriate to conclude that credit management has a significant influence on manufacturing firms' profitability measured in terms of Return on Asset.

Table 4: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.301	13.333		.398	.705
	RCP	.084	.135	.770	.626	.555
	PPP	-.274	.236	-1.778	-1.160	.290
	LIQMT	.144	.245	.334	.588	.578

a. Dependent Variable: ROA

Sources: Output from SPSS using secondary data collected from case studies, 2018

The table above depicts that the beta coefficient is 0.184 with a significance level of 0.799. This indicates the effect of the Payables payment period (which represent Credit Management) on the company's Return on Asset (which represent Profitability) is positive and significant, which means that the Payables Collection Period fall, as the Return on asset remains constant

Test of Formulated Hypothesis

Hypothesis one

H_o: Credit policy cannot affect profitability management in manufacturing companies in Nigeria.

Table 5: ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	114.434	1	114.434	14.965	.005[a]
	Residual	61.174	8	7.647		
	Total	175.608	9			

a. Predictors: (Constant), RCP

b. Dependent Variable: Profitability (ROA)

Descriptive statistic and Linear Regression is employed as considered appropriate. Table 5 (module three) above which reveal that F-statistical probability is shown as 4.169 which is statistically significant. Hence, Since F-Value 14.956 is greater than the "Sig" value of 0.05, we reject the Null hypothesis and accept alternative then it is appropriate to conclude that credit management has a significant influence on manufacturing firm's profitability measured in term of Return on Asset.

Hypothesis Two

Ho: There is no significant correlation between the Profitability and Creditor Payment Period of the company in Nigeria.

Table 6: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	97.737	1	97.737	10.041	.013[a]
	Residual	77.871	8	9.734		
	Total	175.608	9			

a. Predictors: (Constant), PPP

b. Dependent Variable: ROA

Ho: There is no significant correlation between the Profitability and payables Payment Period of the company in Nigeria.

Descriptive statistic and Linear Regression is employed as considered appropriate. Table 7 (module three) depicts that if F-Value is equal or greater than the "Sig" value, we reject Null and accept the alternate hypothesis. Since the F-value is greater thanthe "Sig" value (10.041>.013) we reject the Null hypothesis and accept the alternative hypothesis which stated that there is a significant correlation between the profitability and Payable payment period of the companies in Nigeria, which mean that the higher the payment period the higher the profitability of the companies

Hypothesis three

Ho: The liquidity position of the firm does not significantly affect the firms' profitability

Table 7: ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	11.366	1	11.366	.786	.416[a]
	Residual	72.339	5	14.468		
	Total	83.705	6			

a. Predictors: (Constant), LIQMT

b. Dependent Variable: ROA

Ho: There is no significant correlation between Profitability and payables Payment Period of the company in Nigeria

Descriptive statistic and Linear Regression is employed as considered appropriate. Table 7 (module three) shows that if F-Value is equal or greater than the "Sig" value, we reject Null and accept the alternate hypothesis. Since the F-value is greater than the "Sig" value (.786>.416) we reject the Null hypothesis and accept the alternative hypothesis which stated thatthe liquidity position of the firm significantly affects the profitability of the firm in Nigeria manufacturing firms

Conclusion and Recommendations

The research has made findings and has presented the results, the findings reveal that there is a significant relationship between credit management and profitability of manufacturing firms under study based on their receivable collection period and Payable payment period, this agrees to the study carried out by Ojeka, (2012) while the Liquidity management shows that there is a significant influence on their profitability, this is in agreement with Raymond et al. (2015).The reasons why there is no significant relationship between the receivable collection period to manufacturing firms' profitability could be attributed to a high collection period which means that manufacturing firms should work hard to achieve a high receivable turnover ratio which will have a positive effect on its profitability. Also, in agreement with Gakure, Cheluget, Onyango, and Keraro (2014)that thought that there is a strong negative relationship between a firm's performance and liquidity of the firm, the average payable payment period was not statistically significant whereas the overall model was statistically significant. Based on the analysis of data and findings of this research, the following recommendations were proffered to encourage credit facilities in manufacturing firms which include, the sales department of the organization must know about credit management to encourage the sales of the product of the organization and to make sales on credit to improve the firm's profitability performance. The companies should increase the rate of credit sales to trustworthy customers only even though credit sales is a marketing tool to maintain customer relationships within and outside the organization.

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APPENDIX

Table 8: The Annual Account Analysis of Nigeria Breweries PLC.

S/N	Credit Management	2013	2014	2015	2016	2017	2018
		Days	**Days**	**Days**	**Days**	**Days**	**Days**
1.	**Receivables Collection Period (RCP)** Average trade receivables x 365 days / Turnover	5.3	22.41	20.5	23.23	21.59	39.5
2.	**Payables Payment Period (PCP)** Average trade payables x 365 days / Cost of goods sold	10.76	45.64	39.79	40.9	37.01	64.9
	Profitability	%	%	%	%	%	%
3.	**ROA** Profit After Tax **x** 100 / Total Asset	17.00	13.02	10.67	7.72	8.6	4.9

Source: Annual Account of Nigeria Breweries PLC 2013 and 2018

Table 9: The Annual Account Analysis of Unilever Nigeria PLC

S/N	**Credit Management**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
		Days	**Days**	**Days**	**Days**	**Days**	**Days**
1.	**Receivables Collection Period (RCP)** Average trade receivables*365days / Turnover	13.57	55.93	62.51	99.1	44.1	48.5
2.	**Payables Payment Period (PPP)** Average trade payables x 365 days / Cost of goods sold	21.68	87.64	96.97	139.75	30.01	63.8
	Profitability	%	%	%	%	%	%
3.	**ROA** Profit After Tax **x** 100 / Total Asset	10.98	5.27	2.37	4.23	6.2	8.0

Source: Annual Account of Unilever Nigeria PLC 2013 and 2018

Table 10: Correlations

		ROA	RCP	PPP	LIQMT
Pearson Correlation	ROA	1.000	-.747	-.808	-.559
	RCP	-.747	1.000	.947	.503
	PPP	-.808	.947	1.000	.720
	LIQMT	-.559	.503	.720	1.000
Sig. (1-tailed)	ROA	.	.007	.002	.046
	RCP	.007	.	.000	.069
	PPP	.002	.000	.	.009
	LIQMT	.046	.069	.009	.
N	ROA	10	10	10	10
	RCP	10	10	10	10
	PPP	10	10	10	10
	LIQMT	10	10	10	10