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Impact of Credit Management on Liquidity Position of Manufacturing Companies in Nigeria

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Abstract
This study critically assesses the Impact of Credit Management on Liquidity Position of Manufacturing Companies in Nigeria. Three hypotheses were formulated in line with the objectives of the study. Descriptive research design was adopted. Samples of two manufacturing companies were selected. Data were obtained from annual accounts of the companies under study. Data obtained were analyzed by use of financial ratios and the three hypotheses formulated were tested with ANOVA using SPSS statistical package 20.0 version. From the analysis made, the study found that credit policy can affect profitability management in manufacturing companies in Nigeria and there is a significant correlation between liquidity position and debtors' turnover of the company in Nigeria. Based on the findings, the researcher recommends among others that there is need for companies to maintain adequate liquid assets and eliminate bad debt losses and other associated costs of credit and that company should intensify efforts to engage the services of factoring agents. This will reduce the incidence of bad debts losses and other associated costs of credit.

Keywords: Credit management, liquidity position, firm profitability, liquidity management, manufacturing companies.

Introduction
To be successful, firms must maintain effective management of their accounts receivables, since unmanaged receivables may accumulate to unsustainable levels, resulting in diminishing cash flows. Mismanagement of receivables can result in the occurrence of bad debts, reducing the profitability of the firm (Foulks, 2015). Credit decisions become more complex when the financial conditions of

the nation in which the business operates are unpredictable. Credit policy refers to the measures taken by a business to monitor and recover cash for outstanding accounts receivable (Maysami, 2010). A typical organization's credit policy includes the following variables: collection policy, cash discount, credit duration, and credit standard; Schilling (1996) defined it as credit limits, credit periods, deposits, customer information, and paperwork. And each component of a business's credit policy is utilized to manage account receivables resulting from credit sales. There is no single universal credit policy that every organization should follow. Thus, an organization's credit policy should be determined by its unique criteria, present economic conditions, and the degree of risk involved. Pandey (2004) discovered that bad debt losses occur when a business is unable to collect its accounts receivable due to a credit management issue. The magnitude of bad debt losses is contingent upon the firm's acceptance of creditworthy accounts. Uchegbu (2014) argued that it is prudent to prevent bad debts through the implementation of an effective credit management system. When a business offers its products or services but does not get payment in cash, the business is said to have provided its clients trade credit. Trade credit generates receivables that the business anticipates collecting in the future (Kungu, Wanjau, Waititu & Gekara, 2014). Trade credit is critical for a business because it protects its sales from erosion by competitors and also entices new consumers to purchase on advantageous terms. As long as the sector remains competitive, selling on credit becomes unavoidable. If a firm does not provide credit to its consumers, it will lose them to competitors. As a result, investing in accounts receivables may be a question of survival rather than choice (Kakuru, 2001). Investment in receivables has both benefits and drawbacks; it becomes critical to maintain this level of investment in receivables while adhering to the dual objectives of liquidity and profitability. Trade payables are a type of credit that a business receives from its clients; how effectively a business manages its payables has an effect on his earnings and liquidity. Payables are the total of a firm's or organization's purchases for which the cash payment is scheduled for a future time. The management of trade payables is a form of credit management on the part of the business. In order to ensure and maintain the loyalty of their customers, those trade activities involving the purchase of goods, raw materials, and other non-cash services are also critical to the business's survival. Credit Management encompasses all of a business's operations targeted at ensuring that customers pay their bills on time and according to the specified payment terms and conditions, while an effective Credit Management function serves to avoid late payment or non-payment. Getting it correctly strengthens the financial or liquidity position of the firm, making it a crucial component of any enterprise.

Credit is a powerful marketing tool or weapon that many businesses use solely to increase sales. As a result, credit sales or extensions to customers must be carefully supervised and handled. If there are no adequate measures in place to control sales made to the firm's customers on credit, regardless of the company's market share or

demand for its goods, there could be problems, especially those related to liquidities (Taiwo and Abayomi, 2013).

Sound credit administration is an essential for any business endeavor's budgetary soundness and proceeding with benefit, while decaying credit quality is the most incessant reason for poor money related execution and condition. A lot of studies have been conducted to establish the impact of credit management on firms' liquidity. Ifurueze, (2013) argued that it appears that customers who pay promptly are not problems but those who cannot pay or would not pay. Invariable unpaid debts will affect profitability and liquidity. If repayments are not made regularly as a result of poor controlling, monitoring and collection of debts, then the ability to make profit is severely affected and it is believed that inefficient credit management generates irregular incomes which hinder the organization's effectiveness, efficiency and liquidity (Ojeka, 2012).

Liquidity management is a concept that is receiving serious attention all over the world especially with the current financial situations and the state of the world economy. The concern of business owners and managers all over the world is to devise a strategy of managing their day to day operations in order to meet their obligations as they fall due and increase profitability and shareholder's wealth (Owolabi & Ibida, 2012).

The importance of liquidity management as it affects corporate profitability in today's business cannot be over emphasis. The crucial part in managing working capital is required maintaining its liquidity in day-to-day operation to ensure its smooth running and meets its obligation (Eljelly, 2004). Liquidity plays a significant role in the successful functioning of a business firm. A firm should ensure that it does not suffer from lack-of or excess liquidity to meet its short-term compulsions. A study of liquidity is of major importance to both the internal and the external analysts because of its close relationship with day-to-day operations of a business (Bhunia, 2010). Dilemma in liquidity management is to achieve desired tradeoff between liquidity and profitability (Raheman & Nasr 2007). Liquidity requirement of a firm depends on the peculiar nature of the firm and there is no specific rule on determining the optimal level of liquidity that a firm can maintain in order to ensure positive impact on its profitability.

Liquidity is the ability of the firm to convert assists into cash. A firm's liquidity is also referred to as short-term solvency. According to Taiwo and Abayomi (2013), the liquidity of a business firm is usually of particular interest to its short-term creditors since the liquidity of the firm measures its ability to pay those creditors.

Ifurueze, (2013) suggests that good credit management is vital to business cashflow to ensure business operations. He opined further that credit management provides a firm the potential for growth. Similarly, Kalunda, Nduku and Kabiru, (2012). point out that there is a positive correlation between credit management and liquidity.

However, extending credit has become an aspect of everyday business activity to be able to increase sale by firms since it contributes significant revenue to business especially as the world recovers from the financials shocks of recent years, specially from 2015 - 2020 and exposures of company balance sheet. Irrespective of this doubt still remains as to whether findings can be applied in the Nigeria situations, where the business environment is very fragile. In addition, there is inadequate research on credit management and liquidity of manufacturing firms in Nigeria. Similarly, the significant of the relationship between the two variables still remains to be empirically investigated. This study sought to examine the impact of credit management on manufacturing companies' liquidity has actually not gain empirical evidences or ascendancy in Nigeria.

Theoretical Framework

Portfolio Theory

Since the 1980s, companies have successfully applied modern portfolio theory to market risk. Many companies are now using value at risk models to manage their interest rate and market risk exposures. Unfortunately, however, even though credit risk remains the largest risk facing most companies, the practice of applying modern portfolio theory to credit risk has lagged. Companies recognize how credit concentrations can adversely impact financial performance. As a result, several institutions are actively pursuing quantitative approaches to credit risk measurement. This industry is also making significant progress toward developing tools that measure credit risk in a portfolio context. They are also using credit derivatives to transfer risk efficiently while preserving customer relationships. Portfolio quality ratios and productivity indicators have been adapted. Kairu (2014) the combination of these developments has vastly accelerated progress in managing credit risk in a portfolio context. Companies increasingly attempt to address the inability of the asset-by-asset approach to measuring unexpected losses sufficiently by pursuing a portfolio approach. One weakness of the asset-by-asset approach is that it has difficulty identifying and measuring concentration. Concentration risk refers to additional portfolio risk resulting from increased exposure to credit extension, or to a group of correlated creditors (Richardson, 2012).

Methodology

The research design adopted in this research work is the ex-post facto. The choice of the ex-post facto design is because the research relied on already recorded events. However, this research is generated from the annual reports and accounts of the selected companies for a period of 10 years (2001-2010) to examine the relationships between credit management, liquidity position and firms' profitability in Nigerian

manufacturing companies. This study adopted secondary sources of data from financial statements of Nigerian Manufacturing companies. The population of this study comprises of Forty-three (43) Manufacturing companies listed in the Nigeria Stock Exchange. To test the hypothesis developed, a linear and multivariate regression model which expresses financial performance as a function of credit management policy is stated in functional form as follows:

Model 1: Firms' Liquidity Position = f (Credit Management) (1)

CR = f (DR, GR, CFR) (2)

$CRit = a_0 + P_1DR_{it} + P_2GRit + P_3CFR + e_{jt}$ (3)

Where:

CR = Current Ratio - this will be used in measuring the Firms' Liquidity Position

DR = Debt Ratio

GR = Gearing Ratio

CFR = Cash Flow Ratio

Debt Ratio, Gearing Ratio, and Cash Flow Ratio are used to measure the Credit Management

a = Constant

e_{it} = Error Term

P = Coefficients of Explanatory Variable

Where Debt Ratio is the dependent variable, while Gearing Ratio and Cash Flow Ratio are the independent variable. The study adopted multivariate regression analysis as the analytical procedure to find the correlation between variables in the study.

Results and Discussion

In this research, we utilized pooled linear regression analysis to examine the data collected for the study. The aim was to assess the relationships between the variables specified in our hypotheses, namely credit management, liquidity position, and profitability. To achieve the objectives of this study, we employed a dataset comprising various financial metrics, including Current Ratio, Return on Asset, Debt Ratio, Gearing Ratio, and Cash Flow Ratio. Additionally, we considered indicators such as Current Ratio, Working Capital Ratio, and Quick Ratio.

Descriptive statistics were employed to analyze the impact of credit management on firms' liquidity position. The summary of these descriptive statistics, used in the research model, is presented in Table 1 below. As observed in the table, the Debt Ratio (DR) exhibited the lowest mean value, standing at 0.369689, while the Cash Flow Ratio (CFR) displayed the highest mean value at 26.14005. Furthermore, the mean values for Current Ratio (CR) and Gearing Ratio (GR) were calculated at 1.148158 and 2.465868, respectively.

To further strengthen our analysis, we examined the skewness and kurtosis values for all the variables included in the models. Skewness measures the symmetry of the data distribution, with values closer to zero indicating greater symmetry. In the case of kurtosis, a value of three represents a mesokurtic distribution, while values lower than three are referred to as platykurtic, and values higher than three are labeled as leptokurtic.

Table 1: Descriptive Statistics of the variables used in Model 1

	CR	DR	GR	CFR
Mean	1.148158	0.369689	2.465868	26.14005
Median	1.213800	0.279250	0.313150	1.873450
Maximum	2.066300	1.393600	87.49130	462.1952
Minimum	0.388500	0.001200	-1.239200	-1.704400
Std. Dev.	0.405076	0.348961	13.79377	81.40929
Skewness	-0.212359	1.225854	6.077399	4.322049
Kurtosis	2.421951	4.055317	37.96676	22.35012
Observations	40	40	40	40

Descriptive Statistics of Impact of Liquidity Position on Firms' Performance

Table 2 offers an overview of the statistical metrics employed in this empirical investigation. As indicated in the table, the Quick Ratio (QR) exhibits the lowest mean value, standing at 0.847480, while both the Current Ratio (CR) and Working Capital Ratio (WCR) are characterized by mean values of 1.148158 and 1.148160, respectively. Furthermore, our study gained additional robustness from the examination of skewness and kurtosis values for all variables within the models. Skewness serves as a gauge of the symmetry of the histogram, with values approaching zero signifying greater symmetry. Regarding kurtosis, a value of three (mesokurtic) is the reference point for symmetrical distribution, with values below three classified as platykurtic and values above three denoted as leptokurtic.

Table 2: Descriptive Statistics of the variables used in Model 2

	CR	WCR	QR
Mean	1.148158	1.148160	0.847480
Median	1.213800	1.213800	0.837550
Maximum	2.066300	2.066300	1.463400
Minimum	0.388500	0.388500	0.173400
Std. Dev.	0.405076	0.405075	0.298515
Skewness	-0.212359	-0.212368	-0.028467

Kurtosis	2.421951	2.421959	2.667409
Observations	40	40	40

Result of Unit Root Test

To ensure the reliability of our results, we conducted an examination of the time series properties of all the variables used in our estimation. This crucial step was undertaken using the Augmented Dickey Fuller (ADF) test, a method initially proposed by Engel and Granger in 1987. This approach was necessitated by the prevalent co-movements observed among various economic time series data, a phenomenon extensively discussed in the literature for its potential to undermine the policy implications derived from such modeling constructs (Engel and Granger, 1987). The ADF tests were employed to ascertain the order of integration for these variables, essentially determining how many times a variable needed to be differenced before it achieved stationarity.

Table 3: Augmented-Dickey Fuller (ADF) Test

Variables/Coefficients	ADF Values	Mackinnon Critical Values	Order of Integration	Probability
CR	-6.334358*	-3.615588	I(1)	S
DR	-8.371046*	-3.615588	I(1)	S
GR	-7.128524*	-3.621023	I(1)	S
CFR	-6.334441*	-3.615588	I(1)	S

One, two and three asterisk denotes rejection of the null hypothesis at 1%, 5% and10% respectively based on Mackinnon critical values. N and N.S. Means Significant and Not Significant respectively. At All Order of Integration. The unit root test is conducted on the variables used in this study in other to avoid a spurious regression. From the table above, CR, ROA, DR, GR, CFR, WCR and QR are all stationary at first difference, and this can be seen by comparing the absolute critical value of the test statistics at 1%, 5% and 10% level of significance.

Model Estimation Result

Table 4: Ordinary Least Square Estimate for Model 1

Dependent variable: CR				
Method: Least squares				
Variable	Coefficient	Std. Error	t-statistics	Prob.
DR	0.677386	0.141743	4.778966	0.0000
GR	0.746126	0.003399	-2.196379	0.0012

CFR	-0.000855	0.000606	-1.411143	0.2168
C	0.938498	0.076158	12.32308	0.0000
R^2 = 0.970735 **Adjusted R^2= 0.964882** **Durbin Watson: 2.160422**				

Table 5: Ordinary Least Square Estimate for Model 2

Dependent variable: ROA				
Method: Least squares				
Variable	Coefficient	Std. Error	t-statistics	Prob.
CR	34319.05	529181.4	0.064853	0.0001
WCR	-34373.59	529194.5	-0.064955	0.9486
QR	19.81766	94.41276	-0.209904	0.0000
C	97.13954	44.40765	2.187451	0.0003
R2=0.922524 **Adjusted R^2= 0.914532** **Durbin Watson: 2.290269**				

Table 3 provides the results of the regression of the liquidity measures (CR). The outcome of this research confirms this hypothesis and the relationship between CR and debt ratio which is used to measure credit management is positive and significant at 1% level. Thus, debt ratio is an important determinant of firm's liquidity position. Thus, current ratio is an important determinant of firms' performance. The result that credit management does not have a negative effect on the liquidity of manufacturing companies implies that a favourable credit policy would result in a favourable liquidity position; this is explained by the results of the analysis of the secondary data which shows that as the debtor's collection period falls, the cash conversion cycle also falls.

Conclusion and Recommendations

Credit management is important part in firm manufacturing firms' decision. The optimal of credit management could be achieved by firms that manage the trade-off between profitability and liquidity. The purpose of this study is to investigate the credit management liquidity efficiency and liquidity-profitability relationship. Results of this research found that regression results are significantly positive associated to the firm profitability. The findings revealed that when a company's credit policy is favourable, liquidity is at a desirable level and lastly, the findings revealed that companies should ensure the monitoring and regular review of their credit policy and the allowance of cash discounts should be minimized as much as possible. This study has evaluated the

impact of credit management liquidity on liquidity position of manufacturing Industries in Nigeria. Effective management of credit grant has a positive relationship with the operating profit of the companies in the corporate organizations. This implies that for companies to maximize their profit, they should grant credit to trustworthy customers with an appropriate credit control mechanism. It was also discovered that credit sales increase turnover and profitability in the domains of effective implementation of optimum credit policy in the firms. The following recommendations are made for this study: That organization should consider their mission, the nature of their businesses and their business environment before setting up a credit policy and that the credit policy should not be disregarded after it is created. There is need for companies to maintain adequate liquid assets and eliminate bad debt losses and other associated costs of credit. Companies should intensify efforts to engage the services of factoring agents. This will reduce the incidence of bad debts losses and other associated costs of credit. Companies should increases the rate of credit sales to trustworthy customers only despite the fact that credit sales is a marketing tool to maintain or expired sales. Firms should monitor, review and adjust credit policy from time to time considering the nature of their business and mission.

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