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CORPORATE LIQUIDITY MANAGEMENT AND COST OF DEBT CAPITAL

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ABSTRACT RESEARCH ARTICLE

This study examined corporate liquidity management and cost of debt capital. The specific objectives were to investigate whether cash ratio, current ratio, quick ratio and efficiency ratio have significant effect on debt capital of listed manufacturing firms in Nigeria. The secondary source of data collection was adopted in the study where the purposive sampling technique was used to select a sample size of twenty six (26) manufacturing firms for the study. Least Square regression analysis was used in this study and the findings revealed that cash ratio, current ratio, quick ratio and efficiency ratio have no significant effect on debt capital of listed manufacturing firms in Nigeria. It was concluded that cash ratio and quick ratio have significant effect on debt capital while current ratio and efficiency ratio have no significant effect on debt capital of listed manufacturing firms in Nigeria. Finally, it was recommended amongst others that managers of manufacturing firms should increase the amount held as cash in order to meet daily obligations, which could yield higher return before paying its liabilities.

KEYWORDS: Cost of debt capital, liquidity management, cash ratio, current ratio, quick ratio, efficiency ratio

INTRODUCTION

Liquidity refers to a business's ability to meet its short-term obligations (Daruwala, 2023). It is the enterprise's ability to convert its assets into liquid capital. Bank liquidity is bank's capacity to ensure the availability of funds to meet maturing obligations or financial commitments at a reasonable cost at all times. In summary, bank liquidity refers to a bank's capacity to maintain funds in locations where they are required, particularly to satisfy customer withdrawal demands. Liquidity management entails the strategic planning and supervision necessary to ensure that the company maintains sufficient liquid assets, either to fulfill obligations to clients for business continuity or to adhere to the monetary policies set by the central bank (Joseph & Adelegan, 2023; Onyeka-Iheme & Akintoye, 2023).

To secure long-term profitability and avert bankruptcy, effective liquidity management has become essential for businesses, especially as financial institutions are increasingly reluctant to provide credit due to rising nonperforming loans and elevated interest rates (Alhassan & Islam, 2021). Owolabi and Obida (2020) assert that business managers and owners globally prioritize developing strategies for managing daily operations to fulfill obligations and achieve the primary objectives of profitability and maximizing shareholder wealth. Businesses must adeptly manage the trade-off between liquidity and profitability to operate sustainably. To guarantee sustained performance, a company must pursue an optimal equilibrium between liquidity and profitability, maintaining its status around that threshold (Dadepo & Afolabi, 2020).

In an economy where financial institutions are hesitant to provide credit due to a rise in non-performing loans and elevated interest rates, the concept of liquidity and its management is critically important, particularly during this period of global financial turmoil, warranting thorough examination and serious consideration (Prempeh & Peprah-Amankona, 2020). Liquidity management is an essential aspect of any organizational framework that requires meticulous consideration, planning, and oversight, as it affects stakeholder trust. Liquidity must be regulated to ensure that an optimal amount is maintained, as firms with inadequate liquidity management face illiquidity and potential bankruptcy. The imperative for shareholders to enhance their wealth has necessitated the primary objective of profit maximization for enterprises. Capital structures of firms consist of debt and equity, denoting borrowed funds and owned assets, respectively. A company's debt portfolio primarily consists of short- and long-term liabilities that can only be settled if liquidity is accessible. In this context, liquidity is defined as the ease of converting assets into cash and cash equivalents with minimal value loss. The opportunity cost of maintaining liquidity is the forfeiture of potential earnings from not investing in higher-yielding assets.

In the second quarter of 2016, the Nigerian economy experienced a technical recession, rendering domestic companies, especially those in the oil and gas sector, susceptible to existential risks stemming from financial constraints. The fluctuation of financial institutions are reluctant to extend credit to businesses due to the persistent increase in non-performing loans. This may be attributable to the recent oil price shock, characterized by a substantial decline in oil prices, which significantly affected banks with exposure to the oil and gas sector. Furthermore, the Nigerian economy has experienced rising inflation and a persistent devaluation of its currency (Musa *et al.* 2024).

Also, the increasingly volatile and competitive market environment necessitates that organizations prioritize long-term sustainability in their management practices. Long-term sustainability has been empirically demonstrated to be equivalent to maximizing shareholder wealth. To maximize shareholders' wealth, firms must focus on performance, which is typically assessed through profitability. This emphasis on corporate performance has prompted numerous empirical studies to identify factors that significantly influence firm performance. Several studies identified critical factors including cash and cash equivalents, cash conversion cycle, quick ratio, current ratio, and working capital (Ajayi & Lawal, 2021; Muhamad & Yayang, 2022; Amira *et al.*, 2023; Talatu *et al.* 2024). These factors were determined to have time-varying effects across various contexts in relation to economies and sectors.

Despite the significance of firms' liquidity management strategies, there is a paucity of empirical research regarding their specific effects on essential financial performance indicators such as profitability, return on equity, and risk management practices within the manufacturing sector. The liquidity issue necessitates further scrutiny owing to the sector's susceptibility to diverse external factors, including shifts in consumer preferences, fluctuations in raw material costs, and global economic conditions, which can intricately affect cash equivalent holdings (Lufiyandi & Justina, 2023). Consequently, addressing this research gap is essential for enhancing the comprehension of the financial dynamics within manufacturing enterprises and informing strategic decision-making in both academic and practical contexts. Furthermore, it is essential to analyze the cash ratio, current ratio, quick ratio, and efficiency ratio. This study investigated the effect of liquidity management on the cost of debt capital in listed manufacturing companies in Nigeria.

2. Literature Review and Hypotheses Development

2.1 Liquidity

Liquidity denotes an individual's or entity's capacity to meet both immediate and long-term obligations through cash or assets readily convertible to cash. Investors may also characterize liquidity as the ability to convert an investment portfolio into cash swiftly and with minimal or no depreciation in value. These concepts are essential for a company's success, as a firm's comprehension of liquidity and its management guarantees the company's survival, even from a stakeholder perspective (Prempeh & Peprah-Amankona, 2020). Financial liquidity is a multifaceted yet essential concept that delineates the robustness and stability of the financial system (Igwe, 2024).

The majority of historical business failures have been ascribed to owners' inability to effectively manage their firms' liquidity and ensure profitability. Soje *et al.* (2024) contended that liquidity must be neither excessive nor inadequate. Excess liquidity denotes surplus idle cash that fails to yield profit for the firm or organization, while inadequate liquidity can adversely impact the firm's production processes, revenue generation, and creditworthiness. Liquidity ratios pertain to various liquidity indicators, such as net working capital, cash ratio, quick ratio, and current ratio, among others. A low ratio indicates that the corporation is facing financial challenges or inadequately managing its liquidity. A high ratio indicates the company is financially sound; however, it should not be excessively high due to the significant opportunity cost associated with surplus funds. Due to their interest in the firm's daily operations, both external and internal analysts prioritize liquidity management. The challenge in liquidity management is determining the optimal balance between liquidity and profitability (Dzapasi, 2020).

2.2 Debt Capital

Debt capital refers to the funds a business acquires through borrowing. A loan extended to a company, generally for growth capital, which is typically repaid at a future date. Debt capital is distinct from equity or share capital as subscribers to debt capital do not acquire ownership stakes in the business; rather, they act as creditors. Typically, providers of debt capital receive a contractually stipulated annual percentage return on their loan, referred to as the coupon rate. Occasionally, the loan is repaid according to a percentage of the company's monthly revenue rather than a fixed interest rate, as exemplified by revenue-based financing (Igwe, 2024).

According to Hayes *et al.* (2022), the debt ratio is a crucial financial indicator that provides a detailed evaluation of a company's leverage. This ratio is obtained by calculating the proportion of total debt to total assets, usually represented as a decimal or percentage. A debt ratio greater than 1 indicates a considerable dependence on debt, suggesting that a major fraction of assets is financed by liabilities instead of equity. This scenario prompts apprehensions regarding the likelihood of default, especially amid substantial interest rate hikes. A ratio below 1 indicates a greater proportion of assets financed by equity, reflecting a less leveraged financial position (Hayes *et al*., 2022).

2.3 Cash Ratio and Debt Capital

The cash ratio, also known as the cash asset ratio, is a liquidity measure that reflects a company's ability to settle short-term debt obligations using its cash and cash equivalents. In contrast to other liquidity ratios like the current ratio and quick ratio, the cash ratio is a more stringent and conservative metric, as it exclusively incorporates cash and cash equivalents; the most liquid assets of a company in its computation (Igwe, 2024).

This liquidity metric assesses a company's ability to fulfill its short-term liabilities solely through its cash and cash equivalents. It is a dependable indicator of a company's ability to settle its short-term liabilities utilizing cash or assets that can be swiftly converted into cash, such as marketable securities. Creditors heavily weigh this metric when determining the amount of capital to extend to distressed companies. This arises from the ambiguity regarding the availability of current assets, such as inventory and receivables, at the time of debt repayment (Igwe, 2024).

Musa *et al.* (2024) investigated the impact of liquid assets on the financial performance of publicly listed consumer companies in Nigeria. Liquidity assets are represented by cash assets and receivables, while financial performance is indicated by return on assets. The research focused on the timeframe from 2013 to 2022. Panel data was employed to analyze the information derived from the individual financial statements of the publicly traded consumer companies. The sample included sixteen (16) listed consumer companies out of the twenty (20) firms traded on the Nigerian stock market. The study utilized a panel regression model to assess the primary relationship between liquid assets and financial performance. The findings indicated that cash assets and receivable assets significantly influenced the return on assets of publicly listed consumer firms in Nigeria.

Elijah and Steve (2024) examined the influence of firm liquidity on the capital structure of manufacturing companies in Nigeria. Annual data was acquired from reports of thirty-five (35) manufacturing firms for the period 2007-2021. Pre-estimation procedures included summary statistics, correlation analysis, slope heterogeneity, and cross-sectional dependence assessments. The research utilized debt-to-equity and debt-to-asset ratios to assess capital structure, while the cash conversion cycle in days was employed to evaluate liquidity. The findings indicate that liquidity has a significantly negative relationship with the cash ratio of manufacturing firms, while it has no significant effect on the debt-to-equity ratio of manufacturing firms in Nigeria.

Igwe (2024) examined the impact of debt financing on the firm value of publicly traded ICT companies in the Nigeria Exchange Group (NGX). The study employed an ex-post facto research design, utilizing secondary data obtained from the annual reports of selected ICT firms in Nigeria from 2013 to 2022. Panel regression analysis was employed for data

analysis. The findings indicated that the debt ratio exhibited a statistically insignificant negative impact on market capitalization. The debt-to-equity ratio demonstrated a statistically significant positive impact on market capitalization. The cash ratio exhibited a statistically significant positive impact on market capitalization.

Ugwu *et al.* (2020) investigated the impact of liquidity management on the performance of deposit money banks in Nigeria, utilizing annual financial statements from 2011 to 2017. The multiple regression method was employed to examine the relationship between liquidity management, represented by the cash ratio, asset quality, and liquidity ratio, and financial performance, indicated by return on equity (ROE) and return on assets (ROA). The study's findings indicate a significant positive correlation between cash ratio, asset quality and liquidity ratio and financial performance, suggesting that banks should prioritize liquidity management to mitigate potential default risks.

H1: From the above, we hypothesize that operating cash ratio has no significant effect on debt capital of listed manufacturing firms in Nigeria.

2.4 Current Ratio and Debt Capital

The current ratio is the ratio of current assets to current liabilities. It is utilized to assess the short-term liquidity of a company. It illustrates the capacity of the firm's management to employ assets efficiently and effectively. The current ratio assesses an entity's liquidity as reflected on the balance sheet. It indicates a company's capacity to fulfill short-term liabilities. The current ratio evaluates a corporation's capacity to meet its obligations within the forthcoming 12 months (Idowu & Babatunde, 2022).

The current ratio is considered one of the most straightforward methods to assess a company's liquidity, also referred to as the working capital ratio. This liquidity ratio evaluates a company's ability to fulfill short-term obligations or debts maturing within one year. As opined by Alhassan and Islam (2021), it measures the efficiency with which a business fulfills its short-term liabilities. The ratio provides the most robust indication of whether short-term creditors' claims are secured by assets expected to be converted into cash within a timeframe approximately aligned with the claims' maturity.

Soje *et al.* (2024) examined the impact of liquidity management on the financial status of consumer goods firms in Nigeria. The study employed an ex-post-facto design to collect data from secondary sources in order to analyze the correlation among various factors. The study population comprises twenty-one consumer goods firms listed on the Nigerian Exchange Group (NGX), from which thirteen were selected as samples. Data spanning eight years (2015-2022) from the annual financial statements were examined using multiple regression analysis. The results demonstrated that the current ratio did not substantially affect the financial performance of these companies.

Wardah *et al.* (2023) examined the effect of debt-to-equity ratio (DER) and current ratio (CR) on return on equity (ROE) in the food and beverage companies. The study selected this method due to its appropriateness for small sample sizes and its efficacy in managing non-normal distributions. In SEM-PLS, path analysis evaluates the impact of dependent variables on independent variables. The analysis was conducted utilizing Smart PLS version 4.0. The result indicated that current ratio exhibited a positive correlation with performance.

Muhamad and Yayang (2022) examined the impact of several variables, specifically current ratio, net profit margin, debt to equity ratio, and total asset turnover, on Return on Equity. The research methodology employed proportional sampling according to defined criteria: (1) Identifying manufacturing firms with shares listed on the JSX that possess financial statements for the years ending December 31, 2005-2009. A total of 51 samples were collected from 205 companies in the manufacturing sector over a five-year period. The analysis employed multiple linear regression via least squares, hypothesis testing utilizing partial t-tests and simultaneous F-tests. The results indicated that debt to equity ratio and current ratio positively influenced the return on equity of manufacturing firms listed on the JSX from 2005 to 2009.

Gbalam and Uzochukwu (2020) investigated the correlation between the current ratio and corporate performance in Nigeria. A sample of fifteen (15) firms was utilized to establish the study sample, ensuring sufficient observations for statistical analysis. They employed a balanced panel data analysis to ascertain potential firm-specific approaches to working capital management in selected Nigerian publicly traded companies. Fixed and random effects panel data methodologies were employed, along with the Hausman test, which served as the foundation for determining the preferred model between fixed and random effects models. The results indicated that the current ratio has a negative and insignificant effect on firm performance, as measured by ROA, whereas cash management demonstrates a positive yet insignificant impact on firm performance.

H2: From the above, we hypothesize that operating current ratio has no significant effect on debt capital of listed manufacturing firms in Nigeria.

2.5 Quick Ratio and Debt Capital

Wardiyah (2021) defined the quick ratio, or acid test ratio, as a metric for assessing a company's capacity to fulfill short-term financial obligations utilizing its most liquid assets. The Quick Ratio, also known as the acid test ratio, is frequently termed the fast ratio. The quick ratio is a more stringent assessment of short-term solvency than the current ratio, as its numerator excludes inventories considered somewhat illiquid and a potential source of loss. The quick ratio closely resembles the current ratio; however, it excludes inventory from its calculation.

The quick ratio is a commonly utilized profitability metric for assessing a company's financial standing. This ratio continues to employ current assets and current liabilities in its computation (Ajayi & Lawal, 2021). This indicates that only short-term assets are most rapidly utilized, liquidated, or converted into cash to settle short-term liabilities. Conversely, current assets that necessitate additional time for conversion into cash, such as inventories, are excluded. This ratio is a more reliable measure of company liquidity.

Almakura *et al.* (2024) investigated the impact of liquidity management on the financial performance of Nigerian oil and gas companies. The current ratio, quick ratio, cash ratio, and return on capital employed were examined as proxy variables for liquidity management and financial performance, utilizing an ex-post facto research methodology. The study employed a purposive sampling method to gather secondary data, contingent upon the data's availability during the investigation period. The data was obtained from the annual financial reports of five Nigerian oil and gas companies, covering the period from 2012 to 2021. The data underwent analysis through descriptive statistics and regression analysis. The analysis

indicated that the quick ratio and cash ratio exert a positive but insignificant influence on return on capital employed.

Lufiyandi and Justina (2023) investigated the impact of quick ratio, debt to equity ratio, firm size, and the effects of COVID-19 on return on equity in companies within the tourism, restaurant, and hotel industries listed on the Indonesia Stock Exchange (IDX). They utilized purposive sampling, yielding a sample size of 27 companies. Quantitative data were obtained from annual reports available on the official website of the Indonesia Stock Exchange, and analysis was conducted utilizing descriptive statistics and panel data regression methods. Their findings revealed that the quick ratio positively influenced return on equity, though the effect lacked statistical significance.

Lanemey *et al.* (2022) investigated the impact of the quick ratio on the profitability of manufacturing firms in Indonesia. Three parameters, namely return on asset, net profit margin, and return on equity, were employed to assess profitability. Analysis was conducted on data from 158 manufacturing firms, utilizing accounting information published between 2012 and 2016 through regression techniques. The results indicate a positive correlation between the quick ratio and both net profit margin and return on asset in manufacturing firms, while no such correlation was found with return on equity.

Dadepo and Afolabi (2020) investigated the influence of liquidity management on the financial performance of selected manufacturing firms in Nigeria. Descriptive, correlation, and multiple regression techniques were employed to analyze panel data obtained from the annual reports of 10 representative enterprises from 2012 to 2016. The findings indicated that liquidity management, as measured by the current ratio, cash ratio, and quick ratio, exerts a significant negative influence on financial performance, as represented by return on assets, whereas the cash ratio and quick ratio demonstrated a positive yet insignificant effect.

H3: From the above, we hypothesize that operating quick ratio has no significant effect on debt capital of listed manufacturing firms in Nigeria.

2.6 Efficiency Ratio and Debt Capital

Efficiency ratios are essential metrics in financial analysis, acting as crucial tools for organizations aiming to assess and enhance their operational performance. These ratios represent a range of key performance indicators (KPIs) intended to reveal the effectiveness with which a company employs its resources to generate revenue and oversee its daily operations. In the face of today's dynamic markets, businesses must understand and monitor efficiency ratios to maintain a competitive advantage and promote sustainable growth (Adebayo *et al*., 2021).

Efficiency ratios provide executives, investors, and stakeholders with insight into the operational dynamics of an organization within the complex framework of financial management. By analyzing the efficiency with which a company converts inputs into outputs, these ratios provide insights that extend beyond simple profitability. They highlight the efficiency of resource utilization, the effectiveness of working capital management, and the overall operational health of an enterprise (Adebayo *et al*., 2021).

Obafunso and Saifullahi (2025) examined the influence of capital structure on the financial performance of publicly traded consumer goods companies in Nigeria. The study employed an ex post facto research design and obtained data from secondary sources. A quantitative

method was utilized for data analysis, involving a sample of 12 selected through stratified sampling criteria from a population of 21 consumer goods firms listed on the Nigerian Exchange Group PLC's Data Fact Sheet. The research encompassed a decade-long duration from 2014 to 2023. The study finds that the efficiency ratio exhibits a significant negative correlation with the return on capital employed for consumer goods companies in Nigeria, whereas the quick ratio, leverage ratio, and profitability ratio demonstrate an insignificant negative relationship with the return on capital employed.

Talatu *et al.* (2024) investigated the impact of liquidity management on the financial performance of Nigerian consumer goods manufacturing companies. The research employed an ex-post facto design. The research relies entirely on secondary data obtained from the annual reports of ten publicly listed consumer goods manufacturing companies on the Nigerian Exchange Group (NEG) spanning the years 2018 to 2022. The study employed panel analysis. The E-Views 12 statistical software was employed for data analysis. The study found that cash and cash equivalents positively and significantly influence the financial performance of consumer goods firms. Additionally, there is a negative and insignificant relationship between the efficiency ratio and the financial performance of consumer goods firms in Nigeria.

Ajayi and Lawal (2021) investigated the correlation between liquidity management and bank performance utilizing secondary data from the published annual reports of five Deposit Money Banks in Nigeria over a decade (2009-2018). The analysis employed Auto Regressive Distributed Lag (ARDL) methodology, revealing a positive and significant correlation between the efficiency ratio and return on assets (ROA), a positive and significant correlation between the loan-to-asset ratio and return on assets (ROA), and a positive but insignificant correlation between the liquidity ratio, with a p-value of 0.1808, and return on assets (ROA).

Li *et al.* (2020) elucidated the relationship between liquidity and the performance of non-financial firms in Ghana. The research utilized generalized least squares regression to analyze data from 15 firms spanning the years 2008 to 2017. Control variables, including size, efficiency ratio, growth, and tangibility, were employed. The findings indicated that liquidity, as measured by the current ratio, cash ratio and efficiency ratio exerts a significant negative impact on return on equity.

H4: From the above, we hypothesize that efficiency cash ratio has no significant effect on debt capital of listed manufacturing firms in Nigeria.

3.0 Methodology

The *ex-post facto* research design was used in this study due to the fact that the variables cannot be manipulated by the researcher. This method was adopted since social scientific research problems do not lend themselves to experimental and controlled inquiry of the ex-post factor kind. The population comprises of one hundred and fifty one (151) firms listed on Nigerian Exchange Group as at 31st December, 2024. Since the entire listed firms cannot be used for the study, the study is limited to twenty-six (26) listed manufacturing firms in Nigeria. In selecting the sample, purposive sample technique was used to derive the sample size which used to ensure that the sample represents a diversity of perspectives. The secondary source of data collection was used for this study where data was gathered from audited annual reports of selected listed healthcare in Nigeria. However, for the purpose of this study, ten (10) years annual reports of twenty-six (26) selected manufacturing firms were adopted. The study employed multiple regression technique of analysis using Least Squares

regression estimation. This method was adopted because it enhances easy presentation and interpretation of data. The empirical model of the study is mathematically expressed as follows:

$DTC_{it} = \alpha + \beta_1 CAR_{it} + \beta_2 CUR_{it} + \beta_3 QKR_{it} + \beta_4 EFT_{it} + \varepsilon_{it}$

Where;

DTC_{it} = Debt capital
CAR_{it} = Cash Ratio
CUR_{it} = Current Ratio
QKR_{it} = Quick Ratio
EFT_{it} = Efficiency Ratio
ε_{it} = Error term
α = intercept
$\beta_1 - \beta_3$ = Coefficients of parameters estimated

3.9 Measurement of Variables

The variables used in this study were measured as follows:

S/N	Variables	Measurement
1.	Debt Capital	This forms total amount of debt on a company's balance sheet, including short-term and long-term debt.
2.	Cash Ratio	This forms a company's liquidity, specifically its ability to meet short-term obligations using only its most liquid assets.
3.	Current Ratio	This forms a company's liquidity, specifically its ability to pay short-term obligations with its current assets.
4.	Quick Ratio	This forms a company's ability to meet its short-term obligations using only its most liquid assets.
5.	Efficiency Ratio	This forms a company uses its assets to generate revenue and profits.

Source: Researcher's Compilation, 2025

4. Result and Discussion

Table 1: Summary of Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
DTC	260	.00	45.81	4.6747	4.71928	15.703	.228
CAR	260	-4.65	78.28	9.9211	13.38298	5.903	.228
CUR	260	.17	100.00	42.9433	23.69107	-.925	.228
QKR	260	.00	14.04	.9103	1.27218	61.011	.228
EFT	260	-1.82	1.40	.1683	.30771	7.304	.228
Valid N (listwise)	260						

Source: Output of data analysis by author using SPSS (2025)

From the above table, the dependent variable, return on debt capital (DTC) has a mean value of 4.6747, standard deviation of 4.71928, minimum value of 0.00 and maximum of 45.81. The independent variables; cash ratio (CAR) has a mean value of 9.9211 and a standard deviation of 13.38298, a minimum and maximum value of -4.65 and 78.28 respectively. Current ratio (CUR) has a mean value of 42.9433, standard deviation of 23.69107, minimum value of 0.17 and maximum value of 100.00. Quick ratio (QKR) has a mean value of 0.9103, standard deviation of 1.27218, minimum value of 0.00 and maximum of 14.04. Efficiency ratio (EFT) has a mean value, standard deviation, minimum and maximum values of 0.1683, 0.30771, -1.82 and 1.40 respectively.

Table 2: Summary of Coefficient of Correlation

Correlations

		DTC	CAR	CUR	QKR	EFT
DTC	Pearson Correlation	1	-.315	-.109	-.205	-.007
	Sig. (2-tailed)		.000	.020	.000	.888
	N	456	456	456	456	456
CAR	Pearson Correlation	-.315	1	.572	.136	.019
	Sig. (2-tailed)	.000		.000	.004	.691
	N	456	456	456	456	456
CUR	Pearson Correlation	-.109	.572	1	.160	-.070
	Sig. (2-tailed)	.020	.000		.001	.137
	N	456	456	456	456	456
QKR	Pearson Correlation	-.205	.136	.160	1	.014
	Sig. (2-tailed)	.000	.004	.001		.765
	N	456	456	456	456	456
EFT	Pearson Correlation	-.007	.019	-.070	.014	1
	Sig. (2-tailed)	.888	.691	.137	.765	
	N	456	456	456	456	456

Source: Output of data analysis by author using SPSS (2025)

Table 2 above shows the 2-tailed correlation analysis of the variables at 5% (0.05) level of significance. This shows that debt capital (DTC) is negatively correlated with cash ratio (CAR), current ratio (CUR), quick ratio (QKR) and efficiency ratio (EFT). Cash ratio (CSR) is positively correlated with current ratio (CUR), quick ratio (QKR) and efficiency ratio (EFT) while negatively correlated with debt capital (DTC). On the other hand, current ratio (CUR) is negatively correlated with debt capital (DTC) and efficiency ratio (EFT) while positively correlated with cash ratio (CAR) and quick ratio (QKR).

Table 3: Summary of Regression Result

Model Summary

Multiple R	.438
R Square	.192
Adjusted R Square	.179
Std. Error of the Estimate	4.702

Coefficients

	Unstandardized Coefficients				
	B	Std. Error	Beta	t	Sig.
(Constant)	6.811	.704		9.676	.000
CAR	-.132	.025	-.381	-5.224	.000
CUR	.008	.016	.035	.473	.636
QKR	-.777	.209	-.211	-3.718	.000
EFT	-1.088	.941	-.066	-1.157	.248

Source: Output of data analysis by author using SPSS (2025)

The B column discusses the coefficient of the model. This indicates that a 681.1% increase in debt capital is as a result of a 13.2% decrease in cash ratio, 8% increase in current ratio, 77.7% decrease in quick ratio and 108.8% decrease in efficiency ratio.

The cumulative adjusted R^2 (0.179) which is the multiple coefficient of determination gives the proportion or percentage of the total variation in the dependent variable as explained by the independent variables jointly. Hence, it signifies that 17.9% of the total variation in debt capital of the sample firms is caused by the proxies of liquidity management. This is quite high so predictions from the regression equation are fairly reliable. It also means that 82.1% of the variation is still unexplained so adding other independent variables could improve the fit of the model. This indicated that the model is fit and the explanatory variable are properly selected, combined and used. The findings have theoretical, practical and regulatory significance. This significance represents the contributions of the study which are expected to benefit the existing body of knowledge within the accounting and finance research, regulators and providers of accounting services.

Considering the significant effect of cash ratio on debt capital of listed manufacturing firms in Nigeria, the regression result in table 4 indicate that cash ratio has a negative and significance influence on debt capital of listed consumer firms in Nigeria. This was proved by the beta coefficient value of 0.381 and a t- value of -5.224 and a significance value 0.000 which is significance at 5% significance level. This leads to the acceptance of alternative hypothesis and rejection on null hypothesis. Hence, it is concluded that cash ratio has significant effect on debt capital of listed manufacturing firms in Nigeria.

Considering the significant effect of current ratio on debt capital of listed manufacturing firms in Nigeria, the regression result in table 4 indicate that current ratio has a positive and insignificance influence on debt capital of listed manufacturing firms in Nigeria. This was proved by the beta coefficient value of 0.035 and a t-value of 0.473 which has a significant value of 0.636 which is insignificance at 5% significance level. This leads to the acceptance of null hypothesis and rejection on alternative hypothesis. Hence, it is concluded that current ratio has no significant effect on debt capital of listed manufacturing firms in Nigeria.

Considering the significant effect of quick ratio on debt capital of listed manufacturing firms in Nigeria, the regression result in table 4 indicate that quick ratio has a negative and significance influence on debt capital of manufacturing firms in Nigeria. This was proved by the beta coefficient value of 0.211 and a t- value of -3.718 which has a significant value of 0.000 which is significance at 5% significance level. This leads to the acceptance of alternative hypothesis and rejection on null hypothesis. Hence, it is concluded that quick ratio has significant effect on debt capital of listed manufacturing firms in Nigeria.

Considering the significant effect of efficiency ratio on debt capital of listed manufacturing firms in Nigeria, the regression result in table 4 indicate that efficiency ratio has a negative and insignificance influence on debt capital of manufacturing firms in Nigeria. This was proved by the beta coefficient value of 0.066 and a t-value of -1.157 which has a significant value of 0.248 which is insignificance at 5% significance level. This leads to the acceptance of null hypothesis and rejection on alternative hypothesis. Hence, it is concluded that efficiency ratio has no significant effect on debt capital of listed manufacturing firms in Nigeria.

4.1 Discussion of Findings

The results indicate that almost all the variables are significantly normally distributed at 5% level of significance. The correlation matrix indicates the variables have mixed relationships. The results also indicate the absence of multi-colinearity.

Cash ratio and debt capital

The findings from the first hypothesis revealed that cash ratio has significant effect on debt capital of listed manufacturing firms in Nigeria. This findings is in agreement with the findings of Musa *et al.* (2024) whose result revealed that cash assets and receivable assets significantly influenced the return on assets of publicly listed consumer firms in Nigeria. The study also aligns with the work of Igwe (2024) whose result revealed that cash ratio exhibited a statistically significant positive impact on market capitalization. The study negates the findings of Elijah and Steve (2024) whose result revealed that liquidity has a significantly negative relationship with the cash ratio of manufacturing firms, while it has no significant effect on the debt-to-equity ratio of manufacturing firms in Nigeria.

Current ratio and debt capital

The findings from the second hypothesis revealed that current ratio has no significant effect on debt capital of listed manufacturing firms in Nigeria. This result agrees with the findings of Wardah *et al.* (2023) whose result revealed that current ratio exhibited a positive correlation with performance. In conclusion, current ratio proved to be a significant predictor of return on equity owing to its positive significance. It is also supported with the study of Muhamad and Yayang (2022) whose result revealed that debt to equity ratio and current ratio positively influenced the return on equity of manufacturing firms listed. The also however, negates the study of Soje *et al.* (2024) whose result revealed that current ratio did not substantially affect the financial performance of listed companies.

Quick ratio and debt capital

The findings from the third hypothesis revealed that quick ratio has significant effect on debt capital of listed manufacturing firms in Nigeria. This findings correlates with the findings of Almakura *et al.* (2024) whose result revealed that quick ratio and cash ratio exert a positive but insignificant influence on return on capital employed. The result is also strengthened by the study of Lufiyandi and Justina (2023) whose key findings revealed that quick ratio positively influenced return on equity, though the effect lacked statistical significance. The study however disagreed with the study of Dadepo and Afolabi (2020) whose result revealed that liquidity management, as measured by the current ratio, cash ratio, and quick ratio, exerts a significant negative influence on financial performance, as represented by return on assets, whereas the cash ratio and quick ratio demonstrated a positive yet insignificant effect.

Efficiency ratio and debt capital

The findings from the forth hypothesis revealed that efficiency ratio has no significant effect on debt capital of listed manufacturing firms in Nigeria. This is further strengthened by the position of Ajayi and Lawal (2021) whose result revealed a positive and significant correlation between the efficiency ratio and return on assets. The study negates the findings of Obafunso and Saifullahi (2025) whose result revealed that the quick ratio, leverage ratio, and profitability ratio demonstrate an insignificant negative relationship with the return on capital employed. It also negates the study of Talatu *et al.* (2024) whose result revealed that there is a negative and insignificant relationship between the efficiency ratio and the financial performance of consumer goods firms in Nigeria.

5.0 Conclusion and Policy Recommendation

5.1 Conclusion

The cardinality of liquidity management in any organisation cannot be over emphasised. This is because either inadequate liquidity or excess liquidity may be injurious to the smooth operations of the organization. Liquidity management is a critical component of any organizational environment that necessitates careful consideration, planning, and management because it influences the level of trust among stakeholders. Liquidity should be controlled such that neither too much nor too little is available as firms with poor liquidity management experience illiquidity and eventually bankruptcy. The need for shareholders to maximize their wealth has forced the primary goal of profit maximization for businesses. Firms' capital structures, however, are made up of debt and equity, which refers to borrowed funds and owned assets, respectively. A company's debt portfolio is mostly made up of short- and long-term obligations that can only be paid if liquidity is available. This study hereby concludes that cash ratio and quick ratio has significant effect on debt capital while current ratio and efficiency ratio has no significant effect on debt capital of listed manufacturing firms in Nigeria.

5.2 Policy Recommendations

The following recommendations are hereby made:

i. The study recommended that managers of manufacturing firms should increase the amount held as cash in order to meet daily obligations, which could yield higher return before paying its liabilities.
ii. Maintaining a high level of liquidity may lead to reduced profitability, while prioritizing profitability may require sacrificing liquidity and holding lower levels of current assets. Therefore, it's crucial for these firms to strike a balance between the two extremes.
iii. Manufacturing firms should create a new strategies and incentives like discount and promo that will ensure that debtors are encouraged and motivated to settle their accounts on time.
iv. To improve overall efficiency, the management of manufacturing firms in Nigeria should think about implementing a comprehensive strategy that synchronizes risk reduction measures with liquidity forecasts.

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