LIQUIDITY MANAGEMENT AND FIRM VALUE OF LISTED CONSUMER GOODS COMPANIES IN NIGERIA

BENEDICT SOJE
Department of Accounting
Federal University Wukari
Taraba State, Nigeria
Email: mosiben@yahoo.com

ERNEST EBONG INYANG
Department of Accounting
Federal University Wukari
Taraba State, Nigeria

&

BENJAMIN EMOFE UDOLU
Department of Accounting
Federal University Wukari
Taraba State, Nigeria

ABSTRACT

This study examines the effect of liquidity on firm value specifically among consumer goods firms in Nigeria. Secondary data were collected from listed consumer goods firms in the Nigerian Exchange Group (NGX). The population of the study comprises of the 21 listed Consumer Goods Firm as 2023. From the population, a judgmental sampling technique was used to select a sample size of 13 firms from where data were collected for the analysis covering a period of 8 years (2016-2023) using multiple regression model. The findings of the study show that there is a negative but significant relationship between current ratio and Tobin's Q of listed consumer goods firms in Nigeria, a positive and significant relationship between quick ratio and Tobin's Q and a negative and significant relationship between cash conversion cycle and Tobin's Q. The study therefore concludes that firms that are holding more cash and cash equivalents specifically non-productive or low-yield current assets are bound to perform less as compared to companies with more tangible assets than cash and cash equivalents. Based on the conclusion, the study recommend that Listed consumer goods firms in Nigeria must set a target current ratio that maintains enough cash to handle short term obligations without overburdening it with idle assets which tends to harm its market valuation.

Keywords: Liquidity Management, Firm Value, Listed Consumer Goods Companies, Nigeria.

Introduction

In recent years, there has been increasing numbers of investors in the Nigeria capital market due to the fact that more companies are offering their shares for sales as well as increasing confidence in the capital market in Nigeria thereby necessitating interest in the share price changes as well other related factors. Liquidity management on the other hand has

also attracted a lot of interest in accounting because of its impact on firm's value, profitability and long term survival. Lack of adequate liquidity management not only constitute a threat to a company's survival but also leaves it vulnerable to bankruptcy and insolvency. When firms suspend their outstanding facilities or creditors demand immediate payment on supplies, the business may face significant challenges if it cannot quickly convert current assets into cash. The adequacy of managing assets and liabilities is a top priority for all companies, regardless of whether they are financial or non-financial entities. Liquidity can be likened to the circulation of blood in the human body; just as a lack of blood weakens the system, poor liquidity weakens corporations. Proper liquidity management in a firm ensures the availability of funds for investments, allowing the company to withstand liquidation threats and avoid selling assets at distressed prices (Effiong and Enya, 2020). Consequently, the efficient administration of a firm's resources becomes a crucial aspect of its development and success.

On the other hand, the continuous existence of any company in any economy are usually targeted towards improvement in firm value (Kalbuana 2020). If firm value is seen as book value, firms would be looking at increase in assets, earnings per share, dividend per share and book value of equity. If firm value is considered as market value, companies would be considering increase in market price of shares, price earnings ratio and market capitalization (Etim 2022). Thus, firm value could be understood from the standpoint of increase in both book value and market value. Another common measure of value of companies is Tobin's Q which usually show the level of growth of companies in terms of equity and debt capital to total assets. Growth in market price of shares of companies usually influence the market value of equity of the entities positively because price is often multiplied by the outstanding shares. Thus, when market price of shares increases, the total market value of equity is certain to improve as well. Improvement in earnings per share, dividend per share, price earnings ratio and book value of equity are all indicators of growth in firm value. Specifically, for there to be improvement in these indicators, profitability is expected to be raised. This simply means that for the purpose of raising the value of companies, improvement in profitability of the entities through various attributes that are within the control of managers is fundamentally ideal.

This empirical study seeks to examine the relationship between liquidity management and firm value of listed consumer goods firms in Nigeria. The research aims to reconsider traditional analytical techniques and explore new approaches to liquidity management decision-making processes. To achieve the research objectives, the study will utilize various financial ratios, such as the current ratio, acid test ratio, and cash conversion cycle, to measure liquidity, while the dependent variable, firm value will be represented by Tobin Q.

The consumer goods firms in Nigeria play a significant role in shaping the economy especially in Nigeria where the governments in recent years are grappling with numerous economic challenges. This therefore underscores the significance of this research especially as it relates to a key component of the survival of the industry which is liquidity and firm value. According to Aida- Sofiatin (2020), a company with an unstable value, will be considered to have lost it quality by investors and will make it difficult for such a company to attract additional funding. The consumer goods sector in Nigeria has also faced several challenges during the COVID-19 era, this has presented challenges for various segments of the society, with consumer goods firms particularly impacted. As a result of this, profits have been slashed, reputations have been damaged, management has been blindsided and firms have been lost

out or being distressed. Based on this, the need to investigate the effect of liquidity management on the firm value of listed consumer firms in Nigeria has becomes imperative.

Based on the identified research problem, the main objective of this study is therefore to examine the relationship between liquidity management and firm value of listed consumer goods firms in Nigeria between 2016 and 2023. In particular, the study intends to:

i. Evaluate the effect of current ratio on the firm value of listed consumer goods firms in Nigeria.
ii. Assess the effect of quick ratio on the firm value of listed consumer goods firms in Nigeria.
iii. Ascertain the effect of cash conversion cycle on the firm value of listed consumer goods firms in Nigeria.

In line with the above objectives, the following testable propositions are stated in their null form:

H_{01}: current ratio has no significant effect on Tobin's Q of listed consumer goods firms in Nigeria.

H_{02}: quick ratio has no significant effect on Tobin's Q of listed consumer goods firms in Nigeria.

H_{03}: cash conversion cycle has no significant effect on Tobin's Q of listed consumer goods firms in Nigeria.

Literature Review

This section consists of review of related literature which include conceptual review, theoretical review as well as empirical review.

Concept of Firm Value

Firm value represents the assets owned by an entity and describes the prosperity of the company owners. It is determined by the asset earning power (Lukayu & Mukanzi, 2015). It is the acquisition and trade value of the company anticipated by volunteer buyers and sellers with thorough information about the entity free from any problem or encumbrance. Firm value might be measured using measures such as earnings per share (EPS), Market Value-to-book value of equity, market price of shares, market value of equity, book value of equity, price earnings (P/E) ratio and Tobin's Q (Suresh & Sengottaiyan, 2015). In this study, Tobin's Q is used to measure the value of listed consumer goods firms in Nigeria. According to Jeroh (2020), Tobin's Q measures the relationship of the firm stock market value to the firm's resources replacement cost. It is considered as the best predictor of market condition and also explains the majority of the investment variability. It can also be applied in the financial condition analysis of a company which means that investors who acquire firm's stock can first calculate the Tobin's Q (Rabiu, 2019).

Liquidity

Omaliko and Okpala (2020) opine that liquidity indicates whether an entity could be able to meet its financial obligations in the short term while solvency indicates the ability to meet long term financial obligations. Liquidity is viewed traditionally as arising from financing activities where firms borrow to raise cash for operations. Liquidity is the ability of a firm to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses while effective liquidity risk management is of paramount importance because a liquidity

shortfall at an institution can have system wide repercussions. The provision of maintaining adequate liquidity always to meet customer's obligation is an essential feature of consumer goods firms. Therefore, consumer goods firms must ensure that adequate provision of cash and other near cash securities is made available to meet daily withdrawals obligations and new loan demands by customers in need of liquidity. It is in this regard that banks in Nigeria are statutorily required to comply with the cash reserve requirement (CRR) policy of the Central Bank of Nigeria (CBN) as well as other regulatory measures effectively managing their operations.

Anyanwu (2003) posits that liquidity shortage, no matter how small, can cause unimaginable disruptions to a financial instruction's operations and customer's relationship. Every business relies on its customers to succeed; therefore, managing good customer relationships is key and must be incorporated into its strategic planning process. Liquidity crisis, if not properly managed can result to reputational risk including bad press releases against the institution and could destroy customer's relationship built over the years. In order to avoid this, it is thus imperative that the managers of business and financial institutions should have a well define business policy and established procedures for monitoring and managing liquidity. Managing liquidity is therefore a core daily process requiring institutions monitor and project cash flows to ensure that adequate liquidity is always maintained to meet their obligations as they arise (Wuave 2020). For the purpose of this research, liquidity was measured in terms of Current ratio (CR), Quick ratio (QR) and Cash Conversion Cycle (CCC).

Current Ratio

According to Eke and Ringim (2022) current ratio is calculated by dividing current assets with current liabilities. This ratio indicates how much that a company owns, and all the assets that can be converted to cash within a year, compare to its total liabilities that will mature in short term (not more than one year). According to Ugwu (2022), higher current ratio of current assets compare to its current liabilities, refers to a better ability for company to pay off its short term debts. The indicator used to measure liquidity in this research is current ratio (CR), which mathematically is calculated by dividing current assets with current liabilities. The ratio which represents the ratio of current assets to current liabilities measures the company's ability to meet its short term obligations such as trade creditors. A liquidity ratio that is greater than one implies the firm's greater capacity to meet short term obligations. However, a current ratio that is below one implies liquidity deficit which could lead to a decline in the company's energy, thus can affect financial performance. If the ratio is equal to one, it means that current assets equal current liabilities. (Robinson, et al. 2015).

Quick Ratio

The quick ratio is commonly known as acid test ratio and is a liquidity ratio that measures the ability of a company to pay its current liabilities when they come due with only quick assets. According to Wardiyah (2017) Quick Ratio or Acid Test Ratio is a ratio to measure a company's ability to pay short-term financial liabilities by using liquid assets that are more liquid (Liquid Assets). This ratio is a strong indicator of whether a firm has sufficient short-term assets to cover its immediate liabilities and explain how well a company can quickly convert its assets into cash in order to pay off its current liabilities. According to Sukamulja (2019) the

quick ratio is almost the same as the current ratio, the difference is that the quick ratio does not include inventory in the calculation.

It therefore follows that the acid-test ratio is a more conservative version of current ratio. These two ratios are rather similar, although the Acid-Test ratio provides a more rigorous assessment of a company's ability to pay its current liabilities than the current ratio because the numerator eliminates inventory, considered the least liquid current asset and the most likely source of losses. The advantage of using this ratio is people can see if the companies have the ability to pay its current liabilities without relying on inventory by seeing the acid test or quick ratio, if the ratio greater than 1.0 then the company is sufficiently able to meet their short-term liabilities. Also with higher acid test ratio, the company has a better liquidity and also financially is more secure in the short term. If the result is low or the acid-test ratio is decreasing, usually it means that a company has trouble in maintaining or growing sales, paying obligations too quickly, or slow in collecting receivables. Acid Test Ratio (Quick Ratio) = (Cash + Marketable Securities + Accounts Receivable) / Current Liabilities.

Cash Conversion Cycle

The cash conversion cycle (CCC) was propounded by Hager (1976) and it was used by many researchers (Thuvarakan, 2012). Cash conversion cycle (CCC) is among the measures of management effectiveness and measures how long a firm will be deprived of cash if it increases its investment in resources in order to expand customer sales. CCC is a measure of the liquidity risk entailed by growth. But, shortening the CCC creates its own risks: while a firm could even achieve a negative CCC by collecting from customers before paying suppliers, known as a policy of strict collections and lax payments which is not always sustainable. The CCC does this by following the cash as it is first converted into inventory and accounts payable (AP), through sales and accounts receivable (AR), and then back into cash. CCC is combined with other metrics such as return on equity and return on assets and useful for comparing close competitors, as firms with the lowest CCC is often the one with the best management. CCC is another measure of corporate liquidity management as this measures the time lag between cash payments for purchase of inventories and collection of receivables from customers. CCC applies as a comprehensive measure of working capital as it depicts the time lag between expenditure for the purchase of raw materials and the collection of sales of finished goods, (Padachi, 2006). CCC formulae and calculation is shown as: CCC = Inventory collection Period + Debtors Collection Period–Creditors Payment Period. Applying this formula, the three variables on which CCC is dependent are: Inventory collection Period ICP = Debtors Collection Period DCP = Creditors Payment Period CPP= Cash conversion cycle CCC. This can result negative or positive. However, positive outcome indicates the number of days a company must borrow or tie up capital while awaiting payment from a customer; while negative outcome indicates the number of days a company has received cash from sales before it must pay its suppliers (Hutchison, 2007).

Concept of Liquidity Management

Liquidity management in all organizations is their ability to effectively convert current business assets to cash. Cash is usually considered very important in any intuition because it ensures that business components are sustained (Patjoshi, 2016). On the other hand, liquidity in banking is the ability of a bank to make funds that can be used to pay for obligation as it

progressively becomes due (Onyekwelu, Chukwuani, & Onyeka, 2018). If working capital is managed properly in any organization, it makes it easy to maintain liquidity which guarantees daily operation and meeting of business obligations without any hindrance (Ibe, 2013). Dalgaard, (2009) explained that liquidity is the degree to which an asset or security can be bought or sold in the market without affecting the asset's price. He further explains that a liquid asset is characterized by a high level of trading activity and plays a vital role in the functioning of financial markets. Markets are liquid when those who have assets holdings can sell them at prices that do not involve considerable losses so as to gain the finance they need to fulfil other commitments. Liquidity by its implications has ratios and they include: current ratio, liquid ratio extracted from balance analysis and operating cash flow ratio extracted from cash flow analysis. In the explanation of Bolek and Wolski, (2012), the capacity of organization to meet its current liabilities are measured by different financial ratios. The firm can get together its debt and give its client long time payments, (Arif & Anees, 2012). Liquidity difficulties may deleteriously affect a certain bank's earnings and capital. Prior literatures like Raykov, (2017), Abubakar, et al., (2018), Lyndon and Paymaster, (2016); Syed, (2015) and Ejike and Agha (2018) saw liquidity as the ability of a firm to defray its short-term money-related commitments in a convenient way. Derived from these authors‟ views, high volumes of available cash imply that organizations are in a position to honour their financial obligations, when they fall due without a default. Further, the types of assets held by corporations and the ease by which those assets could be easily turned into cash indicates how liquid the assets are as indicated in (Onyekwelu, et al., 2018; Mulyana & Zuraida, 2018; Mohd & Asif, 2018; Raykov, 2017; Abubakar et al., 2018; Lyndon and Paymaster; 2016; Syed, 2015 & Ejike and Agha, 2018).

Theoretical Review

The theoretical underpinning of this study is the cash conversion cycle (CCC) theory which explains the relationship between a firm's liquidity, profitability and efficiency in managing its working capital. It measures the time it takes for a firm to convert or sell its inventory, collect accounts receivable and pay it accounts payable. The implication of this theory is that effective CCC management enhances firm value. Another relevant theory for this study is the Working Capital Management Theory (WCM). The theory examines the management of firm's short-term assets and liabilities to ensure liquidity, profitability as well as efficiency. It is implied that effective management of any of the working capital components enhance firm value.

Empirical Review

James (2020) examined Liquidity, size and firm value from Nigerian economy adopting expo facto research design. The study used data collected for the period 2007 to 2016. The findings justified the view that firm size had a significant influence on firm market value, though the influence was negative.

Kalbuana, *et al*., (2020) examined Liquidity effect, profitability leverage to company value: A case study of Indonesia. The technique used in the analyses was quantitative approach with sample determination technique which data were analyzed using multiple linear regression analysis It was observed that liquidity variables impact on the company value, while the variables of profitability and leverage do not affect company value significantly.

Kristiani and Foeh (2020) examined the impact of liquidity and profitability on firm value with dividend policy as an intervening variable (Empirical study of manufacturing companies in the pharmaceutical subsector listed on the Indonesia Stock Exchange in 2013 to 2017). The sourced data were analyzed using descriptive analysis, multiple linear regression analysis and as well as path analysis. The outcomes of the analysis indicated that liquidity, profitability and dividend policy simultaneously had a positive and significant influence on firm value.

Vijayakumaran (2019) Efficiency of working capital management and firm value: Evidence from Chinese listed firms. The Net Trade Cycle (NTC) and its components were used to measure efficiency of WCM, while the firm value was measured by the Tobin's Q ratio. The study made use of panel data methodology to estimate the regression model. From the analyses, it was reported that net trade cycle was negatively associated with firm value. Also, it was observed that firm value was adversely affected by the number of days' account receivable and inventories.

Tui and Afriyani (2019) examined the effect of liquidity and company size on profitability and company value in banking industry in Indonesia Stock Exchange. The obtained data were analyzed using Structural Equation Modeling (SEM) with the program of Analysis moment structure. Results of the analysis showed that liquidity had a positive and significant effect on profitability, but liquidity had a negative and insignificant effect on value, company size has a positive and insignificant effect on profitability and firm value.

Hidayat, et al. (2019) investigated the improve level of firm value with liquidity, debt policy and investment in Indonesia emerging market. The sourced data were analyzed using multiple linear regression technique. The results of the analyses revealed that liquidity, debt and investment had positive and significant influence on the firm value off all the sampled companies.

Methodology

The research design adopted for this study is the ex-post facto research design because of the nature of the study. The study intends to examine the cause effect relationship between liquidity and firm value and since the data and events has taken place and data documented, the ex-post facto design become appropriate for the study.

The study population comprises of the twenty-one (21) consumer goods firms with regional, national and international authorizations listed on the Nigerian Exchange Group (NGX) as at 31st December, 2023. Based on the population of the study, a judgmental sampling technique was used to select a sample size of 13 consumer goods firms on the bases of the following criteria:

i. The availability of data for the period under review and year of listing.
ii. Firms must remain listed on the Nigerian Exchange Group (NGX) during the periods of the study.

Data for this study was sourced mainly from secondary sources relying on audited corporate financial statement and annual report of the thirteen (13) selected consumer goods firms submitted to Nigerian Stock Exchange Fact Book, covering an operating period of eight (8) years from (2016-2023). The variables for this study are liquidity management as the independent variable proxy by current ratio, quick ratio and cash conversion cycle and firm value as the dependent variable proxy by Tobin's Q.

The model adopted for this research is the multiple regression model that examines the combined effect of the current ratio, acid test ratio, and cash conversion cycle on the return on equity of listed consumer goods firm in Nigeria. The model is specified below:

$$\mathbf{TQ_{it} = \beta_0 + \beta_1 CR_{it} + \beta_2 QR_{it} + \beta_3 CCC_{it} + \varepsilon_{it}}$$

Where:

TQ = Tobin's Q

CR = Current ratio

ATR = Acid test ratio

β_0 is the regression intercept (constant)

$\beta_1 - \beta_4$= Coefficient of independent variables.

i = Individual firms

t = Time i.e. (2016-2023).

it = Sectorial comparison

ε = error terms. The error term which account for other possible factors that could influence Tobin's Q that are not captured in the model. The simple regression model was employed in order to estimate as well as to examine the effect of the liquidity management on firm values of listed consumer goods firms in Nigeria.

Analysis, Results and Discussion

This section of the study focused on the analysis of data extracted from the annual financial reports of the sampled consumer goods firms listed on the Nigeria Exchange Group (NGX) for the period under review (2016–2023). It also includes the analysis of pre-estimation tests conducted, descriptive statistics, which expresses the summary of the data used for the study, followed by the correlation analysis showing the relationship among the variables of the study, regression results and the discussion of the results.

Data Analysis

Before the data extracted from the annual financial reports of the sampled consumer goods firms were analyzed, pre-estimation tests were conducted to check for whether or not the data series are normally distributed and also check against harmful multicollinearity among the selected variables of study. These are, heteroskedasticity test (using the Breusch-Pagan test for heteroskedasticity), normality test (using Shapiro Wilk test) and multicollinearity test (using the Variance Inflation Factor).

Heteroskedasticity Test

The objective of the heteroskedasticity test is to determine whether the variance of residuals is constant. The assumption of constant residual variance is called homoskedasticity. the non-heteroskedasticity assumption must be fulfilled to obtain the best linear unbiased estimator (Kanda, 2022). The Breusch-Pagan / Cook-Weisberg test for heteroskedasticity was used in this study and the result is shown as below:

Ho: variance is constant (Homoskedastic)

chi^2(1) = 10.51

Prob > chi^2 = 0.0436

According to the test output above, the prob>chi^2 value is 0.0436 and based on this finding the null hypothesis was rejected and we can conclude that the variance of residuals is not constant and as such the non-heteroskedasticity assumption is not fulfilled.

Multicollinearity Test

In testing for the presence of multicolinearity among the independent variables, the Variance Inflation Factor (VIF) test was employed. The Variance Inflation Factors (VIFs) were used to detect collinearity (also called multicollinearity) among predictor in a model of multiple linear regressions.

Table 1: Multicollinearity Test Table

	VIF	1/VIF
CR	1.00	0.997814
QR	1.03	0.973558
CCC	1.03	0.971549
Mean VIF	1.02	

Source: STATA Output Version 15.0

The result showed the average VIF of 1.02 which suggests the absence of multicolinearity among the independent variables of the study.

Descriptive Statistics

Table 2: Summary of Descriptive Statistics

Variables	Obs.	Mean	Std. Deviation	Minimum	Maximum
TQ	104	0.509293	0.438454	0.006722	1.987731
CR	104	1.95772	0.953005	0.035859	3.011563
QR	104	0.839835	0.460412	0.190761	2.138699
CCC	104	31.82174	38.12982	-94.0046	97.41676

Source: STATA Output version 15.0

From table 2, Tobin's Q has a mean value of 0.509293; this represents the average Tobin's Q of the sampled listed consumer goods firms during the study period which is around 51%. The table also revealed that the minimum and maximum Tobin's Q were 0.006722 and 1.987731 respectively; this represents the lowest and highest value observed on the data, indicating a positive value for the observations. Tobin's Q has a standard deviation of 0.438454 which is below the mean. This situation implies that there is a low variation in the distribution of Tobin's Q among the studied consumer goods firms.

Similarly, it can be observed from table 2 that current ratio has a minimum value of 0.035859 and a maximum of 3.011563. This result implies that some of the firm's current ratio are below the recommended 2:1 while some companies had in excess of the recommended industry standard ratio of 2:1. In both cases, it is not healthy for the firms. The table also reveals that the mean of current ratio is 1.96, which implies that on the average, the current ratio of the studied firms is approximately 2:1 which indicates a fair liquidity level. The standard deviation of 0.95 is below the mean and it implies a low variation in the distribution of liquidity among the sampled firms.

From Table 2 also, it can be observed that quick ratio has a minimum and maximum of 0.19076 and 2.138699 respectively. This result implies that some of the firm's quick ratio are below the recommended 1:1 while some companies had in excess of the recommended industry standard ratio of 1:1, signifying that some entities have a relatively low quick ratio while some have a relatively high ratio demonstrating both a strong and weak ability to cover

short term liabilities with their most liquid assets. Quick ratio also has a mean of 0.839835. this implies that on the average, the firms have 0.84 to cover their short term liabilities without inventory. Also, the standard deviation of 0.460412 indicating that most of the sampled firms are within the same range of quick ratio in terms of Tobin's Q.

Lastly, it can be observed from table 2 that cash conversion cycle has a minimum value of -94.0 and a maximum of 97.42. This result implies that some of the firms are able to collect revenue from sales before settling their suppliers, while some companies have relatively long cash conversion cycle, indicating a favourable position for cash flow but also signalling inefficiencies in the management of working capital and turning of inventory into cash. The table also reveals that the mean of cash conversion cycle is 31.82 days, implying that on the average, it takes a firm 31.82 days to convert its investment in inventory into cash flows from sales. The standard deviation of 38.1298 is above the mean and it implies a high variation in the distribution of cash conversion cycle among the sampled firms.

Correlation Analysis

Correlation is used to describe the statistical association between two or more variables for making of predictions regarding these relationships. The values of the correlation coefficients range from -1 to 1. The size of the correlation coefficient explains the direction of the relationship. Higher values indicate a strong relationship while lower values indicate weak relationship. The correlation coefficients on the diagonal are 1.0000, which implies that each of the variables perfectly correlates with itself.

Table 3: Correlation Matrix

	TQ	**CR**	**QR**	**CCC**
TQ	1.0000			
CR	-0.5700	1.0000		
QR	0.0517	-0.4107	1.000	
CCC	-0.6005	-0.0467	0.1626	1.000

Source: STATA Output Version 15.0

Table 3 reveals that the correlation coefficient between current ratio and Tobin's Q is a -0.5700, which shows that there is a negative and strong correlation between the two variables. Furthermore, Table 3 shows that the correlation coefficient between quick ratio and Tobin's Q is 0.0517. The result implies there is a positive but weak correlation between the two variables. Similarly, Table 3 shows that the correlation coefficient between cash conversion cycle and Tobin's Q is -0.6005. This result implies that there is a negative and strong correlation between cash conversion cycle and Tobin's Q of listed consumer goods firms in Nigeria.

Regression Analysis

This study adopted the multiple regression analysis in order to draw inference and test the hypotheses stated in the study.

Table 4: Summary of Regression Results

TQ	Coefficients	T-value	P-value
CR	-.034342	-0.75	0.000
QR	.0663329	0.69	0.548
CCC	-.0013255	-1.15	0.025

Constant	.9323909	8.25	0.000
$R^2 = 0.3300$			
Adj $R^2 = 0.2800$			
Prob > F = 0.000			

Source: STATA Output Version 15.0

The Table above indicates the summary of the regression model. From the Table, the coefficient of determination (R^2) value is 0.3300; this implies that about 33% of the variations in the dependent variable was explained by the collective effects of the independent variables incorporated in the research model while the remaining 67% could be attributed to other factors not captured in the model. The probability value of 0.000 indicates that the model is fit to investigate the impact of liquidity management on firm value of listed consumer goods firms in Nigeria.

From Table 4 it can be observed that current ratio has a regression coefficient of -034342, a z-value of -0.75 and p-value of 0.000. The negative coefficient entails that for any increase in current ratio by one unit, Tobin's Q is expected to decrease by -034342 and vice versa. The 0.000 significance value indicates a negative and significant relationship between current ratio and Tobin's Q of listed consumer goods firms in Nigeria.

Similarly, the Table reveals that quick ratio has a regression coefficient of .0663329, a z-value of 0.69 and a p-value of 0.548. This result depicts a positive but insignificant effect of quick ratio on Tobin's Q such that if quick ratio level is increased by one unit, Tobin's Q is expected to increase by .0663329 and vice versa.

Lastly, it can be seen from Table 4 that cash conversion cycle has a significantly negative effect on the Tobin's Q of listed consumer goods in Nigeria (β = -.0013255, z = 8.25, p = 0.025). The negative coefficient implies that Tobin's Q is expected to decrease by -.0013255 should cash conversion cycle be increased by 1 unit and vice versa. The p-value of 0.025 indicates that cash conversion has a negative but significant statistical influence on Tobin's Q of the studied consumer goods firms in Nigeria.

Discussion of the Findings

In this section, major findings from the study are discussed for clarity of presentation and ease of understanding.

Current Ratio and Tobin's Q of Listed Consumer Goods Firms in Nigeria

The regression coefficient between current ratio and return on equity is -.034342, a t-value of 0.75 and a p-value of 0.000 which shows a negative but significant relationship between current ratio and Tobin's Q of listed consumer goods firms in Nigeria. This illustrates that an increase in current ratio by one unit will result in decrease in Tobin's Q by .034342 and vice versa. A higher current ratio, which reflects a firm's ability to cover its short-term liabilities with its short-term assets, seems to be associated with a lower market valuation (Tobin's Q). This counterintuitive result could imply suboptimal operational efficiency. While liquidity is important for short-term operations, excessive liquidity might signal a lack of investment in growth opportunities. Investors typically favor firms that effectively deploy their resources to generate growth. If a firm is holding too much cash or liquid assets rather than investing in projects that enhance productivity or market share, this may lead to a lower Tobin's Q. Consequently, Investors may view the firm's management as ineffective, which tends to harm

its market valuation thereby negatively impacting Tobin's Q. This finding is consistent with the findings of (Suresh & Sengottaiyan, 2015) but contrary to the findings of (Lukayu & Mukanzi, 2015) who found a positive significant relationship.

Quick Ratio and Tobin's Q of Listed Consumer Goods Firms in Nigeria

The regression coefficient between current ratio and Tobin's Q is .0663329, a t-value of 0.69 and a p-value of 0.548 which shows a positive and significant relationship between quick ratio and Tobin's Q of listed consumer goods firms in Nigeria. This illustrates that an increase in quick ratio by one unit will result in increase in Tobin's Q by .0663329 and vice versa. One possible explanation for this relationship is that investors may view firms with high liquidity favourably, operating under the assumption that strong liquidity positions signify operational stability. However, if other factors (like growth prospects, competitive advantage, or market conditions) overshadow liquidity, the association remains positive but weak hence a slight correlation indicating that higher quick ratios tend to accompany higher Tobin's Q values, this relationship is not strong enough to imply causation or to provide meaningful insights. The finding of this study is in conformity with the findings of Rabiu, (2019) but contrary to the findings of Jeroh (2020) who found a positive insignificant relationship.

Cash Conversion Cycle and Tobin's Q of Listed Consumer Goods Firms in Nigeria

The regression coefficient between cash conversion cycle and Tobin's Q is -.0013255, a t-value of -1.15 and a p-value of 0.025 which shows a negative and significant relationship between cash conversion cycle and Tobin's Q of listed consumer goods firms in Nigeria. This illustrates that an increase in cash conversion cycle by one unit will result in increase in Tobin's Q by 0.0035 and vice versa. The fact that there is a negative but significant relationship between the cash conversion cycle and Tobin's Q for consumer goods firms indicates that longer cash conversion cycles are associated with lower market valuations, as represented by Tobin's Q. A lengthy cash conversion cycle can indicate inefficiencies in managing working capital, meaning the firm has tied up cash in inventory and receivables for extended periods. This lack of liquidity can hinder the firm's ability to invest in growth opportunities, pay off debts, or respond to market dynamics swiftly. Investors view a long Cash Conversion Cycle as a warning sign. It suggests that the company might struggle to generate cash flow efficiently, leading them to perceive the firm as riskier. Consequently, this can depress stock prices. The finding of this study is in conformity with the findings of but contrary to the findings of Vijayakumaran (2019) but contradict to the findings of Kalbuana, et al (2020) who found a positive significant relationship.

Summary of Findings

Based on the regression analysis of data collected from the sampled firms, the following were the major findings of this study:

i. There is a negative but significant impact of current ratio on Tobin's Q of listed consumer goods firms in Nigeria.
ii. There is a positive but insignificant relationship between quick ratio and Tobin's Q of listed consumer goods firms in Nigeria.
iii. Cash conversion cycle exerts a significant but negative impact on Tobin's Q of listed consumer goods firms in Nigeria.

Conclusions and Recommendations

Based on the results presented above, the study found a negatively significant impact of current ratio on the Tobin's Q of listed consumer goods firms in Nigeria. This implies that some consumer goods firms with higher current ratio may be holding excessive levels of non-productive or low-yield current assets, such as excess cash or idle inventory, which could be dragging down their Tobin's Q. In such cases, a bloated current ratio may reflect inefficiencies in managing working capital and suboptimal asset utilization, ultimately leading to lower market value. Hence, it is concluded that firms that are holding more cash and cash equivalents specifically non-productive or low-yield current assets are bound to perform less as compared to companies with more tangible assets than cash and cash equivalents. Also, the study found a significant positive impact of quick ratio Tobin's Q of listed consumer goods firms in Nigeria. This indicates a lower risk of financial distress and an increased ability to increase firm value even if it does not directly translate into significantly higher Tobin's Q. Hence, it is concluded that listed consumer goods firms in Nigeria should avoid overstocking that can tie up cash unnecessarily.

Furthermore, the findings provided evidence that cash conversion cycle has a negatively significant effect on Tobin's Q of the studied firms. This indicates that firms under study might struggle to generate cash flow efficiently, leading investors to perceive the firms as riskier.

Recommendations

In line with the findings of this study, the following recommendations were made:

i. Listed consumer goods firms in Nigeria must set a target current ratio that maintains enough cash to handle short term obligations without overburdening it with idle assets which tends to harm its market valuation.
ii. The Quick ratio was found to improve Tobin's Q in this study; therefore, listed consume goods firms in Nigeria should maintain a balance between having enough inventory to meet customer's demand while avoiding overstocking that can tie up cash unnecessarily.
iii. Listed consumer goods firms in Nigeria must develop stricter credit policies to evaluate potential customers and reduce the days of sales outstanding by improving collection efforts and reducing the time it takes to convert credit sales into cash.

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Appendix I

Population of the Study

	Companies Names	Year of Incorporation	Year of Listing
1.	Bua Food Plc	2005	2022
2.	Cadbury Nigeria Plc	1965	-
3.	Champion Brew Plc	1974	1983
4.	Dangote Sugar Refinery	2005	2007
5.	DN Tyre & Rubber Plc	1961	-
6.	Flour Mills Nig Plc	1960	-
7.	Golden GuineaBrew Plc	1962	-
8.	Honey well Flour Mill Plc	1950	1965
9.	Guinness Nig Plc	1985	2009
10.	International Breweries Plc	1971	-
11.	Mcnichols Plc	2004	2009
12.	Multi-Tyre Integrated Foods Plc	1999	2010
13.	N Nig. Flour Mills Plc	1971	-

14.	Nasco Allied Industries Plc	1971	1992
15.	Nestle Nigeria Plc	1969	1979
16.	Nigerian Breweries Plc	1946	-
17.	Nigeria Enamelware Plc	1960	-
18.	PZ Cussons Nigeria Plc	1948	-
19.	Unilever Nigeria Plc	1923	1973
20.	Union Dicon Salt Plc	1991	1993
21.	Vitafoam Nig Plc	1962	-

Source: *Generated from NSE Fact-book, 2023.*

Appendix II

Sample Size of the Study

	Companies Names	Year of Incorporation	Year of Listing
1.	Vitafoam Nig Plc	1962	-
2.	Cadbury Nigeria Plc	1965	-
3.	Champion Brew Plc	1974	1983
4.	Dangote Sugar Refinery	2005	2007
5.	Honey well Flour Mill Plc	1950	1965
6.	Guinness Nig Plc	1985	2009
7.	International Breweries Plc	1971	-
8.	Nestle Nigeria Plc	1969	1979
9.	Nigerian Breweries Plc	1946	-
10.	Nigeria Enamelware Plc	1960	-
11.	PZ Cussons Nigeria Plc	1948	-
12.	Union Dicon Salt	1923	1973
13.	Unilever Nigeria Plc	1991	-

Source: *compiled by the researcher from table 1*

Appendix III

Measurement of variables

Variables	Nature of Variable	Measurement of Variables	Source
Tobin's Q	Dependent	Market value of equity plus book value of debts divided by total assets	(Arachchi et al., 2017
Current ratio (CR)	Independent	Current assets divided by current liabilities.	Garba (2020)
Quick ratio (QR)	Independent	Current assets less inventory divided by current liabilities	Effiong and Enya (2020)
Cash conversion cycle (CCC)	Independent	Inventory collection period plus debtors' collection period less creditors' payment period.	Ugwu et al (2021)

Source*: compiled by the researcher.*

Appendix IV

```
  ___  ____  ____  ____  ____ (R)
 /__    /   ____/   /   ____/
___/   /   /___/   /   /___/   15.0   Copyright 1985-2017 StataCorp LLC
  Statistics/Data Analysis             StataCorp
                                       4905 Lakeway Drive
                                       College Station, Texas 77845 USA
                                       800-STATA-PC        http://www.stata.com
                                       979-696-4600        stata@stata.com
                                       979-696-4601 (fax)

Single-user Stata perpetual license:
       Serial number:  301506215585
         Licensed to:  www.Downloadly.ir
                       Iran Will Defeat US

Notes:
Some Unicode string functions will not behave correctly because ICU data file
    icudt54l.dat cannot be found at directory:
    "C:\Users\SYM\Documents\Stata_15.0x64\utilities"
      1.  Unicode is supported; see help unicode_advice.

Checking for updates...
(contacting http://www.stata.com)
host not found
http://www.stata.com did not respond or is not a valid update site
unable to check for update; verify Internet settings are correct.

. edit

. *(4 variables, 104 observations pasted into data editor)

. sktest tobinq cr qr ccc

                    Skewness/Kurtosis tests for Normality
                                                              ------ joint ------
    Variable |        Obs  Pr(Skewness)  Pr(Kurtosis) adj chi2(2)   Prob>chi2
-------------+-------------------------------------------------------------------
      tobinq |        104     0.0050        0.8163        7.26         0.0266
          cr |        104     0.0000        0.0000       38.88         0.0000
          qr |        104     0.0005        0.4475       10.85         0.0044
         ccc |        104     0.0095        0.1415        7.96         0.0187

. sum tobinq cr qr ccc

    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
      tobinq |        104    .5092933    .4384543    .006722   1.987731
          cr |        104     1.95772    .9530055   .0358599   3.011563
          qr |        104    .8398355    .4604125   .1907614   2.138699
         ccc |        104    31.82174    38.12982  -94.00469   97.41676

. corr tobinq cr qr ccc
(obs=104)

             |   tobinq       cr       qr      ccc
-------------+------------------------------------
      tobinq |   1.0000
          cr |  -0.5700   1.0000
          qr |   0.0517  -0.4107   1.0000
         ccc |  -0.6005  -0.0467   0.1626   1.0000
```

```
. regress tobinq cr qr ccc

      Source |       SS           df       MS      Number of obs   =       104
-------------+----------------------------------   F(3, 100)       =      0.69
       Model |  .404098962         3  .134699654   Prob > F        =    0.0000
    Residual |  19.3968476       100  .193968476   R-squared       =    0.3300
-------------+----------------------------------   Adj R-squared   =    0.2800
       Total |  19.8009465       103  .192242199   Root MSE        =    1.4404

------------------------------------------------------------------------------
      tobinq |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
          cr |   -.034342   .0455855    -0.75   0.000    -.1247824    .0560983
          qr |   .0663329   .0955254     0.69   0.548    -.1231868    .2558526
         ccc |  -.0013255   .0011546    -1.15   0.025    -.0036163    .0009653
       _cons |   .9323909   .1129746     8.25   0.000     .7082526    1.156529
------------------------------------------------------------------------------

. vif

    Variable |       VIF       1/VIF
-------------+----------------------
         ccc |      1.03    0.971549
          qr |      1.03    0.973558
          cr |      1.00    0.997814
-------------+----------------------
    Mean VIF |      1.02

. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of tobinq

            chi2(1)      =     10.51
            Prob > chi2  =   0.0436
```