

LIQUIDITY MANAGEMENT AND SHAREHOLDERS VALUE OF MANUFACTURING FIRMS IN NIGERIA

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Abstract

Research Purpose: *The study examined the relationship between Liquidity management and shareholders' value of manufacturing firms in Nigeria.*

Design/Methodology/Approach: *The specific objectives of the study were to ascertain the relationship between current ratio, cash ratio, operating cash flow ratio, and net asset per share of manufacturing firms in Nigeria. Current ratio, cash ratio, operating cash flow ratio were the liquidity management indicators, while net asset per share was the dependent variable. The study adopted an ex-post-facto research design, covering the period between 2010 and 2019. Secondary data were extracted from the annual reports and accounts of sampled manufacturing firms in Nigeria. Panel covariance techniques were used for data analysis. In line with the specific objectives of the study the covariance analysis result revealed that current ratio has a positive and strong relationship with net asset per share of manufacturing firms in Nigeria. On the other cash ratio has a negative and weak relationship with net asset per share of manufacturing firms in Nigeria. The relationship between operating cash flow ratio and net asset per share of manufacturing firms in Nigeria is positive and weak.*

Findings: *The implication of the findings is that only current ratio among the explanatory can be used to predict the movement of net asset per share of manufacturing firms in Nigeria.*

Originality/Value Added: *The study, therefore, recommends that Manufacturing firms in Nigeria should strive to improve their current ratio. They can do this by ensuring a faster conversion cycle of debtors or accounts receivables, pay off current liabilities, and sell-off unproductive assets and so on. They should reduce their propensity to hold cash. They should balance the trade-off between cash holding and shareholders' value. They should make profitable investments and ensure that their liabilities are settled on time. Manufacturing firms should devise strategies to improve the cash they generate from operating activities. They can do this by improving their inventory, introducing electronic payments, etc.*

INTRODUCTION

A significant part of the financial management of a business is liquidity management. It is important for the efficient and successful operation and the preservation of the status of its current concern (Ben-Caleb, 2008). The amount of profit that arises, as well as the value of shareholder wealth, is determined to a large degree by liquidity management. This is because a corporation must stay liquid to survive, as failure to fulfil its obligations in due time results in bad credit ratings by short-term creditors, a drop in the market value of goodwill and may eventually lead to liquidation (Bhavet, 2011).

Liquidity refers to the ability of a firm to meet short term financial obligations by converting the short-term assets into cash without incurring any loss. Basel Committee on Banking Supervision (2013) opine that assets are considered to be high-quality liquid assets if they can

be easily and immediately converted into cash at little or no loss of value. Markets are considered to be liquid when those who have assets holdings can sell them at prices that do not involve considerable losses to gain the finances ,they need to fulfil other commitments.

Anyanwu, (2003) posits that liquidity shortage, no matter how small, can cause unimaginable disruption to a firm's operations. Every business relies on its customers to succeed, therefore managing good customer relationships is key and should be incorporated into its strategic planning process. Wuave, Yua, and Yua (2020) state that liquidity crisis, if not properly managed can result in reputational risk including bad press releases against the institution and could destroy customer's relationships built over the years. To avoid this, it is thus imperative that the managers of businesses and financial institutions should have a well-defined business policy and established procedures for measuring, monitoring, and managing liquidity. The researchers further opine that managing liquidity is therefore a core daily process requiring institutions to monitor and project cash flows to ensure that adequate liquidity is always maintained to meet their obligations as they arise.

Statement of the Problem

The concern of business owners and managers all over the world is to devise a strategy of managing their day to day operations to meet their obligations as they fall due and increase profitability and shareholder's value. For a firm to be profitable, grow, and provide value to its shareholders, it must be able to adequately finance its activities and also be ever ready to settle its liabilities as they fall due. The liquidity ratio offers an insight into the company's ability to satisfy its current maturing obligation and pay off creditors as the debt matures and is key to the success and going concerned of a company. The importance of liquidity management as it affects corporate profitability in today's business cannot be overemphasised. In the Nigeria manufacturing sector, many firms that appear profitable on paper are forced into liquidation due to inability to meet short term debts when they fall due. Hence, effective and effective financial management policy seeks to maintain adequate liquidity to meet its short-term maturing obligations without impairing profitability. Unfortunately, maximizing profitability and dividend payout to shareholders are the key priorities of most companies, while the need for effective control of liquid assets is overlooked. The free cash flows of some manufacturing firms are majorly reinvested for more profit with total disregard to the working capital of these firms. The conundrum is how manufacturing firms in Nigeria can strike a balance between maximizing shareholders value through increased profits and their ability to maintain optimum liquidity to settle their liabilities as they fall due. Consequently, the study seeks to investigate the conflicting relationship between liquidity and shareholders' value of companies using evidence from the manufacturing companies.

Objectives of the Study

The main objective of the study is to examine the relationship between liquidity management and shareholders value of manufacturing firms in Nigeria. To achieve this primary objective, the study achieved the under-listed specific objectives. They include to:

- i. Evaluate the extent of the relationship between current ratio and net asset per share of manufacturing firms in Nigeria.
- ii. Examine to what extent cash ratio relates to net asset per share of manufacturing firms in Nigeria.
- iii. Determine the nature and magnitude of the relationship between operating cash flow ratio and net asset per share of manufacturing firms in Nigeria.

Research Questions

The above specific objectives were addressed with the following research questions:

- i. To what extent does current ratio relate to net asset per share of manufacturing firms in Nigeria?
- ii. What is the extent of the relationship between cash ratio and net asset per share of manufacturing firms in Nigeria?
- iii. What is the nature and magnitude of the relationship between operating cash flow ratio and net asset per share of manufacturing firms in Nigeria?

Statement of Hypotheses

The study following null hypotheses was formulated to guide the study:

- i. Current ratio does not have a strong relationship with net asset per share of manufacturing firms in Nigeria.
- ii. Cash ratio does not have a strong association with net asset per share of manufacturing firms in Nigeria.
- iii. Operating cash flow ratio does not have a strong relationship with net asset per share of manufacturing firms in Nigeria.

REVIEW OF RELATED LITERATURE

Conceptual Review

Liquidity Management

Chacko (2014) refers to liquidity as the ability of a firm to meet its short-term obligations. It is the capability of a firm to meet short term financial obligations by converting the short-term assets into cash without suffering any loss. The financial liquidity of a company's assets is the ability to convert assets into cash in the shortest possible time, at the lowest possible costs and without losing their value. Berrios (2013) also stated that operating liquidity is the level of liquidity required to meet an institution's daily cash outflow commitments.

Claeys, Vander and Vannet (2008) submit that normally, high liquidity is considered to be a sign of financial strength, however, Goddard, Molyneux and Wilson (2004) opine that high liquidity can be as undesirable as a low this is because the financial institutions might be holding the excess liquidity that could be used for investments to increase returns and income. According to Havrylchuk and Emilia (2006) observes that companies are strained when their level of liquidity is low and have negative working capital. This is because either inadequate liquidity or excess liquidity may be injurious to the smooth operations of the organization (Hoffmann, 2011).

Current Ratio

The current ratio is a liquidity ratio that measures a company's ability to pay short-term obligations or those due within one year. Fernando (2020) opine that current ratios show investors and analysts how a company can maximize the current assets on its balance sheet to satisfy its current debt and other payables. The current ratio is mainly used to give an idea of a firm's ability to pay back its liabilities (debts and account payable) with its assets (cash, marketable securities, inventory, accounts receivable). As such, current ratio can be used to make a rough measurement of a firm's financial health. The higher the current ratio, the more capable a firm is of meeting its obligations as and when they fall due, as it has a larger proportion of assets value relative to its liabilities' value.

Cash ratio

Kenton and James (2020) state that the cash ratio is a measurement of a company's liquidity, specifically the ratio of a company's total cash and cash equivalents to its current liabilities. The metric calculates a company's ability to repay its short-term debt with cash or near-cash resources, such as easily marketable securities. The researchers further opine that this information is useful to creditors when they decide how much money, if any, they would be willing to loan a company. Cash ratio centres on the firms' ability to hold cash to settle their liabilities. Ejelly (2004) opine that having a significant reserve gives a firm the ability to make huge purchases immediately, as it enables a firm to have the necessary liquidity needed to meet both expected and unexpected expenses in the short run and also have cash in hand for potential investments.

Operating Cash Flow Ratio

Hargrave (2020) the operating cash flow ratio is a measure of how well current liabilities are covered by the cash flows generated from a company's operations. The ratio can help gauge a company's liquidity in the short term. The amount of cash flows arising from operating activities is a key indicator of the extent to which the operations of the entity have generated sufficient cash flows to repay loans, maintain the operating capability of the entity, pay dividends and make new investments without recourse to external sources of financing (IAS, 7).Fabozziand Markowitz (2006), stated that operating cash flow adjusts for receivable, depreciation and liabilities, operating cash flow may be seen as a more accurate measure of how much a company has generated, in comparison with the conventional profitability measures like net income. Furthermore, operating cash flow is seen as crucial for organizations because it underscores their achievements in operations and working capital management (McLaney&Atrill, 2014).

Shareholders' Value

Shareholder value is the value delivered to the equity owners of a corporation due to management's ability to increase sales, earnings, and free cash flow, which leads to an increase in dividends and capital gains for the shareholders.

A company's shareholder value depends on strategic decisions made by its board of directors and senior management, including the ability to make wise investments and generate a healthy return on invested capital. If this value is created, particularly over the long term, the share price increases and the company can pay larger cash dividends to shareholders. Mergers, in particular, tend to cause a heavy increase in shareholder value.

Net Asset Per Share

A yardstick for measuring the performance of companies. It is frequently used for property and investment companies. The basic calculation of net assets per share is: net assets (total assets on the balance sheet less total liabilities) divided by the number of equity shares in

issue. An increase in net assets per share by means of a share buyback, for example, may lead to an increase in the market value of a company's shares.

Theoretical Framework

The study is anchored on Keynesian Liquidity Preference Theory by Keynes (1936) and Shiftability Theory of Liquidity Management by H.G. Moulton (1913) as the theory underpinning the study

Keynesian Liquidity Preference Theory

Keynes (1936) in his study "The general theory of employment, interest and money" identified three main motives for holding cash. The motives are; speculative, precaution and transaction motives. The speculative motive is the need to hold cash to take advantage of changes in bargained purchase and suitable interest rates fluctuation. Most firms have opted for the option of holding onto their marketable securities to meet these motives. The precautionary motive is when the institution wants to hold cash to meet some unforeseen emergencies, contingencies and accidents. Money needed by institutions to meet their economic day to day activities is known as the demand for money for transaction motive.

Shiftability Theory

The theory states that a firm's liquidity is adequately maintained if it holds assets that could be shifted or sold to other lenders or investors for cash even during a period of crisis or distress. The shiftability theory focuses on the liability side of the balance sheet. The theory contends that supplementary liquidity could be derived from the liabilities of a firm, therefore, shiftability, marketability or transferability of a firm's assets is a basis for ensuring liquidity. The theory further contends that highly marketable security held by a firm is an excellent source of liquidity. The proponents of this view argued that a firm's liquidity could be enhanced if it holds specified liquid assets.

Empirical Review

Current Ratio and Shareholders' Value

Ibe (2013) studied the impact of liquidity management on the profitability of banks in Nigeria. Three banks were randomly selected to represent the entire banking industry in Nigeria. The proxies for liquidity management include cash and short-term fund, bank balances and treasury bills and certificates, while profit after tax was the proxy for profitability. Elliot Rothenberg Stock (ERS) stationary test model was used to test the run association of the variables under study while regression analysis was used to test the hypothesis. The result of this study has shown that liquidity management is indeed a crucial problem in the Nigerian banking industry.

Emami, Ahmadi, and Tabari(2013) studied the effect of liquidity risk on the performance of commercial banks in Iran. Using panel data related to commercial banks of Iran during the years 2003 to 2010. The performance of fifteen Iranian banks is examined during the eight years from 2003 to 2010 using panel data. Multiple regression techniques were used for analysis. The study found that liquidity risk has a significantly negative effect on both criteria of the performance i.e. return on asset and return on equity. It means that liquidity risk will cause to weaken the performance of the bank.

Maaka (2013) studied the relationship between liquidity risk and performance of commercial banks in Kenya. The study adopted a correlation research design where data was retrieved from the balance sheets, income statements and notes of 33 Kenyan banks during 2008-2012. Multiple regressions were applied to assess the impact of liquidity risk on banks' profitability. The findings of the study were that profitability of the commercial bank in Kenya is negatively affected due to the increase in the liquidity gap and leverage.

Kurawa and Abubakar (2014) examined the impact of liquidity on banks' profitability in Nigeria. The systematic random sampling method was adopted to select five banks over the period 2003 – 2012. The linear regression analysis was used to reveal the absence of a significant impact between liquidity and profitability among banks in Nigeria.

Lartey, Antwi, Boadi (2013) sought to find out the relationship between the liquidity and the profitability of banks listed on the Ghana Stock Exchange. It was found that for the period 2005-2010, both the liquidity and the profitability of the listed banks were declining. Again, it was also found that there was a very weak positive relationship between the liquidity and the profitability of the listed banks in Ghana.

Akenga (2015) examined the effect of current ratio, cash reserves and debt ratio on the financial performance of firms listed at the Nairobi Securities Exchange (NSE). The causal research design was adopted. Purposive sampling technique was used to select 30 firms. The data were analyzed using descriptive and inferential statistics (random multiple regression). It was found that the current ratio and cash reserves have a significant effect on ROA with a p-value of less than 0.05. The debt ratio was found to have no significant effect on ROA as it had a significance level of 0.571.

Obi-Nwosu, Okaro and Atsanan (2017) examined the effect of liquidity management on the performance of DMBs in Nigeria from 2000 to 2015. The study employs Augmented Dickey-Fuller Unit Root Test, OLS regression and Granger Causality. The study found that liquidity mechanism is not significantly related to DMBs performance in the short run and long run and also find that liquidity mechanism granger cause DMBs performance within the period under review in the study. Hence, the study recommends that DMBs should be given leverage of plugging back funds into the investment to booster profitability while maintaining a level of liquidity ratio.

Bassey (2017) investigated liquidity management and performance of Deposit Money Banks (DMBs) in Nigeria from 1986 to 2011. The study adopted descriptive, correlational and inferential statistics and employs multiple linear regression analysis in analyzing the secondary data collected from 24 DMBs and determining their survival, growth, sustainability. The study found that: there is a significant positive relationship between liquidity management and the performance of DMBs in Nigeria; a positive correlation between return on equity and liquidity management variables (liquidity and cash reserve ratios) while the relationship between liquidity management and loan to deposit ratio is negative. Nabeel and Hussain (2017) examined liquidity management and its impacts on banks profitability in Pakistan from 2006 to 2015. The study adopted correlation, descriptive statistics research design and employed regression techniques analyzing secondary data from 10 banks. The quick ratio, current ratio, cash ratio, interest coverage ratio and capital adequacy ratios are proxies for liquidity management and returns on asset, returns on equity, and earnings per share are proxies for profitability. The study found a positive relationship between liquidity management (proxy by interest coverage ratio, capital adequacy ratio and quick ratio) and the banks' profitability while there was a negative relationship between liquidity management (proxy by cash ratio and current ratio) and the banks' profitability.

Bassey and Ekpo (2018) investigate the critical role played by the CBN and DMBs in fashioning out an appropriate framework for liquidity management and identifies the challenges inhibiting the effective performance of these roles. The study employed a descriptive research design and found that deposit liabilities constitute a major source of funding liquidity by DMBs while loans and advances constitute the bulk of the illiquid assets. It also found that DMBs in Nigeria operates above solvency level, having a current ratio greater than unity and are over-cautious, investing more in short-term securities to protect their liquidity positions. Otekunrin, Fagboroand Femi (2019) examined the performance of selected quoted deposit money banks in Nigeria and liquidity management of 17 deposit

money banks listed on the Nigerian Stock Exchange (NSE) between 2012 and 2017. The study extracts secondary data from the financial statements of 15 deposit money banks for six years and analyzes the data using ordinary least square method (OLS). Capital ratio (CTR), current ratio (CR) and cash ratio (CSR) were proxies for liquidity management while performance proxies were returned on assets (ROA). The study finds that liquidity management and bank's performance are positively related and concludes that liquidity management is an essential factor in business operations and consequently leads to business profitability.

Musaed (2020) examined the impact of liquidity on the financial performance of ten Kuwaiti banks, whose shares are listed on the Kuwait Stock Exchange in the period 2010-2018. The article is based on the analysis of return on assets (ROA) and return on equity (ROE) as indicators of the bank's financial efficiency in comparison with the five liquidity ratios. The results of the study showed a statistically significant direct relationship between ROA and the ratio of loans to total assets, the ratio of loans and deposits and the ratio of the financing deficit to total assets. According to the results of the calculations, a statistically significant inverse relationship between the ROA of liquid assets and the total assets and the ratio of liquid assets and deposits. The determination of return on equity (ROE) showed their statistically significant feedback only on liquid assets and deposits, while a significant direct relationship with the ratio of loans to total assets, the ratio of loans to deposits and the deficit of funding to the total assets. Obim, Takon and Mgbado (2020) examined the impact of liquidity on banks' profitability using liquid assets, bank deposit, treasury bills, and return on asset as proxies. Secondary data was sourced from the Central Bank of Nigeria statistical bulletin. The study employed the ordinary least square using multiple regression techniques. The study finds that there is a: positive and insignificant impact between bank deposit and return on asset; negative and insignificant impact between the liquid asset and return on asset; and positive and insignificant impact between treasury bills and return on asset.

Cash ratio and Shareholders' Value

Almazari (2014) investigated the internal factors that have an effect on profitability in Saudi and Jordanian banks. The study found that there is a positive correlation between profitability measured by ROA of Saudi and Jordanian banks with some liquidity indicators, as well as there is a negative correlation with other liquidity indicators between profitability measured by ROA of Saudi and Jordanian banks.

Aliakbari, Banimahd, Talebnia, and Roodposhti (2015) examined the effect of abnormal operating cash flows on unconditional conservatism. They studied firms listed on the Tehran Stock Exchange from 2006 to 2011. Descriptive Statistics was used to analyze the data. The systematic omission method has been used in this research to achieve the sample and 858 observations were chosen as the sample for research. Results showed a negative relationship between unconditional accounting conservatism and abnormal operating cash flows.

Similarly, Bassey and Moses (2015) examined the liquidity-profitability trade-off of deposit money banks in Nigeria. The study was carried on fifteen deposit money banks in Nigeria and covered a panel data from 2010 to 2012. Two models were specified and estimated using Ordinary Least Squares (OLS) technique. The empirical results revealed that there is a statistically significant relationship between bank liquidity measures-current ratio, liquid ratio, cash ratio, loans to deposit ratio, loans to asset ratio- and return on equity. However, when the return on asset was used as a proxy for profitability, the relationship became statistically insignificant.

Ali and Kavale(2016) conducted a survey study on liquidity management factors affecting the financial performance of the commercial banks in Mogadishu, Somalia. A sample size of 87 respondents was selected using Slog van's formula. Data were analysed using the Product Moment Correlation Technique. The key findings were that liquidity management drivers

individually had a positive influence on the financial performance of commercial banks in Mogadishu-Somalia. Badreldin and Zaroug (2016) investigated the liquidity position and its impact on the financial performance of Omani Banks. A sample of 4 local commercial banks has been used to examine the relationship between the Liquidity and Financial performance for the period of five years from 2010-2014. The data has been taken from the bank's annual reports and analysed using multiple regression techniques. The study concluded the significant relationship between the bank's loans to total assets ratio, illiquid assets to liquid liabilities ratio and bank's ROA; bank's Liquid assets/deposits; Liquid assets/Short term liabilities and ROE; and bank's Loans/ Total assets, Loans/ Deposits & short term liabilities; Bank's loans – customer deposits/ Total assets and ROAA.

Majakusi (2016) determined the effects of liquidity management on the performance of commercial banks. The study applied a descriptive research design. The sample period was from 2010 to 2014. This study used secondary data that was obtained from the CBK. A regression model was used in data analysis. The study found that ROA and liquidity management are positively correlated. This relationship is also statistically significant. This means sufficient cash causes good financial results. Furthermore, the study showed that liquidity management explains 34% of the variability achieved financial returns.

Ologbenla (2018) investigated the impact of liquidity management on the financial performance of insurance companies in Nigeria between 2003 and 2012. Return on asset ROA is used as the dependent variable and it measures the financial performance. Panel Regression analysis was adopted to estimate the model and the results showed that liquidity management has not been having a significant impact on insurance company's performance like equity management which affects long term stability. Again, both investment and working capital are shown to have a significant positive impact on the financial performance of insurance companies in Nigeria.

Onyekwelu, Chukwuani, and Onyeka (2018) appraised the effect of liquidity on the financial performance of deposit money banks in Nigeria. A sample of five (5) banks was used for the study. Secondary data were collected from the firms for ten years period, 2007 - 2016. The data were analyzed using multiple regression analysis. Results show that Liquidity has a positive and significant effect on banks' profitability ratios and that liquidity also has a positive and significant effect on Return on Capital Employed.

Operating Cash Flow Ratio and Shareholders' Value

Thanh and Nguyen (2011) investigated comprehensive income and firm performance in Vietnam. They used the multiple regressions to analyse the data, using a sample of 465 companies listed in Vietnam observed in the period 2007 to 2010. The study revealed that firm performance decreases as the number of bank relationship increase. Additionally, the study also indicates that cash flow has a negative relationship with firms, return on equity, while assets have a negative association with return on assets.

Prowal and Tainis (2013) provided empirical evidence on cash flow ratios in predicting investments soundness. They believed that for the successful operation of a company, the company should generate enough cash to meet daily operation pay taxes and dividend. The study test significance of cash flow ratios in evaluating the performance of a company and uses them to differentiate a sound from risky firms for investment.

Bingilar and Oyadongham (2014) did a study on cash flow and corporate performance. A study of selected food; and beverages companies in Nigeria, the data for the study involved 6 food and beverage companies. The data were subjected to multiple regression techniques. The result of the study revealed that operating and financing cash flow here a significant positive relationship with corporate performance in the food and beverage sector of Nigeria.

Sulayman (2014) did work on liquidity analysis using cash flow ratio as compared to Traditional Ratio in the pharmaceutical sector in Jordan, the study shows that some companies that had good traditional ratios while their cash flow ratios were weak but the cash flow ratios showed a better liquidity position. The study concludes that cash flow ratio provides more information than traditional ratios in increasing liquidity position of the company..Abdul and Abdulrahman (2014) carried a study on the impact of free cash flow on the market value of the firm. The study used panel data covering the period 2004-2010. Chi-square, cross-tabulations, coefficient of correlations, and regression analysis techniques were used. The results show that the market values of a firm are assessed by the Free Cash Flow to Equity. Our result is following the hypothesis that FCF to Equity has a significant positive effect on the stock market. Our findings add to the understanding of the determinants of the market value of firms.

Nwanyanwu (2015) conducted a study on Cash flow and organizational performance in Nigeria: hospitality and print media industries perspectives. From a pilot study, forty-five small and medium enterprises (SMEs) in these sectors were sampled. Data were collected through a questionnaire. Analyses were performed using descriptive statistics and Pearson's product-moment coefficient of correlation using the statistical package for social sciences (SPSS). Results indicated a significantly strong positive relationship between cash flow position and net profit. Watson (2015), examined the associated of various earnings and cash flow measures of firm performance and stock returns. The researcher used simple and multiple regressions to analysis the data. The study revealed that cash flow and firm performance have a significant negative relationship. Thus a company, whose performance is acceptable according to managements and shareholders opinion, may not be acceptable in a social aspect.Khoshdel (2016) studied the relationship between free cash flows and operating earnings with stock returns and growth of net market values of operating assets in the Tehran Stock Exchange. The researcher tests the hypotheses via Pearson correlation and simple linear regression method. The study revealed that there is a positive meaningful relationship between operating earning with return on equity, return on assets, and growth of net market values in operating assets.

Aiyegbusi and Akinlo (2016) examined the effect of cash holdings on the performance of firms in Nigeria for the period, 2001-2012. The study adopted the generalized method of moments in analysing the data. The results of the assessment indicated that cash holdings have a significant positive impact on firm performance. The outcome also revealed that cash flows, growth opportunities, size, and networking capital exert a negative impact on a firm's performance, while debt repayment is positively related to firms' performance.

Amah, Ekwe and Ihendinihu (2016) carried out a study on the relationship of cash flow ratios and financial performance of listed banks in emerging economies – Nigeria example. The study involved a survey of four (4) Banks quoted in the Nigeria Stock Exchange. Data were obtained from the annual report and accounts of selected Banks. The data were subjected to statistical analysis using the correlation technique. The result of the study revealed that operating cash flow has a significant and strong positive relationship with performance in the Banking sector in Nigeria, it was also reified that investing cash flow and financing cash flow hasanegative and weak relationship. Ambreen and Aftab, (2016) examined the impact of free cash flow on the profitability of firms listed in Karachi Stock Exchange. The population consisted of 580 companies listed in KSE as of March 7th, 2015. A stratified sampling method was used to pick a sample of 30 companies listed at KSE. Data were collected from financial statements and published accounts for 2010 to 2014. The data analysis was done using correlation and regression model. The results revealed that free cash flow and size of firm influence firms' profitability while capital liquidity does not influence much on dependent variable profitability.

Ferdinand and Anthony (2017) looked at Agency costs of free cash flows and investment in business sustainability. Pearson correlation and simple linear regression method were used. They used sustainability performance as a proxy for sustainability investment since sustainability performance does not emerge naturally and firms must have invested in sustainability to attain performance. The results indicate that firms with high FCF are associated with higher levels of ESG sustainability investment, after controlling for dividend distributions, stock repurchases, debt interest payments and investment expenditure for maintaining asset-in-place and acquiring new investment. The study also finds that high FCF firms with high investments in ESG sustainability are associated with higher market returns than similar firms with low investments in ESG.

METHODOLOGY

This study adopted *ex-post-facto* research design and was conducted in Nigeria manufacturing sector. The study made use of secondary data. Time-series data were collected from the annual report and accounts of sampled firms in the Nigeria manufacturing sector for the period 2010 to 2019. The population of the study is all the forty-two (42) manufacturing firms quoted on the Nigeria Stock exchange. The following firms were sampled: Guinness Nigeria Plc, Nigerian Breweries Plc, Unilever Plc, and Flour Mills Nigeria Plc. The study employed correlation techniques to ascertain the relationship between liquidity management and shareholders’ value. To make the study more robust multiple regression techniques were also employed to ascertain the effect of liquidity management on shareholders’ value.

Model Specification

The correlation model was specified as follows:

$$r = [1/(n-1)] \times \sum [(CR - \overline{CR})/S_{CR}] \times (\overline{NAPS} - NAPS) / S_{NAPS} \quad (1)$$

$$r = [1/(n-1)] \times \sum [(CASHR - \overline{CASHR})/S_{CASHR}] \times (\overline{NAPS} - NAPS) / S_{NAPS} \quad (2)$$

$$r = [1/(n-1)] \times \sum [(OCFR - \overline{OCFR})/S_{OCFR}] \times (\overline{NAPS} - NAPS) / S_{NAPS} \quad (3)$$

Where

- n = number of observations in the sample
- ∑ = summation symbol
- NAPS = the value of net asset per share
- \overline{NAPS} = the sample mean of net asset per share
- S_{NAPS} = the sample standard deviation of the net asset per share
- CR = the value of current ratio
- \overline{CR} = the sample mean of the current ratio
- S_{CR} = the sample standard deviation of current ratio
- CASHR = the value of cash ratio
- \overline{CASHR} = the sample mean of cash ratio
- S_{CASHR} = the sample standard of cash ratio
- OCFR = the value of operating cash flow ratio
- \overline{OCFR} = the sample mean of operating cash flow ratio
- S_{OCFR} = the sample standard deviation of operating cash flow ratio

The regression model was specified as follows:

$$NAPS_{t,i} = \beta_0 + \beta_1 CR_t + \beta_2 CASHR_t + \beta_3 OCFR_t + \epsilon_t \quad (Equation 1)$$

Where,

- NAPS Net asset per share
- CR Current Ratio
- CASHR Cash ratio

OCFR	Operating Cash Flow Ratio
ε	Error Term
β_0	Coefficient (constant) to be estimated
$\beta_i - \beta_6$	Parameters of the independent variables to be estimated
t	Current period

Description of Variables in the Model

The research variables are structured into dependent and independent variables for the analysis. The dependent variable of the study is net asset per share while the independent variables are current ratio, cash ratio, and operating cash flow ratio.

Table 1: Model Variables Description

Short Form	Details	Formula	Source of Data
NAPS	Net asset per share	$\frac{NAV}{SO}$	Annual Report and Accounts
CR	Current Ratio	$\frac{CA}{CL}$	Annual Report and Accounts
CASHR	Cash Ratio	$\frac{CAE}{CL}$	Annual Report and Accounts
OCFR	Operating Cash Flow Ratio	$\frac{OCF}{CL}$	Annual Report and Accounts

Source: Author’s Compilation.

Where

- NAV - Net Asset Value
- SO - Shares Outstanding
- CA - Current Asset
- CL - Current Liabilities
- CAE - Cash and Cash Equivalentents
- OCF - Operating Cash Flow

DATA PRESENTATION AND ANALYSIS

.Table 2.: Panel Data Descriptive Statistic for the Variables under Study

	NAPS	CR	CASHR	OCFR
Mean	25.03950	0.918604	0.221492	0.488962
Median	22.43500	0.839660	0.119541	0.479285
Maximum	63.36000	2.451505	1.376023	1.201122
Minimum	1.980000	0.408658	0.003468	-0.331082
Std. Dev.	16.91249	0.457441	0.314845	0.317131
Skewness	0.425909	2.014921	2.753766	-0.076439
Kurtosis	2.414531	7.011605	9.841443	3.130668
Jarque-Bera	1.780610	53.88767	128.5637	0.067410
Probability	0.410530	0.000000	0.000000	0.966857
Sum	1001.580	36.74415	8.859663	19.55846
Sum Sq. Dev.	11155.26	8.160847	3.865957	3.922309
Observations	40	40	40	40

Source: Author’s Computation from Eviews 10.0 Statistical Software

Table 2 above reveals the variable description of the 40 observations of the panel data for sampled manufacturing firms. From the table, the industry’s minimums include Net Asset Per Share (₦1.98), Current Ratio 0.408658, Cash Ratio 0.003468, and Operating Cash Flow

Ratio-0.331082. However, the industry’s maximum includes Net Asset Per Share (₦63.4), Current Ratio 2.451505, Cash Ratio 1.376023, and Operating Cash Flow Ratio 1.201122. The industry means for the variables studied are Net Asset Per Share (₦25.04), Current Ratio 0.918604, Cash Ratio 0.221492, and Operating Cash Flow Ratio 0.488962.

The normality of the distribution of the data series is shown by the coefficients of Skewness, Kurtosis, and Jarque-Bera Probability. From the Table 4.2.1, the probability of the Jarque-Bera Statistics for Net Asset Per Share and Operating Cash Flow Ratio have an insignificant p-values as follows Net Asset Per Share (0.410530) and Operating Cash Flow Ratio (0.966857). The insignificant p-values depicts that the variables are normally distribution. This was further confirmed by the skewness coefficients which are not greater than one with the following outcomes Net Asset Per Share (0.425909) and Operating Cash Flow Ratio (0.076439). The kurtosis coefficient also confirmed that Net Asset Per Share and Operating Cash Flow Ratio are normally distributed with coefficients that are around three (Net Asset Per Share -2.414531 and Operating Cash Flow Ratio (3.130668). However, Current Ratio and Cash Ratio are abnormally distributed judging by the significance of Jarque-Bera Probability, the skewness coefficient that is greater than one, and the kurtosis coefficient that is greater than three.

TABLE 3: Pooled Data Covariance Analysis

Covariance Analysis: Spearman rank-order

Date: 02/26/21 Time: 00:17

Sample: 2010 2019

Included observations: 40

Covariance Correlation t-Statistic Probability	NAPS	CR	CASHR	OCFR
NAPS	133.2375 1.000000			
CR	36.60000 0.574685 2.361008 0.0463	133.2500 1.000000 ----- -----		
CASHR	-1.687500 -0.012665 -0.078077 0.9382	91.85000 0.689306 5.865203 0.0000	133.2500 1.000000 ----- -----	
OCFR	25.63750 0.192411 1.208683 0.2343	3.725000 0.027955 0.172393 0.8640	20.25000 0.151970 0.947815 0.3492	133.2500 1.000000 ----- -----

Source: Author’s Computation from Eviews 10.0 Statistical Software

Table 3 suggests that there is a strong (57.4% apprx) and positive relationship between Net Asset Per Share and Current Ratio with t-Statistic: 2.361008 and Probability: 0.0463. Net Asset Per Share and Cash Ratio share a negative and weak relationship (1.2% apprx) with t-

Statistic: 0.078077 and Probability: 0.9382. Operating Cash Flow Ratio and Net Asset Per Share have positive and weak relationship at approximately (19.2%) with t-Statistic: 1.208683 and Probability: 0.2343.

DISCUSSION OF FINDINGS

Hypothesis One: In the test of hypotheses one, covariance analysis result reveals that current ratio has a strong and positive relationship with net asset per share of manufacturing firms in Nigeria. This implies that as current ratio of manufacturing firms is increasing, their net asset per share is also increasing significantly. The finding is in tandem with the finding of Onyekwelu, Chukwuani, and Onyeka (2018), Akenga(2015), Sarkar and Sarka(2013), Agbada and Osuji(2013), Badreldin and Zaroug (2016), and Bassey and Moses (2015) who found a positive and significant relationship between liquidity ratio and performance.

They got similar result because of equal economic circumstance prevailing for all corporate entities. The ability to maximize its current assets to settle its short-term obligations should have a strong relationship with net asset value per share. However, Waswa, Mukras and Oima (2018) found an insignificant relationship between liquidity ratios and profitability. This is as result of sectorial differences between the two studies.

Hypotheses two: In the test of hypotheses two, covariance analysis result reveals that cash ratio has a weak and negative relationship with net asset per share of manufacturing firms in Nigeria. This implies that as cash ratio is increasing, the net asset per share of manufacturing firms is decreasing. The finding is in line with the *a priori* expectations of the researcher because as companies keep more cash to settle its financial obligations without converting it to profit yielding assets, it will have a negative relationship with net asset per share. An imbalance trade-off between liquidity and shareholder's value comes to play.

The finding is in tandem with the finding of Lartey, Antwi, and Boadi (2015), Emami, Ahmadi, and Tabari (2013), Kurawa and Abubakar(2014), and Waswa, Mukras and Oima(2018) who found either a negative or weak relationship between liquidity ratio and performance. This can be attributed to the imbalance trade-off practiced by firms sampled in this studies. However, Onyekwelu, Chukwuani, and Onyeka (2018), Akenga (2015), Sarkar and Sarka (2013), Agbada and Osuji (2013), Badreldin and Zaroug (2016), and Bassey and Moses (2015) got a contradictory results maybe because of their measures of performance.

Hypotheses three: In the test of hypotheses three, covariance analysis result reveals that operating cash flow ratio has a weak and positive relationship with net asset per share of manufacturing firms in Nigeria. This implies that as operating cash flow ratio of manufacturing firms is increasing, the net asset per share is also increasing. The finding is in line with the *a priori* expectations of the researcher because as cash generated from operating activities is increasing, the company will have more funds for investments in assets for more profits and value to the shareholders. Prior studies by Bingilar and Oyadongham (2014), Watson (2015), Aiyegbusi and Akinlo (2016), and Amah, Ekwe and Ihendinihu (2016) who also found a positive relationship between operating cash flow and performance.

The finding was contradicted by the findings of Thanh and Nguyen (2011), Opondo(2014), Zhou (2013), and Parsian and Amir (2013) who found a negative relationship between operating cash flows and performance. The disparity in the result is because they have a more developed economy.

Summary of Findings

The findings are summarised as follows:

1. Current ratio has a positive and strong (the P-value of 0.0463 is < 0.05 A-value, the 2.361008 t-statistic is > 2 , and the correlation coefficient of 0.574685 is > 0.50) relationship with net asset per share of manufacturing firms in Nigeria.
2. Cash ratio has a negative and weak (the P-value of 0.9382 is > 0.05 A-value, the 0.078077 t-statistic is < 2 , and the correlation coefficient of 0.012665 is < 0.50) relationship with net asset per share of manufacturing firms in Nigeria.
3. Operating cash flow ratio has a positive and weak (the P-value of 0.2343 is < 0.05 A-value, the 1.208683 t-statistic is < 2 , and the correlation coefficient of 0.192411 is < 0.50) relationship with net asset per share of manufacturing firms in Nigeria.

Conclusion

The study examined the relationship between liquidity management and shareholder's value of manufacturing firms in Nigeria. From the covariance analysis result, it was revealed that current ratio has a positive and strong relationship with net asset per share of manufacturing firms in Nigeria. The relationship between cash ratio and net asset per share is weak and negative. On the relationship between operating cash flow and net asset per share, operating cash flow and net asset per share share a positive and weak relationship. The study, therefore, conclude that among the explanatory variables studied, only current ratio has a strong relationship with net asset value per share of manufacturing firms in Nigeria. Therefore, current ratio is the only variable among the explanatory variables that can be used to predict shareholder's value in the industry.

Recommendations

The research made the following recommendations:

- i. Manufacturing firms in Nigeria should strive to improve their current ratio. They can do this by ensuring a faster conversion cycle of debtors or accounts receivables, pay off current liabilities, and sell-off unproductive assets and so on.
- ii. They should reduce their propensity to hold cash. They should balance the trade-off between cash holding and shareholders value. They should make profitable investments and ensure that their liabilities are settled on time.
- iii. Manufacturing firms should devise strategies to improve the cash they generate from operating activities. They can do this by improving their inventory, introducing electronic payments, etc

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