

Impact of Liquidity Management on the Profitability of Listed Nigerian Food Product Companies

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Abstract

This study examines impact of liquidity management on the profitability of listed Nigerian food product companies. The study utilized secondary data collected from annual reports and accounts of the companies for the periods 2004 to 2013. A panel data regression technique was employed since the data has both time series and cross sectional attributes. The study finds positive and insignificant relationship between cash conversion circle and return on assets. Also size has positive and significant relationship with return on assets while growth and leverage have negative relationship with return on assets. The study concludes that Profitability is a major factor in the going concern of a business. Therefore, the study recommends that managers can increase profitability by putting in place good credit police and short cash conversion cycle. Managers should strive to achieve a reasonable level of profitability in order to maximize their shareholders wealth.

Keywords: Liquidity Management, Profitability, Return on Assets, Cash Conversion cycle, Regression Analysis.

Introduction

Business financing, especially at the wake of the global financial crisis, has become a major source of concern for business managers as bank loans are becoming too expensive to maintain as a result of tightening of both the local and international financial market and the reluctance of the public to invest in the share of companies sequel to the crash of the capital market (Ali 2012). These situations

compel business managers to device various strategies of managing internally generated revenue to enhance their chances of making profit and meeting existing shareholders expectations.

Every business relies on its clients to succeed and so it is a strategic business plan to build good client relationships, liquidity crisis, if not properly managed can destroy those relationships instantly. In order to avoid liquidity crisis, management of businesses needs to have a well-defined policy and established procedures for measuring, monitoring, and managing liquidity. Managing liquidity is therefore a core daily process requiring managers to monitor and project cash flows to ensure that adequate liquidity is maintained at all times (Afza& Nasir 2009). There is consensus in theoretical literature that profitability and liquidity constitute the most prominent issues in corporate finance literatures (Akinsuleri 2011). While it may be true that the ultimate goal for any firm is to maximize profit, too much attention on profitability may lead the firm into a pitfall by diluting the liquidity position of the organization (Niresh, 2012). Therefore the need to strike a balance between the firm's desire to make profit and the desire to remain liquid cannot be over-emphasized and there arises the issue of liquidity management.

According to Alshatti (2014) one of the major reasons that may cause liquidation is illiquidity and inability to make adequate profit. These are some of the basic ingredient of measuring the "going concern" of an establishment. For these reasons companies are developing various strategies to improve their liquidity position. Strategies which can be adapted within the firm to improve liquidity and cash flows concern the management of working capital, areas which are usually neglected in times of favorable business conditions.

The world of cash and liquidity management was once a simpler place, access to capital was rarely a bottle-neck, even for highly-leveraged corporate, and many had strong, long-standing relationships with a single bank that helped meet most of their funding and cash management needs. While Profitability is a primary goal of all business ventures, without profitability the business will not survive in the long run. Profitability can be defined as either accounting profit or economic profits. Accounting profit provides you with an intermediate view of the viability of a business. Although one year losses may not permanently harm a business, consecutive years of losses (or net income insufficient to cover living expenditures) may jeopardize the viability of your business while Economic profits provide you with a long-term perspective of your business.

Liquidity management and profitability are very important issues in the growth and survival of business and the ability to handle the trade-off between the two is a source of concern for financial managers. Liquidity management and profitability are very important in the development, survival, sustainability, growth and

performance (Ahmed 2010). Profitability does not translate to liquidity in all cases. A company may be profitable without necessarily being liquid. Therefore, liquidity should be managed in order to obtain an optimal level, that is, a level that avoid excess liquidity which may translate to poverty of ideas by management. Also liquidity level should not fall below minimum requirement as it will lead to the inability of the organization to meet short term obligation that are due (Begchi&Khamruiz 2012).

Similarly, the dilemma in liquidity management is to achieve desired trade -off between liquidity and profitability, because, insufficient liquidity may spoil the company's goodwill, diminish its credit standing and that may lead to forced liquidation on its assets. On the other hand excessive liquidity undermines the profitability through accumulation of wealth that does not bring back any profit for the firm. Its requirement depends on the peculiar nature of the firm and there is no specific rule on determining the optimal level of liquidity that a firm can maintain in order to ensure positive impact on its profitability (Raheman and Nasr, 2007).

The Food industry is a complex, global collective of diverse businesses that supply most of the food consumed by the world population, the industry used different methods and techniques to transform raw ingredients into marketable food products for human consumption. Only subsistence farmers, those who survive on what they grow, can be considered outside the scope of the modern food industry. In Nigeria this sector has accounted more for than 12% of the total market capitalization of the entire consumer goods sector as at 2013 (NSE, 2013). The main objective of the study is to determine the impact of liquidity management on the profitability of the listed food products companies in Nigeria. Based on this, the following hypothesis stated in null form is formulated to guide the study:

H₀: There is no significant impact of liquidity management on the profitability of listed food product firms in Nigeria.

The rest of the paper is divided into four sections. Section two is the empirical review of the related literature, section three is the methodology employed in the study, section four is the results and discussion and section five is the conclusions and recommendations.

Empirical Studies on Liquidity and Return on Assets

The relationship between liquidity and return on assets has been established in the existing literatures as evidence by the following studies for example Alshatti (2014) using thirteen Jordanian commercial banks for a period of eight years (2005–2012) uncovered a positive effect of the increase in the quick ratio and the investment ratio of the available funds on the return on assets, and a negative

effect of the capital ratio and the liquid assets ratio on the return on assets of the Jordanian commercial banks. The study recommends that there is a need for an optimum utilization of the available liquidity in a various aspects of investment in order to increase the banks' profitability, and banks should adopt a general framework of liquidity management to assure sufficient liquidity for executing their operations efficiently, and they should initiate an analytical study of the evolution rates of liquidity and their ability to achieve a balance between sources and uses of funds.

Taani (2012) determined the impact of working capital management policy and financial leverage on financial performance of Jordanian companies measured in terms of net income, return on equity (ROE) and return on asset (ROA). Pearson's rank correlation test, ANOVA F- test, and multiple regression analysis were used on 45 companies included in the industrial sector in Jordan ranked in terms of gross revenues. Results of the study indicated that firm's working capital management policy, financial leverage, and firm size have significant relation to net income. However working capital management policy has no significant impact on return on equity (ROE) and return on assets (ROA).

Nazir and Afza (2008) have used external and internal factors to explore the determinants of working capital requirements of a firm. Internal factors are operating cycle, operating cash flows, leverage, size, return on assets (ROA), Tobin's q and growth while industry dummy and level of economic activity are external macroeconomic factors. Their findings revealed that operating cycle, leverage, return on assets (ROA) and Tobin's q had an influence on the working capital requirements significantly. The study concludes that working capital management practices are also related to industry and different industries are following different working capital requirements.

Similarly, Kurawa and Abubakar (2014) examine the impact of liquidity on the profitability of five randomly selected Nigerian Banks listed on the Nigerian Stock Exchange covering the period from 2003 – 2012. Their results revealed a positive relationship between Return on Asset and Cash and Bank balances to Total Liabilities. Their study found that there is no significant impact between liquidity and profitability among the listed banking firms in Nigeria.

The relationship between liquidity and profitability of oil and gas companies listed on Karachi stock exchange (KSE) Pakistan was examined by Saleem and Rehman (2011) using a population of 26 oil and gas companies uncovered a significant impact between liquidity ratio and ROA. According to these studies, liquidity ratios affect the profitability ratio significantly as measured by the ROA.

Toby (2014) analyses the relationship between working capital management policy and corporate profitability in Nigerian quoted companies. Based on the data of 107 quoted companies spread across 23 sectors for the 2003-2007 period, averages and product-moment correlation coefficients were computed based on measures of net current assets ratio (NCAR), return on assets (ROA) and net profit margin (NPM). Found that the adoption of this strategy produced negative profitability in most of the sectors. The results also show strong positive correlation between NCAR and selected measures of profitability. It is recommended that companies would maximize profitability and add value by adopting the conservative working capital management strategy (i.e investing more in current assets) provided the operating environment and money markets are robust.

Mansoori and Muhammed (2012) investigate the effect of working capital management on firm's Return on assets. Using panel data analysis, pooled OLS and Fixed Effect estimation, for a sample of Singapore firms from 2004 to 2011 and found that managers can increase ROA by managing working capital efficiently. Moreover, managers can improve firms' ROA by shortening receivable conversion period and inventory conversion period. And the results of industry analysis suggested the effect of economic sector on relationship between working capital management and ROA.

Lamberg and Valming (2009) examine and compare the use and extent of the liquidity practice before the financial crises and afterward. Furthermore the aim was to measure if the changing of liquidity strategy is related to the profitability measures by return on assets (ROA) using qualitative research strategy. They are of the view that, adaptation of liquidity strategies do not has significance on ROA. Working capital ratio is the most commonly used liquidity measurement. More frequent monitoring and forecasting on liquidity levels and making more short term investment can provide gains in profitability. The study concludes that the adjustment of liquidity practice is beneficial for the companies, even though benefits are not always directly measurable as profitability.

Similarly, Owolabi and Alu (2012) examine the role of liquidity and working capital management in ensuring going-concern of firms the results, indicated that each working capital component affected the company's level of profitability at varying rates, but, these effects when pooled together are not significant. To facilitate the smooth running and/or effective management of working capital so as to enhance the level of Return on assets, it was recommended that the companies should adequately plan and control their operations, adjust the shortfalls as noted, consider the principles of finance in their decision making, employ the services of experts (analysts) in complex business areas, and conduct periodic stock taking if possible every two weeks.

Vijayakumar and Nadu (2011) investigate the relationship between Cash Conversion Cycle (Liquidity) and firms' Return on assets. The analysis based on a sample of 20 Indian Automobile firms for the period 1996-2009. The results suggest that the managers can increase return on assets of their firms by shortening the cash conversion cycle, accounts receivables period and inventory conversion period. The results suggest that managers can also increase the profitability of their firms by lengthening the accounts payables period. The study suggest an optimal cash conversion cycle as more accurate and comprehensive measures of liquidity analysis.

Contrary to the above Ganesan (2007) analyzed the liquidity components efficiency on telecommunication equipment industry in India and found a negative relationship between liquidity components and return on assets of the companies. However, the association between accounts payable period and return on assets was found to be insignificant.

In the same vein Khamrui and Bagchi (2012) investigate the relationship between working capital management and firm profitability and to identify the variables that most affect profitability. Working capital management is considered to be a vital issue in financial management decision and it has its effect on liquidity as well as on profitability of the firm. Moreover, an optimal working capital management positively contributes in creating firm value. In this study, we have selected a sample of 10 FMCG (Fast Moving Consumer Goods) companies in India from CMIE database covering a period of 10 years from 2000 to 2009. Profitability has been measured in terms of return on assets (ROA). Cash conversion cycle (CCC), interest coverage ratio, age of inventory, age of creditors, age of debtors and debt-equity ratio have been used as explanatory variables. Pearson's correlation and pooled ordinary least squares regression analysis are used in the study. The results confirm that there is a strong negative relationship between variables of the working capital management and Return on assets of the firm. As the CCC increases, profitability of the firm decreases, and managers can create a positive value for the shareholders by reducing the CCC to a possible minimum level. There is also a stumpy negative relationship between debt used by the firm and its profitability.

Ashwin Madhou (2013) examine the determinants of corporate profitability for publicly listed Australian firms by using three measures of corporate profitability, namely, net profit, economic value added and return on assets. Through dynamic panel estimation, the study found evidence supporting that the determinants of corporate profitability of firms in extreme portfolios are heterogeneous and that firms with the worst working capital deficit and poor corporate governance ratings

exhibit negative debt ratio. The study concludes that profitable firms hold positive cash holding whereas non-profitable firms hold negative cash holdings.

Based on the above review, it's obvious that some studies uncover a positive relation while others a negative relation this means that the relationship depends not only on the variables used but also the sector at which the study covered.

Theoretical Framework

Theories are analytical tools for understanding, explaining, and making predictions about a given subject matter. There are various theories with regard to liquidity management and profitability:

Pecking Order Theory

Pecking order theory tries to capture the cost of asymmetric information and states that companies prioritize their sources of financing (from internal financing to equity) according to the law of least effort, or of least resistance preferring to raise equity as a financing means of 'last resort'. This implies that internal financing is used first; when it is depleted, then debt is issued and when it is no longer sensible to issue more debt, equity is issued. The theory maintains that businesses adhere to a hierarchy of financing sources and prefer internal financing when available, and debt is preferred over equity if external financing is required (equity implies issuing more shares which meant bring external ownership into the firm). Thus the form of debt a firm chooses can act as a signal of its need for external financing. The pecking order theory is popularized by Myers and Majluf (1984) when he argues that equity is less preferred means to raise capital because when managers (who are assumed to know better about the condition of the firm than investors) issue new equity, investors believe that managers think that the firm is overvalued and managers are taking advantage of this over valuation. As a result investors will place a lower value to the new equity issuance. The conclusion of Myers and Majluf is that the market will attach no significance to issuance of new equity resulting in the circumvention by owners by taking recourse to internal financing. Further, in a situation where external financing is essential, debt is perceived by the firm to be safer than equity since the market value does not change much over time.

A determinant of cash holding from the perspective of pecking order theory has been supported by other researches. Sebastian (2010) examines liquidity and solvency and finds that corporate liquidity and solvency interact through information, hedging, and leverage channels. The information and hedging channels increase equity-value of firms which helps to pay regular dividend and most importantly reduce volatility in cash flow. Frank & Goyel (2002) showed that larger firms are more organized to take decision followed by this theory. Smaller

firms were not following this theory and as the smaller firms moved away from pecking order theory so, overall average moves further from the pecking order (Owolabi; 2004). Soku (2008) while testing financial flexibility and capital structure of small, medium and large firms observed that, large mature firms prefer using internal funds and safe debt in order to recharge financial flexibility rather than issuing equity. In case of small firms though they have low leverage, in order to cope with lack of cash at hand, they prefer to issue equity and increase cash holdings. However he ends up with financial flexibility hypothesis which refers firms hold cash and expect future cash flow, and that characterize their future investment plan and current ability to sort out financial constraints.

Trade off Theory of Liquidity

Under perfect capital market assumptions holding cash neither creates nor destroys value. The firm can always raise funds from capital markets when funds are needed, there are no transaction costs in raising these funds, and the funds can always be raised at a fair price because the capital markets are assumed to be fully informed about the prospects of the firm. The trade-off theory suggests that firms target an optimal level of liquidity to balance the benefit and cost of holding cash. The cost of holding cash includes low rate of return of these assets because of liquidity premium and possibly tax disadvantage. The benefits of holding cash are in twofold: First the firms save transaction costs to raise funds and do not need to liquidate assets to make payments. Secondly the firm can use liquid assets to finance its activities and investment if other sources of funding are not available or are extremely expensive. As theory, the use of trade off model cannot be ignored, as it explains that, firms with high leverage attracts high cost of servicing the debt thereby affecting its profitability and it becomes difficult for them to raise funds through other sources (Jensen, 1986).

Methodology

This study adopt *ex-post facto* research design because the study entails the use of annual reports and accounts of the quoted Nigerian food products companies under study; this is in view of its relative importance to the actualization of the research objective which is to determine the impact of liquidity management on profitability in the Nigerian food products companies

The population of this study comprises of all the eleven (9) food product companies quoted on the Nigeria stock exchange as at 2013 as contained in Table 1 below. The table presents the study population which shows the year of incorporation, as well as year of listing.

Table 1: Population of the study

S/No	Name of company	Year of Incorporation	Year of Listing
1.	Big treat PLC	1991	2007
2.	Dangote Flour Mills PLC	2006	2008
3.	Dangote Sugar Refinery PLC	2005	2007
4.	Flour Mills of Nigeria PLC	1960	1979
5.	Honeywell Flour Mills PLC	1995	2008
6.	Multi – Trex Integrated foods PLC	1999	2010
7.	Northern Nigeria Flour Mills PLC	1971	1978
8.	National Salt Company of Nigeria PLC	1973	1992
9	Union Dicon Salt PLC	1992	1993

Source: Generated by the researchers from the NSE 2013 Fact book.

Two – point filter was used to arrive at the sample of the study; that is, first, a company must have been listed on the NSE on or before 1st January, 2004 and secondly, it must have been quoted without being delisted between 2003 and 2013. These criteria are established with a view to ensure that the food product companies have their

published financial statements for the period covered by this study. As a result of this filter, the number of food product companies is reduced to six. The sample size of this study is therefore six companies, shown in table 2 below.

Table 2: Sampled firms of the Study

S/No	Name of company	Year of Incorporation	Year of Listing
1.	Flour Mills of Nigeria PLC	1960	1979
2.	Northern Nigeria Flour Mills PLC	1971	1978
3.	National Salt Company of Nigeria PLC	1973	1992
4.	PS Mandrides PLC	1949	1979
5.	UTC Nigeria PLC	1969	1972
6.	Union Dicon Salt PLC	1992	1993

Source: Table 1

The food products companies presented in table 2 are taken as the sample for the study selected from the study population shown in Table 1,

using the two point filter earlier on explained. And the variables of the study and their measurements are presented in Table 3 below.

Table 3: Variables of the Study and their Measurement

Variables	Measurements
Return on Assets (ROA)	Profit before tax / Total Assets
Cash Conversion Circle (CCC)	ICP + ARP – CPP
Receivable Collection Period (RCP)	Receivables/Sales X 365days
Creditors Payment Period (CCP)	Payables/Cost of Goods Sold X 365days
Inventory Conversion Period (ICP)	Average Inventory/Sales X 365days
Size	Natural Log of Total Assets
Growth	Previous sales – current sales / current sales
Leverage (LEV)	Debt to Equity ratio

Source: Generated by the Researchers from the Annual Reports and Accounts of the Sampled Companies

Model Specification

The general model based on the variables of the study which is a modification of Ganesan (2007); Vijayakumar and Nadu (2011); Owolabi and Alu, (2012); Rehn, (2012);Taani (2012)Chaklader and Shrivastava, (2013); Kurawa and Abubakar (2014); and Toby (2014); which is given as follows:

$$LM = CCC = f (ICP + RCP - CPP) \dots \dots \dots (Equation 1)$$

$$ROA_{it} = \alpha + \beta_1 CCC_{it} + \beta_2 SIZE_{it} + \beta_3 GROWT_{it} + \beta_4 LEVERAGE_{it} + \varepsilon \dots \dots \dots (Equation 2)$$

Where;

LM is Liquidity Management

ROA is Return on Assets

CCC is Cash Conversion Circle

ICP is Inventory Conversion Period

RCP is Receivable Collection Period

CPP is Creditors Payment Period

α is the Constant Term

β is the Regression Coefficient.

ε is the error term.

Results and Discussion

Descriptive Statistics

Table 4 provides summary of statistics for the variables of the study. The summary statistics include measures of central tendency, such as mean, measures of dispersion (the spread of the distribution) such as the standard deviation, minimum and maximum of both the dependent variable and explanatory variables. The table shows the summary statistics of the dependent and independent variables in order to effectively appreciate the nature of the results. The descriptive statistics analyzes the basic feature of liquidity management and profitability. It provides a basic insight into the nature of the data upon which analysis is done.

Table 4: Descriptive Statistics of the Variables

Variables	Obs.	Mean	Std Dev.	Min	Max
ROA	60	0.0041862	0.3334117	-1.2729	0.7438
CCC	60	56.70589	119.3105	-592.33	303.4344
RCP	60	34.09158	42.84065	0	223.352
ICP	60	99.04015	98.57883	0	481.579
CPP	60	76.42583	133.4067	8.213	902.185
Size	60	9.058119	0.7988227	6.6118	10.7079
Growth	60	0.5846117	2.185336	0	17.095
Leverage	60	1.166265	8.455449	0	65.5540

Source: Generated by the Authors from the Annual Report Data of the food product companies.

Table 4 shows the mean of 0.0042 for ROA meaning that the average return on asset of the listed food product companies in Nigeria is approximately 0.4% with the minimum and maximum of -1.2729 and 0.7438 respectively. Cash conversion circle has a mean of 56.70589 meaning that on average the listed food product companies in Nigeria convert raw material to cash within 57 day. Receivable collection period has a mean of 34.09158 with minimum and maximum of 0 and 223.352 respectively, meaning that on average the listed food product companies in Nigeria collect cash from debtors within 34 days after sales. Inventory conversion period has a mean of 99.04015 with a minimum and maximum of 0 and 481.579 respectively, meaning that on average the listed food product companies in Nigeria convert stocks to sales within 99 days. Creditors payment period has a mean of 76.42583 with minimum and maximum of 8.213 and 902.185 respectively meaning that on average

the listed food product companies in Nigeria paid cash to their suppliers within 76 days.

Size, measured by the natural logarithm of total assets has a mean of 9.058119, with the minimum and maximum of 6.6118 and 10.7079 respectively. Growth, measured by the difference between previous and current sales divided by current sales has a mean of 0.5846117, with the minimum and maximum of 0 and 17.095 respectively while leverage, measured as total debt divided by total assets has a mean of 1.166265, with the minimum and maximum of 0 and 65.5540 respectively.

It is important to note that one of the sampled firms (Union Dicon Salt Plc.) reported zero (0) sales from 2009 to 2013 and sales is one of the amount used in computing the variables of the study. This is the reason for having minimum values of zero (0) in the analyzed result (table 4).

Table 5: Correlation Matrix of the Dependant and Independent Variables

Variables	Roa	CCC	ICP	RCP	CPP	Size	Growth	Lev	Vif
ROA	1.000								
CCC	0.161	1.000							1.06
ICP	0.163	0.585	1.000						1.06
RCP	0.143	-0.392	0.209	1.000					1.06
CPP	0.022	-0.588	0.283	0.826	1.000				1.06
Size	0.523	0.0762	-0.049	0.0135	-0.099	1.000			1.04
Growth	0.014	0.0203	0.0164	-0.029	-0.016	0.052	1.000		1.00
Lev	-0.039	0.212	0.235	-0.095	-0.047	-0.163	0.021	1.000	1.08

Source: Generated by the Authors from the Annual Report Data of the food product companies.

Table 5 shows the correlation coefficients on the relationship between the dependent variable (ROA) and independent variables (Cash conversion circle, size, growth and leverage). The values of the correlation coefficient range from -1 to 1. The correlation results presented in table 5 also indicate that three of the explanatory variables Cash conversion circle, size and growth are positively correlated with the Return on assets, and leverage is negatively correlated with ROA. And Variance Inflation Factor (VIF) test results provide evidence of the absence of collinearity. This is because the results of the VIF test ranges from a minimum of 1.00 to a maximum of 1.08 VIF of 5.00 can still be a proof of absence of

collinearity (Doane& Steward 2007, Muhammad 2009, Barde 2009 cited in Samaila 2014). Hence, the predictive ability of the independent variables is not adversely affected by the relationship.

Regression Results on Liquidity management and Return on assets

Table 6 shows the regression results of Ordinary Least Square (OLS), Random Effects (RE) and Fixed Effects (FE). The dependent variable used in this model is the Return on asset. Although the three results are shown, however, analysis and interpretation would only be made on the OLS and RE as the Hausman test suggests RE more efficient.

Table 6: Regression Result
Random Effect Model Fixed Effect Model

ROA	Coef.	Std.err	Z	p>/z/	Coef.	Std.error	T	p>/z/
Constant	-1.41293	0.4893	-0.89	0.004	-1.2749	.5139788	-2.48	0.017
Ccc	.000305	0.0003	1.03	0.301	.000297	.000303	0.98	0.332
Size	.154834	0.0529	2.93	0.003	.13974	.056418	2.48	0.017
Growth	-.00233	0.0161	-0.15	0.884	-.00279	.0165053	-0.17	0.867
Lev	-.00114	0.0044	-0.26	0.794	-.00163	.0045092	-0.36	0.720
R-sqr:								
Within	0.1427				0.1430			
Between	0.6471				0.5476			
overall	0.2849				0.2818			
P-value	0.0278				0.0965			

Source: Generated by the Author from the Annual Report Data of the food product companies.

F (4,50) = 2.09

Prob. > F= 0.0965

R. Squared = 0.2849

The Random effect regression results displayed in table 6 revealed the cumulative R² (0.674) within and (0.2849) overall which is the multiple coefficient of determination gives the proportion or percentage of the total variation in the dependent variable explained by the explanatory variables jointly. Hence, it signifies that 28.49% of total variation in ROA of listed food product companies in Nigeria is accounted by the explanatory variables. Cash conversion circle has a positive relationship with ROA and the relationship is not statistically significant, size is positively and statistically significant; while growth and leverage have negative relationship and is not statistically significant.

The regression results as shown in table 6 indicate a positive relationship between Cash conversion circle and ROA. This result is consistent with the

findings of Lamberg and Valming (2009), Owolabi and Alu (2012) and Kurawa and Abubakar (2012) who found a positive but not significant relation relationship between the ROA and bank balance; also, consistent with the finding of Toby (2014), who found positive relationship between ROA and net current assets ratio. However, the results contradict the findings of Taani (2012) who documented a positive and significant relation between ROA and cash conversion circle, size and leverage and Ganesan (2007) who found a negative relationship between WCM components and ROA of the companies.

In summary, Cash conversion circle has a positive impact on ROA; though, the result is statistically not significant at 5% level of significance. Size has positive and significant impact on ROA; while growth and leverage have

negative and insignificant impact on the ROA. However, overall the P value (0.0965) and F value (2.09) suggest that the result is statistically significant at 10% significant level.

In view of the results reported of cash conversion circle, firm size, growth and leverage showing that all the variables excluding firm size have no significant impact on ROA provides evidence for the acceptance of our null hypothesis of the study; that, there is no significant impact of liquidity management on the profitability of listed food product firms in Nigeria.

Conclusions and Recommendations

This study examined the impact of liquidity management on profitability of listed Nigerian food product companies. Based on the findings above the study concludes that Cash conversion circle has a weak positive relationship with ROA and the relationship is not statistically significant. Size has a moderate positive relationship with ROA, the relationship is statistically significant while Growth and Leverage have negative relationship with ROA, and the relationship is not statistically significant. Thus, the study recommends that since profitability is a major factor in the going concern of a business, then management should strive to maintain a very low CCC in order to achieve a reasonable level of profitability and maximize their shareholders wealth. This can be achieved by improving the policies on inventory conversion period, receivable

conversion period and cash conversion period of the companies in the listed food product firms in Nigeria.

References

- Afza, T. and Nazir, M. S. (2009). Impact of aggressive working capital management policy on firm's profitability *Journal of Quality and Technology Management*, Vol. 3, No. 2, pp 11-21
- Ahmed, I. (2010). Impact of Working Capital Management on Performance of Listed Non-Financial Companies of Pakistan. *International Journal of Research Review of Management and Business*, Vol. 2, pp 19-30.
- Akinsuleri, O. (2011) *Financial Management (seventh edition)*, Lagos: El-Toda ventures Ltd. p43, 672-673,
- Ali, S. Q. (2012) Capital Management and Firms Performance: Evidence from Pakistan. *International Journal of Research in Business and Economics Vol. 2, BEJ-10*
- Alshatti, A. S. (2014). The Effect of Liquidity Management on the Profitability of the Jordanian Commercial Banks. Vietnam Case. *International Research Journal of Finance and Economics*, Vol. 49, Pp 59-67.

- Ashwin Madhou, A. (2013) Does Working Capital affect Corporate Profitability? Evidence from the Australia. *Business and Economics Journal*, Vol. 201, BEJ-10
- Asika, N. (1991) *Research Methodology in Behavioral Sciences*. Longman Nigeria Plc
- Azhar, N., &Noriza, M. (2010). Working Capital Management: The Effect of Market Valuation and Profitability in Malaysia. *International Journal of Business and Management*, Vol. 5 (11), 140-147.
- Bagchi, B. and Khamruiz, B. (2012) Relationship between working capital management and profitability: A study of selected FMCG companies. *Journal of India Business and Economics*, Vol. 2012: BEJ-60
- Frank, Murray Z., & Goyal, Vidhan K. (2003). Testing the pecking order theory of capital structure. *Journal of Financial Economics*, 67(2003), 217-248
- Ganesan, V., (2007). An analysis of working capital management efficiency in telecommunication equipment industry. *River Academic Journal*, 3(2), 1-10.
- Gill, A., Biger, N., and Mathur, N., (2010). The relationship between working capital management and profitability: evidence from the United States. *Business and Economics Journal*, 10, 1-9.
- Jensen, M. C. (1986). Agency Cost of Free cash flow, Corporate Finance and Takeovers. *The American Economic review*, Vol 76, No 2, 323-329.
- Khamrui, B. and Bagchi, B. (2012). Relationship between Working Capital Management and Profitability: A Study of Selected FMCG Companies in India.
- Kurawa & Abubakar. (2014). An Evaluation of the impact of liquidity on the profitability of Nigerian banks. *Research Journal of Management* Vol.2, No. 7 August | 2014 ISSN 2347-8217
- Lamberg, S. &Valming, S. (2009). "Impact of liquidity management on profitability. A study of the adoption of liquidity in a financial crises. Master Thesis, Umea School of Business, Umea University.
- Langroudi, M.M., Biabani, S. and Somesaraei, M.K. (2013).Evaluation the impact of working capital management on firms performance (case study: firms accepted in Tehran stock exchange) *International Research Journal of Applied and Basic Sciences* © 2013 Available

- online at www.irjabs.com ISSN 2251-838X / Vol, 6 (12): 1817-1828 Science Explorer Publications.
- Lazaridis, I., &Tryfonidis, D. (2006). Relationship between Working Capital Management and Profitability of Listed Companies in the Athens Stock Exchange. *Journal of Financial Management and Analysis*, 19 (1), 26-35.
- Mansoori, E. and Muhammed, J. (2012). The Effect of Working Capital Management on Firm's Profitability: Evidence from Singapore
- Muhammed, A. M. and Annuar, N. M. (2009). Working Capital Management and Corporate Performance of Malaysian firms. *Journal of Modern Accounting and auditing* Vol. 5(11).
- Myers, S. C., &Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information those investors do not have. *Journal of Financial Economics*, Vol. 13, 187- 221.
- Nazir, M., &Afza, T. (2008). Impact of Aggressive Working Capital Management Policy on Firms' Profitability. *The IUP Journal of Applied Finance*, 25 (8), 19-30.
- Nigerian Stock Exchange (2013). *Fact Book*.
- Niresh, J. (2012). "Trade –off between liquidity and profitability", *International Conference Research Journal*, Vol. 1-III, ISSUE 4(2)
- Oladipupo, A.O. and Okafor, C.A. (2013).Relative contribution of working capital management to corporate profitability and dividend payout ratio Evidence from Nigeria. *OSR Journal of Business and Management (IOSR-JBM)* e-ISSN: 2278-487X. Volume 9, Issue 1, PP 13-21.
- Owolabi, S.A. and Alu, C.N. (2012)Effective working capital Management and profitability: A Study of Selected Quoted Manufacturing Companies. *Nigeria Economics and Finance Review* Vol. 2 (6) pp. 55 – 67. Available online at <http://www.businessjournalz.org/efr>
- Owolabi, S.A. and Obida, S.S. (2012) Liquidity Management and Corporate Profitability of Selected Manufacturing Companies Listed on the Nigerian Stock Exchange. *Journal of Business Management Dynamics* Vol.2, No.2, pp.10-25

- Padachi, K., (2006). Trends in working capital management and its impact on firms' performance: an analysis of Mauritian small manufacturing firms, *International. Review of Business Research Papers*, 2(2), 45 -58.
- Raheman, A. & Nasr, M. (2007). Working capital management and profitability: case of Pakistani firms, *International Review of Business Research Papers*, Vol.3, No 1, PP279-300.
- Raheman, A., Afzan, T. and Bodla, M. A. (2010) Working Capital Management and Corporate Performance of Manufacturing Sector in Pakistan. *International Research Journal of Finance and Economics*, 47, 156-169.
- Reahn, K. (2012). Effects of working capital management on corporate profitability An Industry-wise study of finish and Swedish public companies. Vietnam Case. *International Research Journal of Finance and Economics*, Vol. 49, Pp 59-67
- Saleem, Q. and Rehman, R. (2011). Impacts of Liquidity Ratios on Profitability; *Interdisciplinary Journal of Research in Business* Vol. 1 Issue 7, July, 2011 (pp. 95-98)
- Samiloğlu, F., &Demirgüneş, K. (2008). The Effect of Working Capital Management on Firm Profitability: Evidence from Turkey. *The International Journal of Applied Economics and Finance*, 2 (1), 44-50.
- Sebastian, G. (2010). A Theory of Corporate Financial Decisions with Liquidity and Solvency Concerns. *Journal of Financial Economics*, 99 (2011), 365-384.
- Soku, B. (2011). Financial Flexibility and Capital Structure Decision. April 2, 2012. <http://ssrn.com/abstract=1108850>
- Taani, K. (2012). Impact of Working Capital Management Policy and Financial Leverage on Financial Performance: Empirical evidence from Amman Stock Exchange – listed companies *International Journal of Management Sciences and Business Research*, Vol. 1, Issue 8. (ISSN: 2226 -8235)
- Toby, A. J. (2014). Working capital management policy and corporate profitability of Nigerian quoted companies: a sectoral analysis. *International Journal of Financial Management (IJFM)* Vol. 3, Issue 1, pp.9-20
- Vijayakumar, A. and Nadu, J. (2011) Management of Corporate

Liquidity and Profitability: An
Empirical study. *International
Journal of Marketing and
Technology*<http://www.ijmra.us>.