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Does Cash Conversion Cycle Have Impact on Return on Assets of Nigerian Firms?

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Abstract
The Cash Conversion Cycle [CCC] is a powerful performance metric for assessing how well a company is managing its capital. A company with lower cash conversion cycle is more efficient because it turns its working capital over more times per year, and that allows it to generate more sales per money invested. This paper sets out to investigate the impact of Cash Conversion Cycle on Return on Assets [ROA] of selected Nigerian quoted firms for the period, 2000-2009. Data was collected from annual reports of the sampled firms. Multiple regression technique was used in analyzing the models for testing the hypothesis. Return on Assets as a measure of profitability was used as the dependent variable while cash conversion cycle was used as independent variable. Size and Growth were incorporated as control variables. The results showed that cash conversion cycle had a significant negative relationship with profitability [ROA]. Based on the findings, the study recommends that firms try to always reduce the number of days in cash conversion cycle in order to increase profitability as to create value for shareholders.
Keywords: Cash conversion cycle, Working Capital, Inventory, Profitability, Return on Assets, Nigeria

1.0 INTRODUCTION

The current squeeze on cash and credit is threatening the survival of many businesses globally bearing in mind that they are the sources of the company's working assets and the liabilities or collectively referred to as working capital. The fact that corporations could not exist without working capital is thus undeniable. The management of working capital necessitates short term decisions in working capital and financing of all aspects of both firm's short-term assets and liabilities . The main objective is to ascertain that firm has the ability to continue operating with sufficient cash flow for payment of both maturing short-term debt and impending operational expenses. Consequently, it involves crucial decisions on multiple aspects, including managing accounts payable and receivable, preserving a certain level of inventories and the investment of accessible cash. In view of that, working capital has become one of the most important issues in the organizations where many financial executives strive to identify the basic working capital drivers and the appropriate level of working capital [Lamberson, 1995].

Working capital management is simple and a straight-forward concept of ensuring the ability of the organization to fund the difference between the short term assets and short term liabilities[Harris,2005]. Companies can minimize risk and improve the overall performance by understanding the role and drivers of working capital./A standard measure for working capital management is the cash conversion cycle[CCC].Cash conversion period reflects the time span between disbursement and collection of cash and measured by estimating the inventory and receivable conversion period, less the payable conversion period. The policy was developed by Richards and Laughlin[1980] which focuses on the length of time between when the firm makes payments and when it receives cash inflow. A low cash conversion cycle allow the managers to minimize holdings of relative unproductive assets like cash and marketable securities, preserves the firm's debt capacity since less short-term borrowing is required to provide liquidity and corresponds to a higher present value of net cash flows from firms' assets[Jose, Lancaster, and Stevens, 1996]. Moreover, the CCC is an important technique of analysis for the financial managers of firms to asses why and when the firm needs more cash to sustain its activities and when and how it will repay the cash[O'zbayrak and Akgum, 2006].

As earlier stated, a popular measure of working capital management is the cash conversion cycle. A longer cash conversion cycle might increase profitability because it leads to higher sales. However, corporate profitability might also decrease with the CCC, if the costs of higher investment in working capital rise faster than the benefits holding more inventory and/or granting more trade credit to customers.

Return on Assets is one of the prozies for firm's profitability. This study therefore investigates the impact of cash conversion cycle on profitability [proxied by Return on Assets] on selected Nigerian quoted companies.

The next section presents the literature review. Methodology, data and variable issues are discussed in section three whereas section four presents the empirical results while section five concludes the findings and recommendations.

2.0 LITERATURE REVIEW

The essence of management at any level and function is to achieve the corporate objectives of the firm concerned. Expressly therefore, effective working capital management should enhance the achievement of

certain operational, tactical and even strategic objectives of the organization. The organization's Chief Financial Officers [CFO] devote so much time and effort in the management of working capital for the purpose of minimizing the time between outflows and inflows of cash conversion cycle, while simultaneously optimizing process costs and process quality [KPMG ,2005; Anand & Gupta ,2002]. The period you get the money is undoubtedly the single most important period to optimize for any business. This period is technically called the cash conversion cycle [CCC] and is mostly adopted as the comprehensive measure of working capital management [WCM]. The question is to what extent does this financial managers' function affects profitability?

The relationship of Cash Conversion Cycle with firm size and profitability for firms listed at Istanbul Stock Exchange was studied by Uyar[2009] using ANOVA and correlation analysis. The results showed that retail/wholesale industry has shorter Cash Conversion Cycle than manufacturing industries. Furthermore, the study found significant negative relationship between CCC and profitability as well as between CCC and firm size. Lazaridis and Tryfonidis[2006] studied the relationship of corporate profitability and working capital management for firms listed at Athens Stock Exchange for 2001-2004. They reported that there is statistically significant negative relationship between profitability measured by gross operating profit and the cash conversion cycle. Furthermore, managers can create profit by correctly handling the individual components of working capital to an optimal level.

Most of the empirical studies support the traditional belief about working capital and profitability, that reducing working capital investment would positively affect the profitability of firm[aggressive policy] by reducing the proportion of current assets in total assets. For the first time,Soenen [1993] investigated the relationship between the net trade cycle as a measure of working capital and return on assets, and found a negative relationship between the length of net trade cycle and return on assets. In order to validate the results of Soenen[1993], on large sample and with longer period of time, Jose et. al.[1996] examined the relationship between aggressive working capital management and profitability of US firms using cash conversion cycle [CCC] as a measure of working capital management [WCM]. The results showed that more aggressive WCM is associated with higher profitability.

Raheman and Nasr [2007] , studying a sample of 94 Pakistani firms found a strong negative relationship between the components of working capital and profitability indicating that as the cash conversion cycle increases, it will lead to decreasing profitability. Sadlovsca and Viswanathan [2007] pushed this assertion further in their survey which revealed that the best performing companies have CCC that is about 5-6 times shorter than that of the average and low performing ones.

Gitman [1974] introduced the cash cycle concept as a crucial element in WCM. The total cash cycle is defined as the number of days from when the firm pays for its purchases of the most basic form of inventory to when the firm collects for the sale of its finished product. Richards and Laughlin [1980] operationalized the cash cycle concept by reflecting the net time interval between expenditures on purchases and the ultimate recovery of cash receipts from product sales. The cash conversion cycle is an additive measure of days funds are committed to inventories and less the number of days payments are deferred to suppliers.

Deloof [2003] investigated the relationship between WCM and corporate profitability for a sample of 1009 large Belgian non-financial firms for the 1992-1996 periods. The result from the analysis showed that there was a negative relationship between profitability that was measured by gross operating income and cash conversion cycle as well as number of day accounts receivable and inventories. He suggested that managers can increase corporate profitability by reducing the number of days accounts receivables and inventories. He also stated that less profitable firms waited longer to pay their bills.

Eljelly [2004] empirically examined the relationship between profitability and liquidity, as measured by current ratio and cash conversion cycle in Saudi Arabia. Using correlation and regression analysis, the result confirmed a significant negative relationship between the firm's profitability and its liquidity level, as measured by current ratio. This relationship is more pronounced for firms with high current ratios and long cash conversion cycles.

The term profitability is measured in different ways by the researchers. It can be measured as Gross Operating Profit (GOP), Net Operating Profit (NOP), Return on Assets (ROA) and Return on Investment (ROI), while Working Capital Management was measured on Cash Conversion Cycle (CCC).

Ramachandran and Janakiraman (2009) found negative relationship between EBIT and the Cash Conversion Cycle(CCC). The study revealed that optional EBIT dictates how to manage the working capital of the firm. Further, it was found that lower gross EBIT was associated with an increase in the accounts payable days. Thus the study concluded that less profitable firms wait longer to pay bills ,taking advantage of credit period granted by their suppliers. While the positive relationship between average receivable days and firms' EBIT suggested that less profitable firms will pursue a decrease of their accounts receivable days in an attempt to reduce their cash gap in the CCC. In the study of Ganesan [2007], he depicted that the WCM efficiency was negatively associated to the profitability and liquidity. The study revealed that when the WCM efficiency was improved by

decreasing days of working capital, there was improvement in profitability of the firms in telecommunication firms in terms of profit margin.

Alipour [2011] did a study on the relationship between WCM and profitability in Iran. Cash conversion cycle was used to calculate the efficiency of WCM for the period 2001-2006 for companies listed in Tehran Stock Exchange. He selected 1063 out of 2628 companies using the multiple regression and Pearson Correlation to test the hypothesis. The result indicated that there was a negative significant relationship between accounts receivable and profitability, same with inventory and accounts payable with profitability. Furthermore, there was a negative significant relationship between cash conversion cycle and profitability. The results showed that in the studied companies, there was a significant relationship between working capital management and profitability, and WCM has a great effect on the profitability of the companies and managers can create value for shareholders by means of decreasing accounts receivable and inventory.

Poiters [2004] researched on the relationship between working capital management, cash sufficiency and the value of the companies in Heinz. Cash conversion cycle was also used to evaluate WCM . The results showed a significant relationship between cash conversion cycle and cash sufficiency with company market value. It also showed that CCC decrease is one of the key and important factors for profitability increase and consequently company value increase. In order to explore and measure the cash conversion cycle of an international supply chain, namely the export of frozen shrimps from suppliers of shrimps in Thailand to major retailers in the United States, Banomyong [2005] analyzed and discussed as the real key to achieving improvement in the cash conversion cycle. It was therefore important to understand how companies performed on this measurement metric as there were huge variations from company to company within a supply chain. The results showed a negative cash conversion cycle of less 50 days for the US importer. This demonstrated effective cash payment .The study recommends the improvement of US retailer and shrimp supplier, and that cash conversion cycle must also focus on how to manage their inventory effectively.

All the above studies provide us a solid base and give us idea regarding working capital management and its components. They also give us the results and conclusions of researches already conducted on the same area for different countries and environment from different aspects. On the basis of these researches done in different countries, this study has developed its own methodology for research.

3.0METHODOLOGY

The purpose of this research is to contribute towards a very important aspect of financial management with reference to Nigeria. The study investigated if Cash Conversion Cycle has impact on Return on Assets of Nigerian firms. The study fully relied on historic accounting data sourced from the financial statements and accounts of 46 quoted firms listed on the Nigerian Stock Exchange [NSE] for the period 2000-2009. Ex – post facto research design was adopted. Data was obtained from published annual reports and statement of accounts of quoted companies on NSE. This constitutes the most authoritative and accessible documents for assessing the performance of the affected firms. Section 335[2] of Nigerian Companies and Allied Matters Act of 1990 [CAMA] specifies that the balance sheet of a company shall give a true and fair view of state of affairs of the company at year-end. The data generated is being employed to run both cross sectional and time-series regression. The sub-sectors excluded financial institutions like banks , insurance ,etc. due to the nature of their business and their financial reports.

The multiple regression technique was used in analyzing the models stated. The ideas behind regression analysis are the statistical dependence of one variable , the dependent variable, in this case, return on assets[ROA],on one or more variables, the independent variable or explanatory variable. Two control variables were also included in the model. These are Growth and Size.

The general form for the model for a multiple regression analysis is given in the form below:

$Y= a + b_1X_1 + b_2X_2 + b_3 X_3 + +……..b_n X_n + e$ ……..(1)

Where:

Y = Dependent variable

a = Constant of the equation

$b_1 - b_n$ = Coefficient of independent variables

$X_1 - X_n$ = Independent variables

E = Error Term.

In the above equation, the constants b_1 ,b_2,b_3…..bn determine the slope or gradient of the line and the constant term {a} determines the point at which the line crosses the Y-axis, otherwise known as the Y- intercept [see Gujaranti ,1995].

In order to test our hypothesis in this study which states as follows: Cash Conversion Cycle does not have a negative significant impact on Return on Assets of Nigerian firms , the model could be written as follows:

ROA = a + b CCC + Log Size + Log Growth + E ……..(2)

Where :
ROA = Return on Assets
a = Constant of the equation
CCC = Cash Conversion Cycle
LogSize = Size(in logarithm)
LogGrowth = Growth(in logarithm)
b = Coefficient of the independent variables
E = Error Term.

The dependent variable for this study is the Return on Assets [ROA] while the independent variable is the Cash Conversion Cycle . The control variables are the Size and Growth of the firms respectively.

Return on Assets [ROA] is used as a measure of profitability in firms [Nazir and Afza ,2009]. In order words, ROA is a measure of the overall effectiveness of the firm in generating profit with available assets [Van Horne and Wachowicz ,2005]. It is equivalent to Return on Investment [ROI] ,but more appropriate measure of the operating efficiency of a firm [Pandey ,2005]. Though there exist various measures of the variable in empirical profitability studies, the most often used in the literature is Return on Assets being defined as :

Net Income after Taxes …… ….(3)
Average Book Value of Assets

This variable has been used by Samilogu and Demirgumes [2008],Falope and Ajilore [2009]; Nazir and Afza[2009] and others.

Cash Conversion Cycle [CCC] is a proxy for working capital management efficiency. It is the flow of funds from the suppliers to inventory , to accounts receivables and back into cash. It is calculated as follows :

CCC = AR + INV – AP …… (4)

Where AR is Accounts Receivable , INV is Inventory period and AP is Accounts Payable [Alipour,2011; Padachi, 2006; Richards and Laughlin,1980;and Raheman,et.al. 2010]

Accounts Receivable (AR) = Accounts Receivable X 365 ……(5)
Sales

Inventory [INV] = Inventories X 365 …… (6)
Cost of Sales

Accounts Payable [AP] = Accounts Payable X 365 …… (7)
Sales

The control variables are Size of the firm and Growth in sales. Size captures economies of scale and it is believed that as a company becomes larger, it is better placed to reap economies of scale. The study measured size as the logarithm of total assets as follows:

Size = log total assets ……..... (8)

This variable has been used by Gill, et.al.[2010]; Padachi [2006]; Alipour [2011].

Growth of a firm is measured by variation in its annual sales value with references to previous year's sales. This ratio is fairly straightforward as follows:

Growth = $\frac{Sales_1 - Sales_0}{Sales_0}$ …… .(9)

Where $Sales_1$ = this year's sales and sales o = previous year's sales.[Falope and Ajilore,2009; Garcia-Teruel and Solano,2007].

4.0 RESULTS, INTERPRETATION AND IMPLICATION

TABLE 1: SUMMARY OF VARIABLES AND THEIR % CHANGES FOR PERIOD 2000 - 2009

Years	Age	%Δ	Liquidity	%Δ	Leverage	%Δ	Growth	%Δ	ROA	%Δ	CCC	%Δ	AR	%Δ	AP	%Δ	INV	%Δ	Size	%Δ
2000	38.76		1.39		.28		.52		.11		5.78		87.15		143.23		72.35		7.28	
2001	39.76	2.58	1.17	-15.83	.28	0.0	.21	-59.62	.13	18.18	5.85	1.21	125.52	44.03	177.74	24.09	71.41	-1.30	7.36	1.10
2002	40.76	2.52	1.14	-2.56	.15	-46.43	.04	19.05	.09	-30.77	6.43	9.91	127.69	1.73	139.08	-21.76	78.00	9.23	7.39	4.08
2003	40.90	3.43	1.44	26.32	.18	20.00	.04	0.0	.12	33.33	6.63	3.11	127.89	1.57	139.68	4.31	78.80	1.03	7.89	6.77
2004	42.76	4.55	.81	-43.75	.25	38.89	0.91	127.5	.14	16.67	7.56	14.03	107.09	-16.26	90.16	-35.45	78.80	62.5	8.18	3.68
2005	43.76	2.34	.87	7.41	.17	-32.0	1.10	20.0	.18	28.57	7.63	9.26	90.52	-15.47	106.35	17.96	128.05	19.44	8.23	6.11
2006	44.76	2.29	.65	-25.28	.09	-47.05	1.01	-18.19	.24	33.33	7.64	1.32	56.73	-37.32	234.85	120.83	152.94	14.57	8.52	3.52
2007	44.96	4.47	.85	30.77	.10	11.11	.80	-21.72	.34	41.67	7.57	-9.16	58.73	3.53	140.41	-40.21	175.23	-4.11	8.83	3.64
2008	46.76	4.00	.88	3.53	.10	0.0	1.30	62.5	.49	44.12	7.87	3.96	58.23	-8.51	140.81	2.84	174.51	1.72	9.33	5.66
2009	47.74	2.09	1.16	31.82	.05	-50.0	2.19	68.46	.73	48.98	7.90	3.81	52.71	-9.48	125.98	-10.53	174.54	-30.92	9.83	5.36
Average		**3.14**		**12.43**		**-11.72**		**22.0**		**26.0**		**4.16**		**-4.02**		**6.90**	**120.58**	**8.02**		**4.44**

Source: Firm's Financial Statement 2000 - 2009

According to Table 1 , Cash Conversion Cycle [CCC] stood at 5.78 in 2000 and had a slight yearly increase to 7.90 in 2009. The percentage changes for years 2001 to 2009 stood at 1.21, 9.91, 3.11, 14.03, 9.26, 1.32, -9.16, 3.96, and 3.81 with the highest change of 14.03% in 2004, followed by 9.91% in 2002 respectively. Furthermore, there was an average growth of 26% for Return on Assets[ROA] while cash conversion cycle has an average growth of 4.16% respectively. The fluctuations could be as a result of instability on the part of firms paying for inventories purchased from their creditors, and the debtors paying for sales made to them on time.

Size had a steady and impressive increase from 7.28 in 2000 to 9.83 in 2009. Growth which stood at 52% in 2000 sharply dropped to 4% in 2003 with a drastic increase to 91% in 2004 and 219% in 2009 respectively.

TABLE 2

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Age	460	38.76	47.74	43.0726	3.00506
Liquidity	460.00	.65	1.39	1.0030	.22513
Leverage	460.00	.05	.28	.1616	.08201
Growth	460.00	-.04	9.19	1.5448	3.07741
ROA	460.00	.01	.29	.0895	.08351
AR	460.00	52.71	127.69	89.2665	31.34848
AP	460.00	90.16	234.85	143.7306	39.58959
inventory	460.00	71.41	175.23	122.7168	44.84098
Size	460.00	7.28	8.53	7.9238	.50014
CCC	460.00	5.78	7.63	6.9131	.78572

Sources: Computed from Data from Annual Reports of Quoted Companies

Table 2 presents a descriptive statistics of the study for 46 firms [2000-2009] with a total observation of 460 firm years. The main variables for this study are the ROA [independent variable] , cash conversion cycle [independent variable] , Size and Growth [the control variables]. All variables were calculated using the balance sheet [book] values. The measurement of profitability could only be based on income values, and not on so-called market values. When market values are considered in studies, there is always rather a legitimate question of the date for which the market value refers. Hence the study relied on book values as at the date of the financial report.

From the table, the 46 firms observed have a mean cash conversion cycle[CCC] of 6.91 days with a minimum and maximum of 6 and 8 days and SD of .78572 . The mean of ROA [0.0895] shows that Nigerian companies, by considering inflation rate, have poor performance over the study period of 2000-2009. Growth has a mean of 1.54 with minimum and maximum of -0.04 and 9.19 with SD of 3.08, while Return on Assets has an average of 8% with a minimum and maximum of 1% and 29% and SD. Of 0.08 respectively. Size has an average of 7.92 with minimum and maximum of 7.28 and 8.53 and SD of 0.50 equally.

TABLE 3

Correlations

		ROA	SIZE	LIQUIDITY	LEVERAGE	INVENTORY	GROWTH	CCC	AGE	ACCTR	ACCP
ROA	Pearson Correlatio	1									
	N	10									
SIZE	Pearson Correlatio	.201	1								
	Sig. (2-tailed)	.577									
	N	10	10								
LIQUIDITY	Pearson Correlatio	.791	-.697	1							
	Sig. (2-tailed)	.004	.025								
	N	10	10	10							
LEVERAGE	Pearson Correlatio	.010	-.658	.419	1						
	Sig. (2-tailed)	.979	.039	.228							
	N	10	10	10	10						
INVENTORY	Pearson Correlatio	-.294	.869	-.870	-.606	1					
	Sig. (2-tailed)	.409	.001	.001	.063						
	N	10	10	10	10	10					
GROWTH	Pearson Correlatio	.945	.484	.097	-.239	.006	1				
	Sig. (2-tailed)	.000	.157	.790	.505	.986					
	N	10	10	10	10	10	10				
CCC	Pearson Correlatio	-.722	.758	-.485	-.265	.648	.298	1			
	Sig. (2-tailed)	.028	.011	.155	.459	.043	.403				
	N	10	10	10	10	10	10	10			
AGE	Pearson Correlatio	.807	.938	-.577	-.826	.792	.484	.624	1		
	Sig. (2-tailed)	.022	.000	.081	.003	.006	.156	.054			
	N	10	10	10	10	10	10	10	10		
ACCTR	Pearson Correlatio	-.885	-.793	.424	.640	-.773	-.304	-.419	-.799	1	
	Sig. (2-tailed)	.015	.006	.222	.046	.009	.394	.229	.006		
	N	10	10	10	10	10	10	10	10	10	
ACCP	Pearson Correlatio	-.432	-.143	-.178	-.174	.110	-.387	-.651	-.043	-.200	1
	Sig. (2-tailed)	.212	.693	.623	.631	.763	.270	.041	.907	.580	
	N	10	10	10	10	10	10	10	10	10	10

Source: SPSS Output on Firms' Annual Report 2000 - 2009

As earlier stated, the hypothesis for this study is: Cash Conversion Cycle[CCC] does not have a negative significant impact on Return on Assets of Nigerian firms. To test this hypothesis, it is restated in null and alternative form as:

Ho : Cash Conversion Cycle does not have a negative significant impact on Return on Assets of Nigerian firms.

H_1 : Cash Conversion Cycle has a negative significant impact on Return on Assets of Nigerian firms.

The decision rule is that:

1. Accept Ho and reject Ha if the variable of cash conversion cycle [CCC] has a positive coefficient sign and $p< 0.05$.
2. Accept Ha and reject Ho if the variable of the cash conversion cycle[CCC] has a negative coefficient sign and $p< 0.05$.

Based on the data for this test and the computed results shown in the table, we proceed with the test.

TABLE 4 : TEST OF HYPOTHESIS

Dependent Variable: LOG(ROA)
Method: Least Squares
Date: 06/04/12 Time: 00:07
Sample: 1 10
Included observations: 7
Excluded observations: 3
White Heteroskedasticity-Consistent Standard Errors & Covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.551914	4.257050	0.364552	0.7396
LOG(CCC)	-0.424941	0.245994	-3.507905	0.0315
LOGSIZE	-0.228267	0.958428	-0.238168	0.8271
LOG(GROWTH)	0.468105	0.128256	3.649765	0.0355

R-squared	0.819789	Mean dependent var	2.519129
Adjusted R-squared	0.639578	S.D. dependent var	0.864742
S.E. of regression	0.519149	Akaike info criterion	1.822308
Sum squared resid	0.808548	Schwarz criterion	1.791400
Log likelihood	-2.378079	F-statistic	4.549058
Durbin-Watson stat	1.572085	Prob(F-statistic)	0.122609

* Variables were log-transformed to make them normally distributed

Source: Firm's Annual Report 2000 – 2009 (E-view output)

The linear regression result shows the value of the coefficient of the determination, R^2 = 0.819 indicating that 82% of almost all the variations in the dependent variable was explained by the regressors. The significant value of the F-Statistic is greater than 0.05 ,which means that the variation explained by the model is due to chance (f = 4.55 , P> 0.05). This also tests for overall significance of the independent variables. The independent variable , which is the cash conversion cycle [CCC], has a negative impact on Return on Assets [ROA] , [Coefficient of CCC= -0.42 , t = - 3.51 , P= 0.03; P < 0.05].This implies that a percentage decrease in CCC will result into a 2.5% increase in ROA. The moderator variables, size, have no significant impact on ROA ,(Coefficient of Size = -0.23 , t = -0.24 ,p = 0.83 ; P > 0.05) ; while Growth have a significant positive impact , (Coefficient of Growth = 0.47 , t = 3.64 , p = 0.04 ; P< 0.05).The Durbin-Watson (D.W) is 1.57 showing an acceptable level of autocorrelation. The D-W statistics is usually between 0 and 4. A value of 2 shows complete absence of autocorrelation.

DECISION:

Since the coefficient of cash conversion cycle has a negative sign (-0.424941) and p-value is 0.0315 (p< 0.05), we accept the alternative hypothesis and reject the null hypothesis. The multiple regression model becomes:
ROA = 1.55 – 0.42CCC -0.23Size + 0.47Growth. We can then say that Cash Conversion Cycle has a negative significant impact on Return on Assets of Nigerian firms. Based on the result which states that Cash Conversion Cycle (CCC) has a negative effect on ROA , the null hypothesis is rejected while the alternative hypothesis is accepted. From the above result , it could be explained by the fact that when the cash conversion cycle is relatively shorter , the firm may not need external financing. This leads to incurring less borrowing cost , thereby increasing profitability. This agrees with the findings of Deloof (2003) , Uyar (2009) , (Padachi,2006) , Shin and Soenen(1998) , Jose,et.al.(1996), Rehaman and Nasir(2007), etc. It showed that cash conversion cycle decrease is one of the key and most important factors for profitability increases and consequently company value increase. Furthermore, Shin and Soenen (1998) argued that the negative relationship could be explained by the market power or the market share due to a shorter CCC, and because of bargaining power by the suppliers and/or the customers as well as higher profitability due to market dominance. Another implication for the negative relationship can also be explained by the fact that minimizing the investments in current assets can help in boosting profits. This ensures that liquid assets is not maintained in the business for too long and that it is used to generate profits for the firm (Mathuva,2009). In other studies, Lyrondi and Lazardis (2000) found a positive

significant relationship between CCC and profitability. Their view was that resources are blocked at different stage of supply chain, thus prolonging operating cycle, thereby leading to profit increase due to sales increase. This occurs mostly where cost of tied up capital is lower than the benefits of holding more inventories and granting more trade credit to customers. Also, small manufacturing firms may be able to obtain trade credit from suppliers and this is supported by the higher proportion current liabilities to total assets(Gill ,et.al.,2010).

5.0 RECOMMENDATIONS AND CONCLUSION

This study recommends that firms should shorten the period between purchase of goods to pay for their purchases as to enhance profitability. They can also reduce the period between converting of raw materials into finished goods as to sell them.Working capital management necessitates short-term decision on working capital and financing of all aspects of both firm's short term assets and liabilities. The aim of efficient and effective working capital management is to ensure growth in firms, increase in size, enhance the liquidity profile of firms as well as optimal leverage. This study empirically analyzed the impact of cash conversion cycle on profitability of firms in Nigeria. Profitability was measured by Return on Assets. The results showed that cash conversion cycle had a significant negative impact on return on assets, implying that decrease in CCC leads to increase in profitability of Nigerian firms. Furthermore, it is suggested that further studies capturing all sectors of the economy should be attempted, in addition to use of more variables and extended period of the study.

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