



Working Capital Adequacy and Organization Performance. The Case Study of Banks in Nigeria

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ABSTRACT:-*The study assessed the impact of working capital on bank performance using the two big banks in Nigeria namely, First bank Nigeria PLC and GTB Bank Nigeria PLC. The inability of many organizations to effectively manage their working capital in such a way that it will lead to a sustainable performance has been identified as the bane of organizational growth in Nigeria. The study applied ordinary least square i.e multiple regression analysis as its estimating technique. A model that expressed return on capital employed which is a proxy for organization performance as function of working capital, turnover and equity was formulated. After the model estimation it was discovered that working capital do not have significant impact on their performances during the period under review. Consequently, it is recommended that firms should reappraise the trends of their working capital vis avis their performances with a view to choosing appropriate level of cash conversion flow that will not hamper their performances. Again, government should provide enabling environment for business organizations to thrive since literature have shown that business environment tend to have more impact on organization performance than working capital especially in a developing country like Nigeria.*

Keywords:-*Working Capital, Organization Performance, Negative and Positive Relationship*

I. INTRODUCTION

Working capital management is considered to be a very important element to analyze the organizations' performance while conducting day to day operations, by which balance can be maintained between liquidity and profitability. Maintaining liquidity on daily base operation to make sure it's running and meets its commitment is a crucial part required in managing working capital. It is a difficult task for managers to make sure that the business function running in well-organized and advantageous manner. There are chances of inequality of current assets and current liability during this procedure Organisation's growth and profitability will be affected if this occurs and organisation manger wouldn't be able to manage it efficiently.

According to Harris (2005) Working capital management is a simple and straightforward concept of ensuring the ability of the organisation to fund the difference between the short term assets and short term liabilities. Nevertheless, complete mean and approach preferred to cover all its company's activities related to vendors, customer and product. (Hall, 2002). Now a day working capital management is considered as the main central issues in the organisations and financial managers are trying to identify the basic drivers and level of working capital management (Lamberson, 1995).

The purpose of this study is to identify whether the performance of organisations are affected by working capital management using both First bank and GTB bank in Nigeria. It has to establish the relationship between liquidity and organisation's performance considering Return on Assets (R.O.A) and Return on Equity (R.O.E). This study is very important for the managers of many business organizations as it will help them to set tradeoff between their liquidity and their performance of organisations. Specific research studies exclusively on the impact of working capital management on corporate performance of the business organizations appear to be scanty, especially for the case of Nigeria. Consequently, our study is a modest attempt to measure and analyse the trend of working capital investment and needs of business organisations. This study, therefore, attempts to assess the impact of working capital on organization performance of a sample of business organizations and its results are expected to contribute to the existing literature on working capital and firms performance.

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Consequently, the major objective of this study is to assess the impact of working capital on organizations' performance. However the sub objectives are as follows:

II. SOME LITERATURE

Prior studies reported that working capital management may have an important effect on the organisation's profitability. Shin and Soenen (1998), Lazaridis and Tryfonidis (2006), Raheman and Nasr (2007), among others, measured working capital with cash conversion cycle, which consists of stockholding period, debtors' collection period and creditors' payment period. These researchers supported that greater investment in working capital (the longer cash conversion cycle) leads to reduction in the organisation's profitability (Banos-Caballero et al, 2010, and Nazir and Afza, 2003, 2009).

Deloof (2003) used a sample of Belgian organisations and found that organisations can increase their profitability by reducing the debtors collection period and the days-in-inventory period. He also found that less profitable organisations wait longer to pay their bills. Wang (2002) used a sample of Japanese and Taiwanese organisations and found that a shorter cash conversion cycle would lead to a better organisation's operating performance. Teruel and Solano (2007) took samples of small to medium-sized Spanish organisations for the 1996-2002 period and found that the organisations can create value by reducing the days-in-inventory period and the debtors collection period, thus leading to the reduction in the cash conversion cycle.

On the other hand, though, other researchers support that investing more in cash conversion cycle (conservative policy) may lead to increased profitability since maintaining high inventory levels is expected to increase sales, reduce supply costs, reduce cost of possible interruption in production and protect against price fluctuations (Blinder and Maccini, 1991). A higher debtors' collection period may also strengthen the relationship with customers and hence may lead to an increase in sales revenue (Ng *et al*, 1999). Deloof (2003) showed that a relatively huge amount of organisations' assets are reserved for working capital. Summers and Wilson (2000) also stated that more than 80% of the daily business transactions in the UK corporate sector is on credit terms. As it can be seen from the aforementioned empirical evidence, there are inconclusive and inconsistent results with regard to the role of working capital management on organisations' financial performance. This is due to the fact that researchers used either the conversion cycle as it relates to the organisation's profitability or they examined only part of the components of the conversion cycle.

Dong (2010) reported that the organisations' profitability and liquidity are affected by working capital management in his analysis. Pooled data are selected for carrying out the research for the era of 2006-2008 for assessing the companies listed in stock market of Vietnam. He focused on the variables that include profitability, conversion cycle and its related elements and the relationship that exists between them. From his research it was found that the relationships among these variables are strongly negative. This denote that decrease in the profitability occur due to increase in cash conversion cycle. It is also found that if the number of days of account receivable and inventories are diminished then the profitability will increase numbers of days of accounts receivable and inventories.

Mohammad Neab and Noriza BMS (2010) worked on crating the relationship between Working Capital Management (WCM) and performance of organisations. For their analysis they chose the Malaysian listed companies. They administered the perspective of market valuation and profitability. They used total of 172 listed companies from the databases of Bloomberg. They randomly selected five year data (2003-2007). This research likewise the researches quoted before studied the impact of the dimensions of working capital component i.e. C.C.C., current ratio (C.R.), current asset to total asset ratio (C.A.T.A.R), current liabilities to total asset ratio (C.L.T.A.R.), and debt to asset ratio (D.T.A.R.) in effect to the organisation's performance whereby organisation's value dimension was taken as Tobin Q (T.Q.) and profitability i.e. return on asset (R.O.A.) and return on invested capital (R.O.I.C). They applied two different techniques for analyzing the data that are multiple regression and correlations. They found that there is a negative relationship between working capital variables and the organisation's performance.

SaswataChatterjee (2010) focused on the importance of the fixed and current assets in the successful running of any organization. It poses direct impacts on the profitability liquidity. There have been a phenomenon observed in the business that most of the companies increase the margin for the profits and losses because this act shrinks the size of working capital relative to sales. But if the companies want to increase or improve its liquidity, then it has to increase its working capital. In the response of this policy the organization has to lower down its sales and hence the profitability will be affected due to this action. For this purpose 30 United Kingdom based companies were selected which were listed in the London Stock exchange. The data were taken of three years 2006-2008. It analyzed the impact of the working capital on the profitability. The dimensions of working capital management included in this research which is quick ratios, current ratios C.C.C, average days of payment, Inventory turnover, and A.C.P (average collection period. on the net operating profitability of the UK companies.

Mathuva (2009) studied the impact of working capital management on the performance. He took almost 30 listed organisations as a sample and all these companies were listed in Nairobi stock exchange and the data was taken from 1993 to 2008. There were certain findings of his research by analyzing the fixed effects regression models. Firstly, there is a negative relationship between the time when the cash is collected from the customers and the organisation's productivity. This depicts, organisations that are more profitable enjoys less time period for the

Collection of cash from the customers as compare to ones which are less profitable. Secondly, there is a positive relationship between the inventories when they were brought in and the period to which they are sold and the organisation's profitability. The interpretation comes out as that the organisations or the organizations which take more time to keep the inventories it reduces the costs of the disruption in the process of production and usually the business losses as there is the insufficiency in the goods. This situation decreases the operating cost of the organisation. The third assumption of the research was the association between the average payment period and profitability and found out to be positive ($p < 0.01$). The more the time taken to disburse the creditors, the profitability will increases

Sen. M (2009) examined the ISE (Istanbul Stock Exchange) listed organisations and checked out the relationship with the working capital. According to them there is negative relationship among variables. His research uncovered the importance of the finance directors who act as moderators or catalysts to increase the productivity of the organisation in other words they positively affect the organisation's performance

Terual and Martinez-Solano (2007) also provided the empirical relationship between both the variables. They chose the small and medium sized Spanish organisations, a sample of about 8872 small to medium sized enterprises for 1996 to 2002. After the in depth view it was found out that the negative relationship between the profitability of SME's and the number of days account receivable and days of Inventory. But it did not provide the exact impact of no. of days account payable affect and SME's return on Assets.

Ganesan (2007) selected telecommunication equipment industry to study the effectiveness of working capital management. The sample included for his research paper included 443 annual financial statements of 349 telecommunication equipment companies covering the period 2001 to 2007. The statistical tests used included correlation, regression analyses and Analysis of variance (ANOVA). The results showed that days of the working capital negatively affects the profitability of these organisations but in reality it does not affect the transportability of organisations in telecommunication equipment industry.

Sayaduzzaman MD. (2006), examined that the management of British American Tobacco is highly reasonable due to the constructive cash inflows, designed approach in running the major components of working capital by evaluating five years data from 1999-2000 to 2002-2003. Appliance of multi-dimensional modal of existing assets mix may have optimistic impact on the nonstop expansion & extension of this multinational enterprise. This also depends on collaboration of the stakeholders and business environment in the framework of globalization.

Filbeck G. et al. (2005) investigated the data of 26 industries by taking the data of 970 companies during 1996 to 1999. They found out that organisations are able to decrease financing

Cost and/or augment the funds obtainable for development by reduce the amount of funds attached to the current assets. They revealed that significant difference exist between industries in working capital measures across time. In addition, we determine that these measures for working capital vary extensively with in industry with the passage of time. It is concluded that negative relationship was also found out between profitability and liquidity of companies of United Kingdom. Conversely a positive relationship was seen between debt and organisation's profitability. The researchers propose that profitability can be increase by managers if reduction in the day's of accounts receivable and inventories occurred. Therefore the companies whose profitability is less opt to take much longer time to pay their bills. The aim of this heading is to discuss the work being done by the researchers and scholars in different industries and organisations so as to reveal the contents or the variables and in their dimensions in depth.

Melita (2010) examined the effect of working capital management on firm's profitability in an emerging market financial performance in an emerging market. We hypothesize that working capital management leads to improved profitability. The data set used consisted of firms listed in the Cyprus Stock Exchange for the period 1998-2007. Using multivariate regression analysis, results supported his hypothesis. Specifically, results indicated that the cash conversion cycle and all its major components; namely, days in inventory, days sales outstanding and creditors payment period – are associated with the firm's profitability. According to Melita (2010) the results of this study should be of great importance to managers and major stakeholders, such as investors, creditors, and financial analysts, especially after the recent global financial crisis and the latest collapses of giant organizations worldwide.

Kesseven (2006) examined the trends in working capital management and its impact on firms' performance in Mauritian Small Manufacturing Firms. According to him, the trend in working capital needs and

profitability of firms were examined to identify the causes for any significant differences between the industries. The dependent variable, return on total assets was used as a measure of profitability and the relation between working capital management and corporate profitability was investigated for a sample of 58 small manufacturing firms, using panel data analysis for the period 1998 – 2003. The regression results show that high investment in inventories and receivables was associated with lower profitability. The key variables used in the analysis were inventories days, accounts receivables days, accounts payable days and cash conversion cycle. A strong significant relationship between working capital management and profitability had been found in previous empirical work. An analysis of the liquidity, profitability and operational efficiency of the five industries showed significant changes and how best practices in the paper industry have contributed to performance. The findings also revealed an increasing trend in the short-term component of working capital financing.

Muammahd and syed (2011) investigated the impact of working Capital Management on firms' performance for non-financial institutions listed in Karachi Stock Exchange (KSE- 30) Index. A panel data has been used in this study for 21 Kse-30 Index listed firms over a period for the year 2001 to 2010. The results were obtained by using Canonical Correlation Analysis for identifying the relationship between working capital management and firms' performance. The findings showed that working capital management has significant impact on firms' performance and it was concluded that managers can increase value of share holder and return on asset by reducing their inventory size, cash conversion cycle and net trading cycle. Increase in liquidity and time period to supplier will also lead to firms' overall performances.

III. MODEL SPECIFICATION

The model used in this study is model is guided by the work of Melita (2010) In order to test our proposition, we regress the working capital on and the organisations' performance (Deloof, 2003, and Teruel& Solano, 2007). However according to Melita (2010) there some components of the cash conversion cycle which include equities and turnover. These two variables are used as our control variables i.e they also form part of our independent variables that we will regress on the organisations' performance, return on capital employed (ROCE) is used to capture the organizations performance.. Consequently the model for our study is stated as follows:

$$ROCE = f(WC, TUR, EQ,) \dots (1)$$

Explicitly the models can be written as

$$ROCE_{it} = \beta_0 + \beta_1 WC_{it} + \beta_2 TUR_{it} + \beta_3 EQ_{it} + \mu_t \dots 2$$

IV. DEFINITION OF VARIABLES

Return on Capital Employed (ROCE): This is our dependent variable as it represents a measure of the organisations performance. This ratio also relates profit to investment. It is computed by dividing the profit before investment and tax by the capital employed (Total long term Fund) which is the fund employed in the net asset plus total debt Anao and Osaze (1993). That is

$$ROCE = \frac{\text{Net Profit Before Interest and Taxes}}{\text{Total Long Term Fund}}$$

working capital (WC): This is our real variable of interest, it can be given in a formula form, which is obtained from the book of Brealey, Myers and Allen (2008), p. 789: Net working capital = current assets - current liabilities. Similarly to this statement, Filbeck and Krueger (2005) state that: Working capital is the difference between resources in cash or readily convertible intocash (Current Assets) and organizational commitments for which cash will soon berequired (Current Liabilities).

Turnover (TUR): This is one of our control variables, it is represents the total sales of the organization, according to Melita (2010) it is regarded as one of the cash conversion cycles.

Equities (EQ): This is the other control variable used in this study, it is also regarded as noe of the cash conversion cycles. It is captured with the share capital of the organizations

V. RESULT AND DISCUSSION

The two organizations used were selected from the Banking Industry. Namely First Bank and Guarantee Trust Bank. After the model estimation, the regression results were presented as follows:

First Bank

$$ROCE = -31.15 + 0.0014TUR - 0.0124WC + 0.0089EQ$$

(62.31081)* (0.0092)* (0.01184)* (0.010292)* ..eqn1

$$R^2 = 0.92 \quad F = 4.363[0.33] \quad Dw = 3.4$$

GT Bank

$$ROCE = 45.88 - 0.000152TUR - 0.00014WC + 0.0000357EQ$$

$$(60.52131)^* (4.56E-06)^* (3.64E-05)^* (3.62E-05)^* \quad \text{..eqn2}$$

$$R^2= 0.50 \quad F= 0.337123 [0.816505] \quad Dw=2.6$$

The regression results were presented in equation 1 and 2. As it was shown from the presentation, two firms were chosen each from the industries. Considering the results and starting from the first model on equation 1 which represents that of the first bank. It showed that turnover and equity has direct or positive relationship with the return on capital employed which is the proxy for organization performance. But working capital which is our major variable of interest has a negative or inverse relationship with the ROCE. The second model which is for the GT bank also showed a similar result i.e. our real variable of interest which is the working capital showed a negative relationship with the ROCE. This result is in conformity with the findings of researchers like Deloof (2003), Wang (2002) who found a negative relationship between working capital components and organization performance.

Test of Statistical Significance and Test of Overall Statistical Significance

The R^2 of first bank has 0.92 while that of GT bank 0.33. This means that working capital, turnover and equity explained 92% and 33% variation in ROCE of first bank and GT bank respectively. A very important deduction from the two results is that the coefficients of working capital for the two firms were not statically significant. Also the F statistics values of the two firms did not pass test of statistical significance hence the two models were not statistically significant. It can be concluded that working capital does not have significant impact on the two organizations performance.

VI. CONCLUSION

Evidence from this research work has confirmed that working capital appears not have significant positive impact on the performances of the two banks during the period under consideration.

Consequently, according to Patrick (2009) it can be concluded that the banks were not following the conservation policy since they believed that reduction in working capital would lead to improvement in their performances. Again our empirical result have shown that the coefficients of working capital of all the firms' models did not pass the statistical test of significance at 5% level based on this, it can also be concluded that working capital of these banks did not have any significant impact on their performances.

However, it was also deduced from our findings that if banks do not follow the conservative policy they may have a more robust R square than the other firm that follow conservation policy in the same industry. Therefore it can also be concluded that the less conservative a firm is its management of its cash conversion cycle the more the influence of working capital on its performance.

Policy Recommendations

Following the findings from this study the following recommendations are made:

- (i) Appraisal of Working Capital Management by Firms: our study have shown that working capital can either have a negative or positive relationship with an organization performance. On this note it is recommended that firms should conduct a thorough appraisal of their trends of performances and working capital. This will enable them to design a proper line of action that suits their performance enhancement.
- (ii) Need to Maintain a Minimum Level of Working Capital: Efforts should be made by organizations to encourage maintenance of at least a minimum inventory level as these will enable them to meet some unforeseen commitments Saswata (2010). That is despite the fact that there existed a negative relationship between working capital and performance it is important for firms to keep a minimum cash conversion level so as to meet unexpected expenditure arising from the organizations, operations.
- (iii) Provision of Enabling Environment for Business Organisations to Thrive: The reason why working capital failed to have significant impact on organization performance in Nigeria might not be farfetched considering the business environment in Nigeria. Authors like Smith(1987), Melita (2010) and Deloof (2003) have emphasized economic instability, political instability, power generation, security, government policies and corruption as major factors that influence business organisations' performances in most developing countries like Nigeria. This is very evident in Nigeria as the business environment in country is incessantly prone to insecurity, unstable government policy, dearth of infrastructural facilities, poor supply of electricity and a host of other impediments to organizations performance that are inherent in Nigerian business environment. Therefore the earlier the Nigerian government tackles all these menace confronting the country's business environment the better the performance of business organizations.

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