

THE EFFECT OF C2C CYCLE ON THE PROFITABILITY OF LISTED NIGERIAN CONGLOMERATE COMPANIES

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Abstract: *This study examines the relationship between C2C cycle and firm profitability for the Nigerian conglomerate sector. The study is undertaken based on the historical panel data analysis. To achieve this objective; an ex-post facto research design was employed. Data were generated from secondary sources, specifically, the annual reports and accounts of quoted firms from 2003 to 2012. The population of the study comprises of six Conglomerate companies listed on the Nigerian Stock Exchange. Descriptive statistics, Pearson correlation, as well as fixed-effect and random-effect Generalised Least Square (GLS) regression techniques alongside with Hausman Specification Test as the decision rules were utilised as tools of analysis in the study. The findings establish that C2C cycle is positively related to the efficiency of the listed Conglomerate Firms in Nigeria, though the relationship is statistically insignificant. Management has to attempt to uphold cash operating cycle. Since, as showed in this study the lengthier the C2C cycle, the higher gainful the businesses turn out to be; implying that a long operating cycle is more appropriate and logical as it influence profitability.*

Keywords: C2C cycle, Profitability, and Conglomerate Companies

Introduction

Cash controlling is a crucial part of Working Capital Management (WCM). As said by Lee (2001), cash administration encompasses the management of current assets and current liabilities, and the generating of money to fund a business. Hence, Cash movement management is fundamental to guaranteeing that a business is liquid and up to meet its current liabilities. This is functioning over the active controlling of revenues and costs payment, money steadiness and money allocations among the various portions of the business. Cash-to-Cash (C2C) cycle is an exclusive economic performance metric that points out exactly how firm is handling their funds across the supply chain. Admittedly, these definitions ignore depreciation and consider revenue tariffs inside operational expenses. Hence, the components of C2C cycle are Inventory

Turnover Period (ITP) plus Accounts Receivable Period (ARP) minus Accounts Payable Period (APP).

The relation between C2C cycle and firms profitability some studies have provided empirical evidence that managers can increase companies' profitability through efficient C2C cycle. There is, however, lack of harmony among researchers regarding how each variable of WCM affects corporate profitability. For Example, Lyroudi and Lazaridis (2000); Onwumere, Ibe and Ugbam (2012); Soekhoe (2012); and Leeper and Chambers (2013) claim that an increase in C2C cycle improves company performance in terms profitability. Conversely, Deloof (2003); and Warnes (2013) showed that increasing C2C cycle cause declining profitability in the firms.

Furthermore, to the best of the researcher's knowledge, there are few or possibly absent of studies, on a sector basis, which investigated the effect of C2C cycle on firm profitability in Nigerian Conglomerate Sector. Lack of or perhaps missing of empirical evidence on the effect of C2C cycle on firm profitability in case of the Nigerian Conglomerate sector (to the best of the researcher's knowledge), as well as the lack of general agreement regarding the influence that C2C cycle has on corporate profitability provided the reason for this study. The study, therefore, is an attempt to fill this gap and with the objective to examine the effect of C2C cycle on corporate profitability from Conglomerate Firms in Nigeria which are quoted on the Nigerian Stock Exchange, on the basis of the background; the study formulates the following hypothesis for testing:

Ho: C2C cycle does not have a significant effect on the Profitability of the listed Conglomerate Firms in Nigeria.

Recent scenario in Nigeria

High costs of production as a result of poor infrastructure; the dearth of infrastructure has been one of the major threats to the profit maximization of many Conglomerate. Power and logistics costs continue to constitute a rising portion of operational and administrative costs (Ademola, 2011). Due to the identified challenges, performance of conglomerate companies trails that of single product focused companies in Nigeria; available financial information for selected conglomerate and single product focused companies in Nigeria suggests that conglomerate companies have operated less efficiently than single product focused companies

have over the last five years (Ademola, 2011). Hence, this study attempts to uncover the effects of C2C cycle on Profitability of the listed Conglomerate Firms in Nigeria.

The remaining part of this paper is drawn as follows: Section two reviews the related literature on issues about the subject matter; section three talks about the methodology; section four addressed on data analysis and interpretation of results; then section five concludes the paper and suggests recommendations.

Literature review

C2C cycle and Profitability

Many researchers have studied the impact of C2C cycle on Profitability. For instance, in Mauritania Padachi (2006) studied the tendency in WCM and its influence on the profitability, using the pooled ordinary least square regression method, the study found no statistically significant relationship. After applying a fixed-effect approach, the same survey reported an insignificant positive association between the C2C cycle and profitability.

In an attempt to ascertain an association between SCM and financial performances of Korean Companies. Lee, Song and Lee (2009) used multiple regression as an analytical tool and found positive relations concerning C2C cycle and the certain performance metrics, while wholesale and retail trade industry has a negative correlation between the variables and Return on Assets as hypothesised.

From the developed American economy, Nobanee and AlHajjar (2009) examined the linkage in relation to WCM and corporate performance based on a sampled 5,802 publicly quoted non-financial American firms. They employed the Generalized Method of Movement System Estimation. The study reveals that the C2C cycle is significantly negatively associated with returns.

So also in Malaysia, Zariyawati, Annuar, Taufiq and AbdulRahim (2009) examined the association between WCM and firm profitability across six different Malaysian economic sectors. Using pooled ordinary least square model, the study establishes an inverse relationship between the C2C cycle and profitability in most economic sectors. Likewise, Eizadinia and Taki (2010) showed that the full development and advance of WCM has a powerful influence on the creation of corporate value. The results indicate that C2C cycle has inverse and significant relationship with return on assets.

Likewise in Iran, Rezazadeh and Heidarian (2010) investigated the effect of WCM on the profitability. For that purpose, samples of Iranian quoted firms in Tehran Stock Exchange for 1997 to 2007 were considered, and from these companies, 1356 firms data were collected and analysed as data. The results show that management can create value by making short the C2C cycle also can improve the profitability of the companies.

Conversely in America, Gill, Biger and Mathur (2010) using a sample of 88 quoted companies at the New York Stock Exchange for three years. Using least square regression model, the study found significantly positive link stuck between the C2C cycle and profitability.

However, Alipour (2011), in Iran measured the association between WCM within time territory of 2001-2006 and sample 1063 out of 2628 companies using multiple regression and Pearson's correlation found a significant negative relation between C2C cycle and profitability. Equally in Jordan, Suhail and Lahcen (2011) collected a sample data for the years of 2000-2006. The study 2SLS and OLS regression model were applied, and the results showed a negative relationship of C2C cycle with the profitability of Jordanian's firms.

On the other hand in Turkish, Karadagli (2012) focuses on the impact of WCM as proxies by C2C cycle and net trade cycle on the firm performance and searches for potential differences between the profitability effects of WCM for the SMEs and the bigger companies. Employing data for 2002-2010 using pooled panel Regression analysis and found that an increase in both the C2C cycle and the net trade cycle increases business performance regarding both the operating income and the stock market return for SMEs whereas for bigger companies a decrease in C2C cycle is connected with enhanced profitability.

However, Soekhoe (2012), tried to examine the linkage concerning the WCM and Dutch Companies' profitability by using an experiment of 70 companies of different sectors for the duration 2006 to 2010. He used pooled and fixed effect model of regression analysis and descriptive statistics with correlation analysis. All of these models' results shown that C2C cycle is positively correlated with profitability.

Nevertheless, Warnes (2013) studied the effect of WCM on the profitability over the period of five years from 2007-2011 by utilising the information of Conglomerate manufacturing companies quoted at Karachi Stock Exchange (KSE). Multiple regression models are applied, and the findings of the study validated that C2C cycle has a positive and significant impact on ROA that mean reduction in C2C cycle will lead to increase the profit of the firms. Results suggest that by reducing the period of C2C cycle at a certain level, the profitability of cement manufacturing firms can be increased.

In recent times, Iqbal and Zhuquan (2015) analyse the relationship between C2C cycle and profitability of listed Pakistani companies using 2008-2013 data employing panel data and panel least square as an analytical tool. The study establishes a significant negative relationship between C2C cycle and profitability. Therefore, suggesting that managers can improve cost-effectiveness and value of their firms by extensive efforts towards maintaining an optimal cash conversion cycle level.

Concisely, the findings of these studies reviewed reveal the different outcome; one group is of the view that C2C cycle is inversely related to firm profitability, whereas, another group is of the opinion that C2C cycle is positive with firm profitability. Likewise, some studies revealed that C2C cycle has a significant influence on firm profitability. While, conversely some studies revealed an immaterial association between C2C cycle and firm profitability, whereas most of the studies used multiple regressions analysis and the frequent proxy for profitability is ROA, while for C2C cycle components are: Inventory Days; Account Receivables Days; and Account Payable Days.

Cash Cycle Theory

As cash is often the ultimate determinant of company death or survival, the explicit focus on cash management often safeguard for the management of growth and liquidity. Cash flows and managing operating cash cycle are vital components for a company in introductory and rapid growth phase. For a growth company, the degree to which the firm can take advantage of available cash directly determines the self-financeable rate of growth liquidity (Churchill & Mullin, 2001). Moreover cash flows and cash days can be used to concisely demonstrate the effect of (liquidity) in and on business process, in a way that is both meaningful and familiar to people.

Likewise, Ganesan (2007), hypothesized that firms with more debt hold more cash (generated from sales) able to service it, and that firms simultaneously allocated some of the extra cash savings and some to debt payments (to suppliers). Less Profitability firm hold less cash, showing that an importance source of liquid assets is the current cash flow. Moreover, uncertainty expressed through higher volatility of both cash flow and cash conversion forces firm to hold more cash. The length of the C2C cycle, the dividend dummy and the ratio of long term debt to total debt are not significant. Conversely, intangibles have a negative impact on cash showing that they may affect cash at the firm level through other channels than assets

specificity. From the foregoing therefore, cash-cycle theory is the theory that best explain this research work. This theory when applied to this research view the relationship among dynamic liquidity indicators; days of inventory, days receivable outstanding, days payable outstanding, C2C metric and cash management.

Methodology

This study is carried out based on historical panel data analysis. The data is analysed to (or “intending to”) establishing a relationship between the study variables. This makes the ex-post facto research design suitable for the study where the variables of the study were not restricted as the event of the study has already happened. The study covered the period from 2003 to 2012. The population of the study comprises of six Conglomerate companies listed on the Nigerian Stock Exchange. The annual reports and accounts of Conglomerate quoted companies are purely accessible. The annual reports are the primary sources of data for this study. Table 1 presents the six companies that make up the population of the study:

Table 1: Population of the Study.

S/N.	Company	Date of Listing	Paid Up Capital (N)
1	A.G Leventis Nigeria Plc	1978	1,323,645,000.00
2	Chellarams Plc	1977	361,463,000.00
3	John Holt Plc	1974	195,000,000.00
4	SCOA Nigeria Plc	1977	324,737,000.00
5	TransCorp Plc	2006	12,906,999,000.00
6	UAC of Nigeria Plc	1974	800,360,000.00

Source: NSE Factbook 2012

The study covered the listed Conglomerate companies operating in the NSE as at 31/12/2012 as presented in Table 1. For any company to be included in the working population, it must be quoted on the NSE on or before 31/12/2002, and it must have complete annual report and account. This will be done in order to avoid the problem of missing data as the financial reports of unlisted companies are not publicly available. The working population of firms is listed in Table 2 along with their listed date in the NSE.

Table 2: Working Population.

S/N.	Company	Date of Listing	Paid Up Capital (N)
1	A.G Leventis Nigeria Plc	1978	1,323,645,000.00
2	Chellarams Plc	1977	361,463,000.00
3	John Holt Plc	1974	195,000,000.00
4	SCOA Nigeria Plc	1977	324,737,000.00
5	UAC of Nigeria Plc	1974	800,360,000.00

Source: NSE Factbook 2012

As the size of the new population for this research is not large, and the researcher is confident that studying all the elements in the population will not be out of place, all the five (5) firms that emerged are taken as the sample size of the study as presented in Table 2.

Secondary data were utilised for the study. The data were evaluated by calculating the profitability for each year for the period of study. Random-effect generalised least squares (GLS) regression was done by comparing the ROA to C2C measures the net time interval between actual cash expenditures on a firm's purchase of productive resources and the ultimate recovery of cash receipts from product transactions. The measure of the logarithms of total sales and leverage as measured by the ratio of total debt to total assets as a control variables this is in conformity with the works of Falope and Ajilore (2009) and Afza and Nazir (2009). Further, the ratio was analysed using statistical regression tool run using STATA program Version 12.

Variables and their Measurement

For the purpose of this study, the dependent variable, companies' profitability is measured by Return on Assets (ROA), which is defined as profit before interest and tax divided by total assets. This is in conformity with the works of Falope and Ajilore (2009) and Afza and Nazir (2009); Kurawa and Garba (2014). The before tax net income is adopted because taxes are charged at fixed rates of assessable income and not normally controllable by management.

The independent variables have been computed as follows:

Cash-to-Cash (C2C) Cycle: a measure to gauge profitability. It measures the net time interval between actual cash expenditures on a firm's purchase of productive resources and the ultimate recovery of cash receipts from product sales (Falope & Ajilore, 2009; Gill, Biger & Mathur, 2010). It is measured as follows:

$$C2C = (\text{Inventory turnover} + \text{Average collection}) - \text{Average payment}$$

These are in line with Padachi (2006); Falope and Ajilore (2009); Gill, Biger and Mathur (2010); Hayajneh and Yassine (2011); Raheman and Nasr (2007); and Zariyawati, Annuar, Taufiq and Abdul Rahim (2009)

In order to have a suitable analysis of the impact of account receivable management on the profitability of companies, various studies have incorporated the use of other variables which are theoretically suggested to affect firm profitability. Along the same line, the present study will, in addition to the C2C variables, will take into consideration two control variables relating to the companies. The measure of the logarithms of total sales of the companies will be adopted for size as one of the control variables. This measure was used in Raheman and Nasr (2007), Dong and Su (2010) and Gill, Biger and Mathur (2010). Similarly, consistent with the

works of Raheman and Nasr (2007), Dong and Su (2010) and Gill, Bigger and Mathur (2010), leverage as measured by the ratio of total debt to total assets will be added as the second control variable.

Model Specification

The functional relationships among these variables are therefore defined as:

$$ROA_{it} = f(C2C, SZ, LEV)_{it} + \epsilon_{it}$$

From this general form of the regression equation a model is designed to test hypothesis developed. This model is consistent with the works of Padachi (2006), and Hayajne and Yassine (2011).

$$ROA_{it} = \alpha_0 + \alpha_1 C2C_{it} + \alpha_2 SZ_{it} + \alpha_3 LEV_{it} + \epsilon_{it}$$

Where, α_1 represents the ratio of change in ROA to a unit change in each substituted explanatory variable;

i represents the number of companies of the panel data; t represents the time periods of the panel data; α_2 represents the ratio of change in ROA to a unit change in Size; α_3 represents the ratio of change in ROA to a unit change in Leverage; and ϵ_{it} is the error term that is factored to satisfy the linear regression model assumption.

Data Analysis and Discussion of Results

Table 3 offers summary statistics for the variables of the study. All the variables were computed from the relevant balance sheets and income statements of the sampled companies.

Table 3: Descriptive Statistics of the Variables

Variables	MEAN	STD DEV	MIN	MAX
ROA	4.2348	12.9938	-42.2400	37.9900
C2C	139.6012	142.8235	-44.4400	692.9700
SZ	6.8764	0.3284	6.2700	7.3500
LEV	0.6146	0.4180	0.1400	2.2900

Source: Generated by the authors from the annual reports and accounts of the sampled companies using STATA (Version 12).

Table 3 discloses that the return on assets of the five conglomerate companies over the ten year period to 2012 have an average of 4.24% ranged from a negative return of 42.24% to a maximum of 37.99%. This means that for every one Naira worth of net investment, the industry had at worst made a loss of N42.24 and had at best earned a maximum of N37.99 kobo. Every firm in the industry could earn an average of 4.24% on its net investment with a high

degree of risk, as returns varied at both sides of the scale by as large a margin as 12.99%. The average C2C cycle was 140 days. This means that the firms run their operations for an average of 140 days using suppliers' funds.

In an effort to found the nature of the correlation between the dependent and the independent variables and also to determine whether or not multicollinearity exists as a result of the correlation among variables, Correlation analysis assesses the inter-relationship and association between variables. The Pearson correlation analysis is used here to evaluate the relationship between the variables of C2C cycle and profitability Table 4 is computed for this purpose. The correlation matrix in Table 4 provides some insights into which of the independent variables are related to the dependent variable ROA.

Table 4: Correlation Coefficients of the Variables

Variables	ROA	C2C	SZ	LEV	VIF
ROA	1.0000				
C2C	0.0044	1.0000			6.800
SZ	0.0102	-0.5090	1.0000		1.500
LEV	-0.7323	-0.0998	0.1253	1.0000	1.140

Source: Generated by the authors from the annual reports and accounts of the sampled companies using STATA (Version 12).

From the above Table 4, the values on the diagonal are all 1.000, indicating that each variable is perfectly correlated with itself. The highest correlations with ROA is for LEV (-0.7323) which is negative, which implies there is a lack of multicollinearity with ROA and all variables. Likewise, the correlations within the explanatory variables prove lack of multicollinearity as the highest correlation coefficient is that of SZ and LEV with a positive value of 0.1253.

With regard to the nature of the relationship between the dependent and the independent variables, the relationship between ROA and C2C cycle show a positive and insignificant amounted to only 0.0044 which is less 1%, which implies as ACP increase by less than 1% ROA will increase by the same percentage. Similarly, from the Table 4, The VIF which is simply the reciprocal of TV ranges from 1.14 to 6.800, and this indicates the absence of Multicollinearity. VIF shows multicollinearity when its value exceeds 10 (Tobachnick and Fidell, 1996; as cited in Sabari, 2012).

In order to establish the impact of account collection period in the management of working capital on the profitability of conglomerate companies in Nigeria. The regression equation, $ROA_{it} = \alpha_0 + \alpha_1 C2C_{it} + \alpha_2 SZ_{it} + \alpha_3 LEV_{it} + \epsilon_{it}$, in our model is run using OLS.

Fixed Effect regression and Random-effects GLS regression. A Hausman specification test is also run to check a more efficient model against a less efficient but reliable model to verify that the most efficient model also gives reliable results, with the dependent variable ROA and the independent variable C2C cycle, and control variables SIZE and LEV. The regression result of the Impact of C2C cycle on Profitability is evaluated from the model summary as presented in Table 5.

Table 5: Regression Results of the Impact of C2C Cycle on Profitability
Source: Generated by the authors from the annual reports and accounts of the sampled companies using

OLS					FIXED-EFFECT				RANDOM-EFFECT			
Variables	Coef.	Std. Err.	T	P	Coef.	Std. Err.	T	P	Coef.	Std. Err.	Z	P> z
C2C	-0.0021	0.0105	-0.2000	0.8400	-0.0264	0.0191	-1.3900	0.1730	-0.0021	0.0105	-0.2000	0.8400
SZ	3.6305	4.5784	0.7900	0.4320	3.1920	7.0994	0.4500	0.6550	3.6305	4.5784	0.7900	0.4280
LEV	-23.1917	3.1109	-7.4600	0.0000	-26.3587	6.2162	-4.2400	0.0000	-23.1917	3.1109	-7.4600	0.0000
Cons	-6.1799	32.1675	-0.1900	0.8480	2.1751	50.5956	0.0400	0.9660	-6.1799	32.1675	-0.1900	0.8480
R-squared	0.5472											
Adj R-squared	0.5177											
Within					0.3549				0.3301			
Between					0.8142				0.9595			
Overall					0.5017				0.5572			
F value	18.53											
Prob>F	0.0000				0.0003				0.0000			
Hausman test (Prob>Chi)	0.44251											

STATA (Version 12).

In evaluating the Model, based on the regression result in Table 5, the results of OLS show the coefficient of determinations “R-square” shows 0.5472 indicating that the variables considered in the model account for about 54.72% change in the dependent variables. That is ROA, while the remaining of the change is as a result of other variables not addressed by this model. Likewise, the P-Value of 0.0000 which is less than 0.05 proved the model to be fit.

Similarly, taking into consideration the Hausman specification test result, the Random-effects GLS regression showed that the coefficient of determinations “R-square” shows the within and between values of 33.01% and 95.95% which are also notable. While the overall R2 is 54.72%, indicating that the variables considered in the model account for about 55% change

in the dependent variables, that is profitability, while about 45% change may be as a result of other variables not addressed by this model. Equally, the P-Value of 0.0000 which is less than 0.05 proved the model to be fit.

From the same OLS result in Table 5, it can be seen clearly that t-value of C2C cycle - 0.2000 is lower than 1.96 (for a 95% confidence level). The null hypothesis will not be rejected as the t-value is lower than 1.96 that means the C2C cycle has no significant influence on the dependent variable as the higher the t-value, the higher the relevance of the variable. Likewise, using Two-tail test p-value of C2C cycle 0.8400 is greater than 0.05, and for a null hypothesis to be rejected the p-value has to be lower than 0.05 (for a 95% confidence level) or an alpha of 0.10 (for a 90% confidence level). Thus the C2C cycle has no significant influence on the dependent variable (ROA) as the p-value of 0.8400 is higher than 0.05.

Additionally, from Random-effect model result of Table 5, one can clearly observe that z-value of -0.20 is lower than 1.96 (for a 95% confidence level). The null hypothesis will not be rejected as the z-value is lower than 1.96 that means the C2C cycle has no significant influence on the dependent variable (ROA) as the higher the z-value, the higher the relevance of the variable. Similarly, using Two-tail test p-value, for a null hypothesis to be rejected the p-value has to be lower than 0.05 (for a 95% confidence level) or an alpha of 0.10 (for a 90% confidence level). Thus the C2C cycle has no significant influence on the dependent variable (ROA) as the p-value of 0.840 is higher than 0.05.

In general, the overall probability is positively significant at 5%, and of all the independent variables in this model; however, C2C cycle independently has no significant influence on the dependent variable (ROA) as its z-value is lower than 1.96 and the p-value of 0.840 is higher than 0.05. This is in line with Zariyawati, Annuar, Taufiq and AbdulRahim (2009), Lyroudi and Lazaridis (2000); Onwumere, Ibe and Ugbam (2012); Soekhoe (2012); and Leeperand Chambers (2013) who found a positive relationship between the cash conversion cycle and profitability. However, oppose Falope and Ajilore (2009), Ramachandran and Janakiraman (2009), and Dong and Su (2010) that established a significant negative relationship between profitability and the C2C cycle. Therefore, the model equation can be written as:

$$\text{Profitability (ROA)}_{it} = -6.179934it - \alpha_1 0.0021254it + \alpha_2 23.630541it - \alpha_3 23.1917it + \epsilon_{it}$$

Generally, by looking at the result of correlation as well as that of Random-Effect GLS Regression, the correlation between ROA and C2C provide evidence of the positive value of 0.0044 with implies an increase of C2C cycle will slightly increase the profitability of

conglomerate companies in Nigeria. On the other hand, both z-value and p-value reveal an insignificant relationship between C2C and ROA, for this reason, it will be deduced that relationship between the C2C cycle and profitability of listed conglomerate companies in Nigeria is a positive however insignificant.

Conclusion and Recommendations

Based on the research findings it can be concluded that C2C cycle is positively related to the efficiency of the listed Conglomerate Firms in Nigeria, though the relationship is statistically insignificant. Management has to attempt to uphold cash operating cycle. Since, as showed in this study the lengthier the C2C cycle, the higher gainful the businesses turn out to be; implying that a long operating cycle is more appropriate and logical as it influence profitability.

References

- Ademola, O. (2011). Nigerian Conglomerate: Appropriating Value from the Conglomerate Structure. olufemiademola.blogspot.com/2011/11/nigerian-Conglomerate-appropriating.html?m=1. Accessed on 25/02/2016.
- Afza, T. & Nazir, M. (2009). Impact of aggressive working capital management policy on firms' profitability. *The IUP Journal of Applied Finance*, 15(8), 20-30.
- Alipour, M. (2011). Working capital management and corporate profitability: Evidence from Iran. *World Applied Sciences Journal*, 12 (7), 1093-1099.
- Churchill, N. C., & Mullin, J. W. (2001). How Fast Can Your Company Afford to Grow? *Harvard Business Review*, 79, 135-143.
- Deloof, M. (2003). Does working capital management affect profitability of Belgian firms? *Journal of Business Finance and Accounting*, 30, 573-588.
- Dong, H. P. & Su, J. (2010). The relationship between working capital management and profitability: A Vietnam case. *International Research Journal of Finance and Economics*, 49, 59-67.
- Eizadinia, N., & Taki, A. (2010). The survey of the effects of working capital management on the profitability of listed companies in Tehran stock exchange. *Quarterly of Financial Accounting*, 2(5), 120-139.
- Falope, O.I. & Ajilore, O.T. (2009). Working capital management and corporate profitability: evidence from panel data analysis of selected quoted companies in Nigeria. *Research Journal of Business Management*, 3(3), 73 – 84.
- Ganesan, V. (2007). An Analysis of Working Capital Management Efficiency in Telecommunication Equipment Industry. *Rivier Academic Journal*, 3 (2), 1-10.
- Gill, A, Biger, N. & Mathur, N. (2010). The relationship between working capital management and profitability: evidence from the United States. <http://astonjournals.com/bej> accessed on 06/012/2013.

- Hayajneh, O. S. & Yassine, F. L.A (2011). The impact of working capital efficiency on profitability – An empirical analysis on Jordanian manufacturing firms. *International Research Journal of Finance and Economics*, 66, 67-76.
- Iqbal, A. & Zhuquan, W. (2015). Working capital management and profitability evidence from firms listed on Karachi stock exchange. *International Journal of Business and Management*, 10(2), 231-235.
- Karadagli, E.C. (2012). The effect of working capital management on the profitability of Turkish SMEs. *British Journal of Economics, Finance and Management Sciences*, 5 (2), 36-44.
- Kurawa, J.M., & Garba, S. (2014). An evaluation of the effect of credit risk management (CRM) on the profitability of Nigerian banks. *Journal of Modern Accounting and Auditing*, 10 (1), 104-115.
- Lee, H.J., Song, S.H., & Lee, H.J. (2009). Correlation between SCM and finance performances: Evidence from Korean companies. Retrieve from: <http://impgroup.org/uploads/papers/7505.pdf> accessed on 16/12/2013.
- Lee, J. (2001). The cash management conundrum. *Asia Money*, 12 (2), 80-82.
- Leeper, J. & Chambers, K. (2013). The optimal relationship of cash conversion cycle with firm size and profitability. *European Journal of Banking and Finance*, 10, 33-41.
- Lyrودي, k. & Lazaridis, J. (2000). The cash conversion and liquidity analysis of food industry in Greece. Retrieve from: http://paper.ssrn.com/paper.taf/abstract_id=236175 accessed on 16/12/2013.
- Nobanee, H. & AlHajjar, M. (2009). Working capital management, operating cash flow and corporate performance. Retrieve from: <http://ssrn.com/abstract=1471236> accessed on 16/12/2013
- Onwumere, J.U.J., Ibe, I. G., & Ugbam, O.C. (2012). The impact of working capital management on profitability of Nigerian firms: A preliminary investigation. *European Journal of Business and Management*, 4(15), 192-201.
- Padachi, K. (2006). Trends in working capital management and its impact on firms' performance: An analysis of Mauritanian 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* 3(1), 279 – 300.
- Ramachandran, A. & Janakiraman, M. (2009). The relationship between working capital management efficiency and EBIT. *Managing Global Transitions*, 7(1), 61 – 74.
- Rezazadeh, J., & Heidarian, J. (2010). Effects of working capital management on the profitability of Iranian companies. *Quarterly of Accounting Research*, 2(7), 20-33.
- Sabari, M. H. (2012). Risk and uncertainties as determinants of size of recapitalised banks in Nigeria. *ICAN Journal of Accounting and Finance (IJAF)*, 1(4), 87-104.
- Soekhoe, S. G. (2012). *The Effects of Working Capital Management on the Profitability of Dutch Listed Firms*. University of Twente School of Management and Governance, M.Sc. Business Administrative Thesis.
- Suhail, O.H. (2011). The impact of working capital efficiency on profitability- An empirical analysis of Jordanian manufacturing firms. *International Research Journal of Finance and Economics*, 2012 (66), 1450-2887.
- Warnes, S. (2013). Impact of working capital management on firm's profitability: Empirical evidence from cement sector (A case study of Pakistani firms). *American Journal of Governance and Politics*, 3(2), 46-55.

Zariyawati, M. A., Annuar, M. N., Taufiq, H. & Abdul Rahim, A.S. (2009). Working capital management and corporate performance: Case of Malaysia. *Journal of Modern Accounting and Auditing* 5(11), 47–54.