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Working Capital Management and Profitability: An empirical Investigation in an Emerging Market.

Albert Amponsah Addae*,Michael Nyarko-Baasi
Methodist University collage Ghana, Department of Banking and Finance
Box DC 940 Dansoman- Accra
*Email: shinalberto@gmail.com

ABSTRACT
The paper seeks to examine the effect of working capital management (WCM) on firms' performance for non-listed Ghanaian firms. The paper includes conceptual as well as empirical analysis in which data from a sample of non-listed firms from 2004-2009 are analyzed to examine if efficient WCM improves firms' profitability. Cash conversion cycles as well as its components are used as measures of WCM skills. Gross operating Profit to Total Assets is used as performance measure. This paper found that, profitability is negatively related to the length of the cash conversion cycle. The results demonstrate that managers can create value by reducing their firm's number of day's accounts receivable and inventories. Also, performance is affected positively by the firms' size, GDP growth and firms' sales growth. This work's originality and value lies in suggesting that policy makers in emerging markets need to motivate and encourage managers and shareholders to give more attention to working capital management.
Keywords: Working Capital Management, Profitability, Cash Conversion Cycle

1. INTRODUCTION.

Corporate financial decisions are about capital budgeting, capital structure and working capital management. Much attention is paid to capital budgeting and capital structure, which are about the management of long-term capital, than working capital management in finance literature. However working capital management is also a very important field of corporate finance, because of its considerable effects on the firm's profitability and liquidity (Nazir and Afza, 2009).

A firm's investment in current assets such as cash, bank deposits, short-term securities, accounts receivable and inventories is called as "(gross) working capital". And the "net working capital", which is a more important and descriptive term in the context of working capital management context, refers to the current assets less current liabilities, for example accounts payable and other short-term liabilities. To put it differently, net working capital is the surplus of current assets over the short-term liabilities and represents the liquidity margin available to meet the cash demands in order to maintain the daily operations and benefit from the profitable investment opportunities. (Yadav, Kamath and Manjrekar, 2009; Padachi, 2006). Therefore it is possible to say that working capital can be regarded as lifeblood of the firm and its efficient management can ensure the success. Money tied up in working capital is one area worth looking into. According to Brigham and Gapenski (1997), Working capital, for most firms, constitutes a big chunk of their investment. "Tying up cash in working capital is as much an investment as is tying up cash in plant and equipment". On this note, business leaders cannot overlook working capital management and its effect on profitability of the firm.

The main purposes of working capital management is to enable the firm have sufficient liquidity to sustain its operations and to have to meet its obligations (Eljelly, 2004). Especially in today's global environment, all firms, regardless of their size and industry, need to acquire positive cash flow and liquidity (Stewart, 2009). On the other hand, the way working capital is managed has also noteworthy effects on the firm's profitability (Deloof, 2003). The fact remains that working capital management involves a tradeoff between profitability and risk. According to the theory of risk and return, investments with higher risk may create higher return.

Several researches have studied the effect working capital management on firms' profitability (Peel and Wilson, 1996; Shin and Soenon, 1998; Deloof, 2003; Abor 2005; Abor 2004; Aquino 2010; Mohammed 2011; and Aquino 2010). Previous study on working capital management in Ghana had focused their analysis on listed firms (Abor: 2004). However, the management of current assets and liabilities is particularly important to all firms especially in the case of non-listed (small and medium-sized) companies as most of these companies' assets are in the form of current assets (Petersen and Rajan, 1997). Since Abor's paper on working capital management was based on listed firms, this study seeks to derive empirical evidence on the effect of working capital management on the profitability of non-listed Ghanaian Firms.

The main objective of this work is to provide some empirical evidence on the relationship among working capital management and firms' performance for non-listed firms in Ghana, To examine the impact of the different components of working capital (accounts receivables days, inventories days, accounts payable days and cash conversion cycle) on the profitability of non-listed firms in Ghana

2. LITERATURE REVIEW

Corporate finance basically deals with capital structure decisions, capital budgeting decisions, and working capital management decisions. Working capital management is a very important among the component of corporate finance since it affects the profitability and liquidity of a company.

Working capital meets the short-term financial requirements of a business enterprise. It is a trading capital, not retained in the business in a particular form for longer than a year. The money invested in it changes form and substance during the normal course of business operations. The need for maintaining an adequate working capital can hardly be questioned. Just as circulation of blood is very necessary in the human body to maintain life, the flow of funds is very necessary to maintain business. If it becomes weak, the business can hardly prosper and survive. Working capital starvation is generally credited as a major cause if not the major cause of small business failure in many developed and developing countries (Rafuse, 1996). The success of a firm depends ultimately, on its ability to generate cash receipts in excess of disbursements. The cash flow problems of many small businesses are exacerbated by poor financial management and in particular the lack of planning cash requirements (Jarvis et al, 1996). This lack of a distinct working capital management profession is not an indication that corporate executives do not see the importance of it. During the 20th century many corporate actively worked on improving the physical supply chain. In the 1980s and 1990s many Japanese corporate and innovative corporate outside Japan, like Dell Computer for example, were highly successful, because they reinvented their production and logistics based on "just-in-time" management and reduced their working capital levels significantly when compared to their peers.

In recent years working capital as part of short-term asset management has become a more important subject for firms, in meeting their cash requirement levels, as financial crisis lowered the willingness of banks to extend loans to firms (Seifert et.al 2009). In a recent survey among Dutch financial managers 78% of the respondents said the importance of working capital management had improved in the last six months (Asyx and Accenture Working Capital Survey 2009). For managers of firms there are two main objectives concerning the management of their firms. First they want to maximize the profitability of the firm, maximizing the value for the shareholders of the firm. Second they want to minimize the liquidity risk of the firm. Liquidity risk is the risk that firms do not have enough cash or other short-term assets to satisfy their financial obligations, which can cause difficulties for firms in maintaining their corporate activities.

2.1 Review of previous studies

Most firms have a large amount of cash invested in working capital. It can therefore be expected that the way in which working capital is managed will have a significant impact on the profitability of firms. Shin and Soenen (1998) find a strong negative relation between the cash conversion cycle and corporate profitability for a large sample of listed American firms for the 1975-1994 periods. This result indicates that managers can create value for their shareholders by reducing the cash conversion cycle to a reasonable minimum. Also a study done in Belgian firms shows a significant negative relation between gross operating income and the number of days accounts receivable, inventories and accounts payable of Belgian firms. These results suggest that managers can create value for their shareholders by reducing the number of day's accounts receivable and inventories to a reasonable minimum. The negative relation between accounts payable and profitability is consistent with the view that less profitable firms wait longer to pay their bills.

Mohamad and Saad (2010) found that current ratio is negatively significant to financial performance of 172 listed Malaysian firms. Their study emphasized the importance of proper management of working capital as it affects firm's market value and profitability. They also suggested that working capital management should be part of the company's strategic and operational processes in order to be effective.

Wilson (1996) examine the credit management practices adopted in UK SMEs and found a strong connection between good credit management practice and aspects of company performance. For example, Wilson (1996) reports a strong relationship between efficiencies in managing the cash cycle and profitability. Wilson (1996) shows that those firms with late payment problems were typically reliant on short-term finance and were generally poorer in terms of credit management practice. Similarly, Singleton and Wilson (1998), argue that although late payment is a concern for all small firms, some of them manage it better than others. They find that firms with formal credit management procedures are better in managing late debt. These businesses tend to use longer term finance compared to businesses that have bigger late payment problems and use various forms of short term finance to fund working capital needs (Singleton and Wilson, 1998).

Falope and Ajilore (2009) used a sample of 50 Nigerian quoted non-financial firms for the period 1996 -2005. Their study utilized panel data econometrics in a pooled regression, where time-series and cross-sectional observations were combined and estimated. They found a significant negative relationship between net operating profitability and the average collection period, inventory turnover in days, average payment period and cash conversion cycle for a sample of fifty Nigerian firms listed on the Nigerian Stock Exchange. Furthermore, they found no significant variations in the effects of working capital management between large and small firms.

Eljely (2004) empirically examined the relationship of liquidity and profitability as measured by current ratio and cash gap on a sample of 29 joint stock companies in Saudi Arabia and found significant negative relation between the firm's profitability and its liquidity level, as measured by current ratio using correlation and regression analysis. He presented evidence of negative relation between current ratio and profitability.

Abor (2004) studied listed non-service Ghanaian firms within the period of 1998-2002 and adopted Cash Conversion Cycle and Net trade cycle as a measure of profitability and arrived at the following conclusions; that there is a negative significant relationship between profitability and number of day's inventory and number of day's Account receivable but negative non-significant relationship between profitability and number of day's accounts payable. He also found a negative relationship between profitability and the cash conversion cycle and Trade cycle as well.

Lazaridis and Tryfonidis (2006) found a negative relationship between profitability and CCC for 131 listed companies listed in Athens Stock Exchange for the period 2001 -2004. Similar to the results of these studies focused on large firms, the findings of Garcia-Teruel and Martinez-Solano (2007) also indicates negative relationship between profitability and CCC for small and medium sized firms from Spain.

Zariyawati et al. (2009) investigated the relationship between CCC and profitability for the Malaysian firms for the period 1996-2006. And their findings are consistent with the aforementioned studies. Mathuva (2009) examined the influence of working capital management components on corporate profitability by using a sample of 30 firms listed on the Nairobi Stock Exchange (NSE) for the periods 1993 to 2008. The key findings of his study were; highly significant negative relationship between accounts collection period and profitability, a highly significant positive relationship between the period taken to convert inventories into sales, and highly significant positive relationship between the time it takes the firm to pay its creditors (average payment period) and profitability.

Afza and Nasir (2007) found no significant relationship between working capital management policy and financial performance among the 208 public limited companies listed in the Karachi Stock Exchange. Similarly, Ali and Hassan (2010) study of 37 listed companies in the OMX Stockholm Stock Exchange showed no significant relationship between profitability and working capital management policy when grouped as aggressive, defensive or conservative based on cash conversion cycle.

In summary, the literature review indicates that working capital management impacts on the profitability of the firm but there still is ambiguity regarding the appropriate variables that might serve as proxies for working capital management. Note that previous studies as discussed above provide no clear-cut direction of the relationship between any of the variables of working Capital and firm's profitability.

3.METHODOLOGY

The purpose of this paper is to contribute towards a very important aspect of financial management known as working capital management with reference to Ghana. Here we will see the relationship between working capital management practices and its effects on profitability of 125 non listed Ghanaian firms for a period of six years from 2004 – 2009. The achievement of the aim of this work was achieved by developing a similar empirical framework first used by Shin and Soenen (1998) and the subsequent work of Deloof (2003).

3.1 Model

Panel data methodology has been employed to capture the effects of working capital management on profitability for the selected companies. Four different regression models were estimated as follows:

$$GPA = \alpha_i + \beta_1 Ar_{it} + \beta_2 Size_{it} + \beta_3 FA_{it} + \beta_4 SG_{it} + \beta_5 Gdpg_{it} + \beta_6 CPI_{it} + \beta_7 Polr_{it} + \beta_8 OPE_{it} + \lambda_t + u_{it}$$

$$GPA = \alpha_i + \beta_1 Ap_{it} + \beta_2 Size_{it} + \beta_3 FA_{it} + \beta_4 SG_{it} + \beta_5 Gdpg_{it} + \beta_6 CPI_{it} + \beta_7 Polr_{it} + \beta_8 OPE_{it} + \lambda_t + u_i$$

$$GPA = \alpha_i + \beta_1 Invit + \beta_2 Size_{it} + \beta_3 FA_{it} + \beta_4 SG_{it} + \beta_5 Gdpg_{it} + \beta_6 CPI_{it} + \beta_7 Polr_{it} + \beta_8 OPE_{it} + \lambda_t + u_{it}$$

$$GPA = \alpha_i + \beta_1 CCC_{it} + \beta_2 Size_{it} + \beta_3 FA_{it} + \beta_4 SG_{it} + \beta_5 Gdpg_{it} + \beta_6 CPI_{it} + \beta_7 Polr_{it} + \beta_8 OPE_{it} + \lambda_t + u_{it}$$

GPA= Gross operating profit to Total assets, Ar= Average collection period, Invit= Rate of inventory turnover, Ap= Average payment Period, CCC= Cash conversion cycle, CPI= consumer price index as a proxy for inflation, Polr= Bank of Ghana policy rate, Size=Firm size, FA= Financial Assets, SG= sales growth, Gdpg= growth in gross Domestic product, OPE = openness of the economy

i =1, 2,3,4……n , t = 2004 to 2009, $\boldsymbol{\alpha_i}$**:** Unobservable heterogeneity (individual effect) which is specific for each firm., $\boldsymbol{\lambda_t}$**:** Unobservable time effects, and $\mathbf{u_{it}}$**:** The error term assumed iid (0,1)

3.2 Variables

This study undertakes the issue of identifying key variables that influence working capital management of Ghanaian firms. Choice of the variables was influenced by the previous studies on working capital management.

3.2.1 Dependent Variable

The measure of financial performance used in past studies varied. Garcia-Teruel and Marinez-Solano (2007), Falope and Ajilore (2009) used return on assets (ROA). Mohamad and Saad (2010) and Afza, and Nasir (2007) used ROA, Mohamad and Saad (2010) also included return on invested capital (ROIC) while Afza, and Nasir (2007) measured return on equity (ROE). Eljely, (2004) used net operating income plus depreciation divided by net sales. Wajahat and Syed (2010) and Amarjit, et.al (2010) used gross profit divided by total assets less financial assets.

In order to analyze the effects of working capital management on the firm's profitability, the commonly used accounting-based measure: the ratio Gross Profit (Gross operating income) to total assets (GPA) (as use by Deloof: 2003, Abor: 2004, Eljily, et. al.: 2010, Aquino: 2010, and Mohammad: 2011) was used as the dependent variable (firms profitability). Therefore GPA would be calculated as;

$$GPA = \frac{Sales - (cost\ of\ sales + Depreciation\ \&\ Amortization)}{Total\ \ Assets - Financial\ Assets}$$

The reason for using this variable instead of any other accounting profits such as earnings before interest and tax or profits before or after taxes is because we want to associate operating 'success' or 'failure' with an operating ratio and relate this variable with other operating variables (that is cash conversion cycle).

3.2.2 Independent variables

With regards to the independent variables, working capital management would be measured by using the number of day's accounts receivable, number of days of inventory and number of days accounts payable.

Below summarizes the definitions and theoretical predicted signs. Note that previous studies provide no clear-cut direction of the relationship between any of working capital management variables and firm's profitability.

Table 1: Proxy variables definition and predicted relationship

Proxy	Variables Definitions	Predicted sign
Ar	**Accounts receivables divided by sales and multiplied by 365 days**	**+/-**
Ap	**Accounts payables divided by cost of goods sold and multiplied by 365 days**	**+/-**
Invit	**Inventory divided by cost of goods sold and multiplied by 365 days**	**+/-**
CCC	**No. of days A/R plus No. of days inventory minus No. of days A/P**	**+/-**
Size	**Natural logarithm of total Assets**	**+/-**
FA	**Fixed financial assets divided by the total asset**	**+/-**
CPI	**Consumer price index as a proxy for inflation**	**-**
Polr	**Bank of Ghana policy rate**	**-**
SG	**Sales growth (SG) as ($Sales_1 - Sales_0$)/$Sales_0$**	**+**
Gdpg	**Growth in gross Domestic product**	**+**
OPE	**The openness of the economy (export plus import divided by GDP)**	**-**

Ar = Average collection period, Invit = rate of inventory turnover, Ap = Average payment Period, CCC = Cash conversion cycle, Cpi = consumer price index as a proxy for inflation, Polr = bank of Ghana policy rate, Size = Firm size, FA = financial Assets, SG = sales growth, Gdpg= growth in gross Domestic product, and OPE = openness of the economy.

3.3 Data Collection and Sample Size

Data was built from a selection of financial-reports of non-listed companies in Ghana. The selection was drawn from Audited Annual Financial Reports that are filed yearly to Registrar of Companies Departement and the Ghana Revenue Authority. This empirical study was based on sampled companies for the period of six (6) years (2004-2009). A total of 125 firms were randomly selected to be included in the study.

The sample size used in this study was in accordance with the empirical study undertaken by Green, (1991), as cited in the article of Van Voorhis, and Morgan, (2001), that "as a rule of thumb, sample size N > 50 +8m (where m is the number of independent variables) for testing the multiple correlation and N > 104 + m for testing individual predictors (assuming a medium-sized relationship). If testing both, use the larger sample size". For the purpose of this paper, all companies from the service industry as well as firms in the financial industry were excluded from the sample data due to their type of activity.

4. RESULTS AND DISCUSSION OF FINDINGS

All variables were calculated for balance sheet using book values. The book value was used because the companies did not provide any market value related to the variables that we used in this study. In addition, the

measurement of profitability could only be based on income statement values, not on so-called market values. Furthermore, when market values are considered in such studies, there is always a rather legitimate question of the date for which the 'market values' refer. This is rather arbitrary. Hence, 'book values' were relied on as of the date of the financial reports.

4.1 Descriptive Statistics

Table I provides descriptive statistics of the collected variables. Descriptive analysis shows the average, and standard deviation of the different variables of interest in the study. It also presents the minimum and maximum values of the variables which help in getting a picture about the maximum and minimum values a variable can achieve. *Table I* presents descriptive statistics for 125 non listed Ghanaian firms from 2004 to 2009 and for a total 750 firms-year observations.

***Table I**: Descriptive statistics of the collected variable*

Variable	Obs	Mean	Std. Dev.	Min	Max
Gpa	750	0.21566	0.42532	-0.1525	0.70802
Ar	750	12.1821	27.0088	0.0000	351.647
Invit	750	34.3588	60.9557	0.0000	397.802
Ap	750	45.0168	25.6066	0.1311	530.806
CCC	750	1.52406	25.5823	-51.883	493.335
Cpi	750	217.525	50.1159	153.23	303.930
Polr	750	0.16113	0.02210	0.1275	0.18880
Size	750	11.6086	2.06809	6.9807	17.8730
FA	750	0.08005	0.10985	0.0005	0.28895
Sg	750	0.35639	19.4981	186.10	1.08960
Gdpg	750	0.05800	0.00792	0.0470	0.07300
OPE	750	0.59500	0.11049	0.5000	0.76000

Source: Calculations Based on Annual reports of firms from 2004-2009

The mean value of net operating profit is 21.57% of total assets, and standard deviation is 42.53%. It means that value of the profitability can deviate from mean to both sides by 42.53%. The maximum value for the gross operating profitability is 70.8% for a company in a year while the minimum is -15.25%.

The cash conversion cycle used as a proxy to check the efficiency in managing working capital is on average 2 days and standard deviation is 26 days. Firms receive payment against sales after an average of 12 days and standard deviation is 27 days. Minimum time taken by a company to collect cash from receivables is 0 day while the maximum time for this purpose is 352 days. It takes an average 34 days to sell inventory with standard deviation of 61 days. Here, maximum time taken by a company is 398 days, which is a very large time period to convert inventory into sales. Firms wait an average 45 days to pay their purchases with standard deviation of 26 days. Here, minimum time taken by a company is 0.13 days which is unusual, and maximum time taken for this purpose is 530 days. To check the size of the firm and its relationship with profitability, natural logarithm of sales is used as a control variable. The mean value of log of sales is 11.61 while the standard deviation is 2.07. The maximum value of log of sales for a company in a year is 17.87 and the minimum is 9.98.

In the same way to check the ratio of fixed financial assets to the total assets of non listed Ghanaian firms, the financial assets to total assets ratio is used as a control variable. The mean value for this ratio is 8% with a standard deviation of 10.99%. The maximum portion of assets in the form of financial assets for a particular company is 29% and the minimum is 0.05% (For a number of firms, a proportion of total assets are fixed financial assets). Also the average growth rate of GDP in Ghana and openness (merchandise trade) of Ghanaian economy between 2004 and 2009 is 5.8% and 59.5% respectively and consumer price index which was use as a proxy for inflation on the average was 217.5, together with these, the sample firms have seen their sales grow by almost 36 % annually on average and the Bank of Ghana policy rate on the average has been around 16% for the period under studied.

4.2 Correlation Analysis

Table II -Correlation for the Collected Variable

	Gpa	Ar	INV	Ap	CCC	Cpi	Polr	Size	FA	Sg	Gdpg	OPE	
Gpa	**1.00**												
Ar	**-0.12**	**1.00**											
Invit	**-0.17**	**0.06**	**1.00**										
Ap	**-0.05**	**0.00**	**0.15**	**1.00**									
CCC	**-0.09**	**0.41**	**0.09**	**-0.06**	**1.00**								
Cpi	**-0.01**	**-0.03**	**0.09**	**0.06**	**-0.04**	**1.00**							
Polr	**0.01**	**0.00**	**-0.01**	**0.01**	**-0.01**	**0.02**	**1.00**						
Size	**0.09**	**-0.07**	**0.03**	**-0.02**	**0.02**	**-0.03**	**-0.06**	**1.00**					
FA	**0.04**	**0.01**	**0.01**	**-0.06**	**0.06**	**-0.02**	**0.05**	**-0.16**	**1.00**				
Sg	**0.17**	**-0.01**	**-0.03**	**0.02**	**-0.03**	**-0.18**	**0.01**	**0.04**	**0.01**	**1.00**			
Gdpg	**0.01**	**-0.02**	**0.04**	**0.01**	**0.00**	**0.45**	**-0.04**	**-0.04**	**-0.04**	**-0.21**	**1.00**		
OPE	**-0.01**	**0.01**	**-0.07**	**-0.03**	**0.02**	**-0.39**	**0.09**	**-0.01**	**0.05**	**0.14**	**-0.47**	**1.00**	

Source: Calculations Based on Annual reports of firms from 2004-2009

Table II shows the correlation matrix for the variables. The correlation coefficient is a measure of the degree of linear relationship between two or more variables, a negative correlation between the Gross operating profit to Asset (GPA) and the number of day's accounts receivable, days of inventory and days accounts payable. In the same way, the correlation with the cash conversion cycle is negative. This demonstrates that paying suppliers and collecting payments from customers earlier, and keeping products in stock less time, are all associated with an increase in the firm's profitability. A negative relation between number of day's accounts payable and profitability is consistent with the view that less profitable firms wait longer to pay their bills. In that case, profitability affects accounts payable policy, and not vice versa. An alternative explanation for a negative relation between the number of day's accounts payable and profitability could be that firms wait too long to pay their accounts payable. Speeding up payments to suppliers might increase profitability because Ghanaian firms often receive a substantial discount for prompt payment. Considering the three periods jointly, the negative correlation obtained indicates that shortening the cash conversion cycle is associated with higher profitability, which could justify the effect that a more efficient management of working capital has on corporate profitability. This presupposes that the shorter the cash conversion cycle the more profitable a firm will be and vise versa.

With regard to the correlations between the independent variables, a moderate values was fund between the cash conversion cycle and number of days accounts receivable (0.41) and between consumer price index(proxy for inflation) with growth in gross domestic product and openness of the economy (merchandised trade) of 0.45 and 0.39 respectively.

4.3 Regression Analysis

The structure of unobservable heterogeneity is very crucial for determining the appropriate method of panel data estimation. If there is a correlation between the dependent variables of the estimated model and the unobservable heterogeneity for each firm, fixed effects method is a sound choice to reach consistent estimation process. But if there is no correlation between them, random effects method, which is based on generalized least squares, would be more efficient than fixed effects. Hausman's specification test (1978) has been used to decide the character of the effects: random or fixed. Fixed effect was supported in all cases as the Hausman test reject that the estimated coefficient using the fixed effect is equal to the estimated coefficients using random effect therefore fixed effect is preferable to random effects models.

Table III -Regression

Effect of working Capital Management, on Firms Performance

Gpa	Medel I	Model II	Model III	**Model IV**
Ar	-0.0039101			
	-2.85***			
Ap		-0.0195717		
		-2.75***		
Invit			-0.0028256	
			-2.85***	
CCC				-0.1589750
				2.31***
Sg	0.0000698	0.0000275	0.0001123	0.0000625
	0.39***	0.15**	0.63**	0.35**
Gdpg	1.5054670	0.0043434	1.0037615	1.8943047
	1.25***	0.84***	0.90*	0.98***
CPI	-2.0678170	-1.2582820	-1.2295140	-1.8118590
	-1.13	-0.68	- 0.67	-0.99
FA	0.0220005	0.0178748	0.0206893	0.0184635
	2.63**	2.13**	2.48**	2.19**
Polr	0.1234184	0.1811510	0.0621188	0.1167746
	0.30***	0.44***	0.15*	0.28*
Size	0.0022868	0.0036878	0.0022689	0.0020354
	0.40***	0.65**	0.40*	0.36***
OPE	-0.0114758	0.0149643	0.0035250	-0.0186608
	-0.09	0.12	0.03	-0.15
Cons	0.2967181	0.3589731	0.3292053	0.2514095
	2.52**	2.94***	2.76**	2.14**
Hausman	30.41	22.41	12.41	30.10

*****significant at 99%,**significant at 95%,*significant at 90%.t-statistic in parentheses. The p-value of Hausman test for each equation lies at the last line of the table. Coefficients of time dummy variables not reported here but all significant at 99%.**

A non-listed Ghanaian firm gross profit on assets is reduced by lengthening the number of day's accounts receivable, number of days of inventory and number of days accounts payable. This aspect, which is consistent with the results found by Deloof (2003) for large firms, underlines the importance of working capital management for firms. Lengthening the deadlines for clients to make their payments, although it may improve profitability because greater payment facilities may raise sales, also negatively affects profitability. Thus a more restrictive credit policy giving customers less time to make their payments improves performance. Another reason for the negative relationship can be attributable to the fact that, the rate at which customers consume the product of these firms is low. Thus, the findings of this paper suggest that managers can create value for their shareholders by reducing the number of days for accounts receivables. In addition, the negative relationship between accounts receivables and firm's profitability suggest that less profitable firms will pursue a decrease of their accounts receivables in an attempt to reduce their cash gap in the cash conversion cycle.

A negative relationship between number of day's accounts payable and profitability is consistent with the view that less profitable firms wait longer to pay their bills. In that case, profitability affects the account payables policy and vice versa. Lengthening the number of day's accounts payable negatively affects profitability. This result could be explained by the high implicit cost of vendor financing to the firm, since the firm forgoes discounts for early payment. However, this explanation does not make sense if we take into account that the dependent variable used, the gross profit on assets, does not include financial costs. Deloof (2003) justifies this result by arguing that less profitable firms tend to delay payment of their bills. An alternative explanation for a

negative relationship between the number of day's accounts payable and profitability could be that Ghanaian firms wait too long to pay their accounts payable although speeding up payments to suppliers might increase profitability because firms often receive a discount for prompt payment.

The result found a negative relationship between Days of inventory turnover and profitabity which conformed to the findings of Raheman and Nasr (2007) and Lazaridis and Tryfonidis (2006). Firm's profitability can improve by reducing the number of days of inventory, so that keeping inventory for less time can also improve profitability. One of the explanation for the negative relationship between number of days of inventories and profitably suggests slow movement in stock. Such a situation could be attributable to declining sales, consequently, resulting in lower profits and large volume of inventories.

The integrated analysis of the number of days accounts receivable, days of inventory and days accounts payable was carried out using the cash conversion cycle. In contrast to Deloof's (2003) findings for large Belgian firms, we fund that shortening the cash conversion cycle improves profitability of non listed Ghanaian firms. Aggressive working capital management policy reflected in low investments in current asset influences net income positively. This is consistent with the theory that "a restricted lean-and-mean current asset investment policy generally provides the highest expected return" (Brigham and Gapenski, 1997). Likewise, this is consistent with the Eljely's (2004) study that pointed out that excessive liquidity results to reduction in profitability due to lost profits and unnecessary costs. It is also consistence with Abor (2004) study that also points out that shorting the cash Conversion cycle of listed Ghana firms will lead to good financial performance. However, this finding is not consistent with the studies of Afza, and Nasir (2007), and Ali and Hassan (2010), which found no significant relationship between working capital management policy and profitability.

With reference to the control variables, most of these are significant. Corporate profitability is positively associated with size, so that large size seems to favor the generation of profitability. The results do not change if we use the logarithm of sales to measure the size. The result of the study showed that firm size has a significant positive relationship with financial performance. This is not consistent with the study of Ali and Hassan (2010), which found inverse relationship and with the study of Amarjit, et.al (2010), which found no significant relationship. In this study, large firms are identified with high gross revenues, which under normal circumstances would translate to higher profit.

Growth, which could be an indicator of a firm's business opportunities, is an important factor allowing firms to enjoy improved profitability, as we see in the positive sign for the variable Sg(sales growth). At the same time, as we would expect, it improves in periods of higher economic growth. Moreover, the high values of the coefficients of the real GDP growth rate in Ghanaian highlight the importance of economic growth regarding companies' profitability. Economic growth proved to be an important indicator for better market performance. In case of financial assets to total assets ratio, it also has a significant negative relation with profitability. It reflects that if this ratio increases the operating profitability will decrease.

In general, all the results are similar, except those for the variables OPE (merchandised trade) and CPI (proxy for inflation), which loses significance and Polr (bank of Ghana policy rate) which is significance at 10%. These results cast no doubt that shorting the cash Conversion cycle might affects profitability positively.

5. Summary and Conclusion

With the effects of the recent financial crisis, firms have been urged to efficiently utilize their resources. Although previous literature focused on long term financing and long term investment, firms' liquidity and short term investments proved to be more important during financial crises. According to the tradeoff theory, firms have to keep a balance between profitability and liquidity. Liquidity is a precondition to ensure that firms are able to meet its short-term obligations and its continued flow can be guaranteed from a profitable venture. The importance of cash as an indicator of continuing financial health should not be surprising in view of its crucial role within the business. This requires that business must be run both efficiently and profitably. On the other hand, too much focus on liquidity will be at the expense of profitability. Thus, the manager of a business entity is in a dilemma of achieving desired tradeoff between liquidity and profitability in order to maximize the value of a firm.

Previous studies argue that more efficient liquidity management stimulates more profitability (see for example Deelof, 2003 and Lazaridis and Tryfonidis, 2006). While large number of studies examined this relation most of which focused on more developed firms. In this study we argue that firms in emerging markets and especially in small economies with small firms need to pay more attention on managing their working capital. For such economies firms have limited access to funding and financial forecasting is less efficient. In particular, we examined the relationship between firms' working capital management measured by the cash conversion cycle in addition to its components and profitability. Using data from 125 firms not listed on the Ghana Stock Exchange for the period from 2004 to 2009. Firms' profitability proved to have negative relation with the length of cash conversion cycle. This indicates that firms will be more profitable if they are able to shorten the length of their

cash Conversion cycle. We also find a significant negative relation between profitability and the number of day's accounts receivable, account payable days and days of inventory

Finally, non listed firms have to be concerned with working capital management because they can also create value by reducing their cash conversion cycle to a minimum, as far as that is reasonable.

5.1 Recommendations

The importance of working capital management on the firms' financial performance is emphasized in this study to bring attention of business leaders to the obvious but is often neglected. The above study is important for policy makers and regulators who need to motivate and encourage managers and shareholders to pay more attention on working capital through improving investors' awareness and improving transparency.

Managers can create value for their shareholders by reducing the number of day's accounts receivable and inventories to a reasonable minimum. Considering the result of the research, the company's aims must be to decrease cash conversion cycle (if no disorder is created in the company operation), it will improve the performance.

Also, the Government of Ghana in its attempts to improve on the economy by way of empowering the private sector development should concentrated on the growth of the Gross Domestic Product (GDP) as a growth in GDP will positively improves on the performance of firms in the economy.

5.2 Recommendation for further Study

Further, this research recommend that, there is a pressing need for further empirical studies to be undertaken on small business financial management, in particular their working capital practices by extending the sample size so that an industry-wise analysis can help to uncover the factors that explain the better performance for some industries and how these best practices could be extended to the other industries. The scope of further research may be extended to the working capital components management including cash, marketable securities, receivables, and inventory management. The next step is to look into the best practices of top performing companies. What working capital management strategies may be implemented to minimize investment in current assets at the firm's acceptable financial risk appetite?

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