

EFFECTS OF CASH MANAGEMENT ON THE PERFORMANCE OF SMALL AND MEDIUM ENTERPRISES (SMES) IN NIGERIA

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Abstract

Cash management which is one of the components of Working capital management is expected to enhance the performance of enterprises and by extension, the share holder's value. The relationship between cash management and performance was investigated for a sample of 211 small and medium sized enterprises in Kaduna North and South Local Government Areas of Kaduna Nigeria for the period 2008-2012. The cash management was used as the independent variable while performance of SMEs was considered as the dependent variable. Correlation coefficients and regression analysis were used as measures of the relations. The cash management showed significant positive relations with performance of SMEs. The regression results rejected the null hypothesis that cash management does not affect the performance of SMEs. It (regression results) however, ensured the positive relation between cash management and performance measures of Small and Medium Enterprises (SMEs).

Keywords: *Cash Management, Performance, Small and Medium Enterprise.*

Background to the Study

Cash means liquid assets that a business owns. It includes cheques, money orders and bank drafts. Management of cash therefore means efficient collection and disbursement of cash and any temporary investment of cash that a business concern or individuals makes. In business parlance, cash is considered as one of the major and vital component of working capital. Scholars like Parang (2009) and Pandey (2004) averred that maintaining optimum level of cash in an organization is called cash management which has the objective of meeting cash disbursement as per payment schedule, meet cash collection as per schedule and minimize funds locked up as cash balance by maintaining optimum cash balance while, motives of holding cash are transaction, speculative and precautionary motives and that it is the process of planning and controlling cash flows into and out of the business, cash flows within the business, and cash balances held by a business at a point in time.

The key elements of cash management are cash forecasting, balances management, administration of cash receipts and disbursements, and internal control (i.e. bank reconciliation) Gilman, (2009). Zietlow et al., (2007) and Gitman, (2009) averred that good cash management can have a major impact on overall working capital management. It is objectively used to manage and determine the optimal level of cash required for the business operation and invested in marketable securities which are suitable for the nature of the business operation cycle. They further echoed the views of Parang and Pandey that "cash management" involves planning for cash inflows and outflows, and determining the optimal balances of cash and near-cash accounts such as marketable securities and that, marketable securities are short-term interest-earning financial claims that can be quickly converted to cash without any significant loss of value.

Efficient cash management involves the determination of the optimal cash to hold by considering the trade-off between the opportunity cost of holding too much cash and the trading cost of holding too little (Ross et al., 2008) and as stressed by Atrill (2006) that, there is need for careful planning and monitoring of cash flows over time so as to determine the optimal cash to hold. A study by Kwame (2007) established that the setting up of a cash balance policy ensures prudent cash budgeting and investment of surplus cash. This finding agree with the findings by Kotut (2003) who established that cash budgeting is useful in planning for shortage and surplus of cash and has an effect on the financial performance of the firms.

A Popular measure of WCM is the cash conversion cycle, (CCC) i.e. the time lag between the expenditure for the purchases of raw materials and the collection of sales of finished goods. The longer this time lag, the larger the investment in working capital. A longer cash conversion cycle increases profitability because it leads to higher sales. However, corporate profitability also decreases with cash conversion cycle, if the costs of higher investment in working capital rise faster than the benefits of holding more inventories and/or granting more trade credit to customers Deloof, (2000). Ross et al. (2008) asserts that reducing the time cash is tied up in the operating cycle improves a business's profitability and market value, furthers the significance of efficient cash management practices in improving business performance. Ross et al (2008) however argued that, a firm can be very profitable, but if this is not translated into cash from operations within the same operating cycle, the firm would need to borrow to support its continued working capital needs.

Thus, the twin objectives of profitability and liquidity must be synchronized and one should not impinge on the other for long. Based on the above background, the study was designed to assess the effect of cash management on the performances of small and medium enterprises in Nigeria. The study was anchored on the specific objectives as stated under.

Objectives of the Study

To establish the effect of cash management on the performances of small and medium enterprises in Kaduna North and South Local Government areas of Kaduna State Nigeria

Literature Review

In a study on retail firms by Moss and Stine (1993), it was found that the firm size has a significant negative relationship with CCC i.e. larger the size of the firm shorter the CCC and vice versa. They also found a significant positive relation between length of the CCC and current and quick ratios. A significant negative relationship between the profitability and length of CCC was found in empirical studies conducted to examine the liquidity profitability tradeoff (Jose *et al.* 1996; Eljelly, 2004; Sen and Oruc, 2009). Another study on 22 thousand public limited firms by Hutchison *et al.* (2007) showed a positive relation between shorter CCC and higher profitability.

Lyroudi & Lazaridis, (2000) made a unique study of the Greek Food Industry to determine the relationship between the Cash Conversion Cycle and the traditional liquidity indicators, i.e., the Current Ratio and the Quick Ratio. The results portrayed a significant positive association between the modern and traditional liquidity signifiers. The Cash Conversion Cycle was also found to be positively linked with the Return on Assets ratio.

In a study conducted by Khan, Hijazi, and Kamal (2006) on Pakistani listed companies, it was found that firm's profitability is negatively related to day's inventory outstanding, day's payable outstanding and CCC. Similarly, Shah and Sana (2006) found a significant negative relation between CCC and gross profit meaning that profit can be increased by reducing the cash conversion cycle.

Anand and Gupta's (2001) empirical survey of working capital performance in corporate India helps identify the core determinants of WCM. Their study investigates the working capital performance of 427 of the S&P-500 companies over the period 1998/99 to 2000/01. They argue that cash conversion efficiency (CCE), among other components of the working capital is a key variable that chief financial officers need to keep in mind when making decisions regarding higher profitability.

Lazaridis and Tryfonidis (2006) investigated the relationship of corporate profitability and working capital management for firms listed at Athens Stock Exchange. They reported that there is statistically significant relationship between profitability measured by gross operating profit and the Cash Conversion Cycle. Furthermore, Managers can create profit by correctly handling the individual components of working capital to an optimal level. Raheman A., Afza T., Qayyum A., Bodla M.A. (2010) observed that the cash conversion cycle and net trade cycle offer easy and useful way of checking working capital management efficiency. For value

creation of shareholders, firms must try to keep these numbers of days to minimum level.

Shin and Soenen (1998) were probably among the pioneers to relate efficient management of working capital with enhanced profitability. In their article "Efficiency of Working Capital Management and Corporate Profitability", they analyzed whether the Cash Conversion Cycle (they used the Net Trade Cycle variable in which number of days inventory, receivables, and payables were all divided by the Sales figure and then multiplied by 365) had some potential impact on the profitability of a sample of firms listed on the US Stock Exchange during the period 1974-1994. They found that a reasonable reduction in the Cash Conversion Cycle could lead to an increase in the firms' Profitability. The correlation between the cash conversion cycle and the profitability variable was negative as well as statistically significant. The authors, thus, held that shortening the (CCC) would lead to an increase in profitability. In another related paper written by Ioannis Lazaridis and Dimitrios Tryfonidis, profitability was found to be statistically significant with the cash conversion cycle of firms listed in the Athens Stock Exchange for the period 2001-2004.

Uyar (2009) carried out a researched on the relationship between cash conversion cycle with firm size and profitability of 166 firms listed on the Istanbul Stock Exchange (ISE) for the year 2007. Firm size measured by total assets and sales revenue, and profitability is measured by return on assets and return on equity. The paper showed that Retail/wholesale industry has shorter CCC than manufacturing industries. Another importance of the study is that the textile industry has the longest CCC. There is a significant negative correlation between the length of CCC and the firm size. Hence, smaller firms have longer CCC. Lastly, significant negative correlation between the length of CCC and the profitability was found.

Raheman and Nasr (2007) studied the effect of different variables of working capital management including average collection period, inventory turnover in days, average payment period. They selected a sample of 94 Pakistani firms listed on Karachi Stock Exchange for a period of six years from 1999 - 2004 and found a strong negative relationship between variables of working capital management and profitability of the firm. They found that as the cash conversion cycle increases, it leads to decreasing profitability of the firm and managers can create positive value for the shareholders by reducing the cash conversion cycle to a possible minimum level.

Karaduman et al (2011) investigated the relationship between working capital management and company's profitability in Estantbol Stock Exchange for a period of 2005-2009. They use return of assets as criterion for profitability evaluating and cash cycle for evaluation of working capital management. Results show that decrease in cash cycle has positive effect on return of assets. Mohamad and Saad (2010) used Bloomberg's database of 172 listed companies randomly selected from Bursa Malaysia main board for five year period from 2003 to 2007. Applying correlations and multiple regression analysis, they found that current assets to total asset ratio shows positive significant relationship with Tobin Q, ROA and ROI. Cash conversion cycle, current asset to current liabilities ratio and current liabilities to total assets ratio illustrate negative significant relations with Tobin Q, ROA and

ROIC. From a different perspective, firm's size, Teruel & Solano (2007) tried to make inquiries about working capital management and profitability relationships in Small and Medium size firms (SME). For this purpose, they collected a panel of 8872 Spanish corporations for the period from 1996 to 2002. Using panel data analysis with both random effect and fix effect models, they revealed a negative relationship between return on asset and cash conversion cycle, They argued that small and medium-size firms also can increase their profitability by shortening cash conversion cycle.

Raheman and Nasr (2007) performed an analysis on 94 firms listed at KSE, based on a time span of 6 years from 1999 to 2004. They have taken different working capital ratios such as Net Operating Profitability, Debt ratio, current assets to total assets ratio, cash conversion cycle, average collection period, inventory turnover, average payment period, current ratio and natural logarithm of sales. They suggested that profitability and working capital management are negatively related to each other.

Afza and Nazir (2008) reviewed their pervious study to estimate the impact of different types of working capital management policies on financial performance of firms in different sectors. For this they used a sample of 263 non-financial firms belonging to 17 different sectors listed at KSE from 1998 to 2003. The secondary data was collected from the financial reports of selected companies and also from the publications of State Bank of Pakistan. There are two types of working capital management policies namely aggressive working capital management policy and conservative working capital management policy.

Gill, Biger, and Mathur (2010) studied 88 companies of New York. The time span of the study was 3 years i.e. 2005 to 2007. To elaborate the relationship of profitability with working capital management, they took Accounts receivables, Accounts payables, Cash conversion cycle, Inventory, natural log of sales as a proxy of size of the firm, fixed assets ratio and debt ratio as independent variables while dependent variable was Gross Operating Profit. The regression analysis was used to find out the results. They stated that if the collection period of accounts receivable is greater, then there would be less profitability. So, they suggested that managers should try to reduce the credit period in order to improve the profitability. They also recommended that cash conversion cycle is positively related with financial performance.

Conceptual Framework

Cash management has been identified as independent variable while performance which include (profitability, growth in sales, return on assets and return on equity) of the small and medium enterprises (SMEs) was the dependent variable. A good cash conversion cycle indicates proper working capital management also, meaning that a shorter cash conversion cycle finally leads to higher performance in small and medium enterprises.

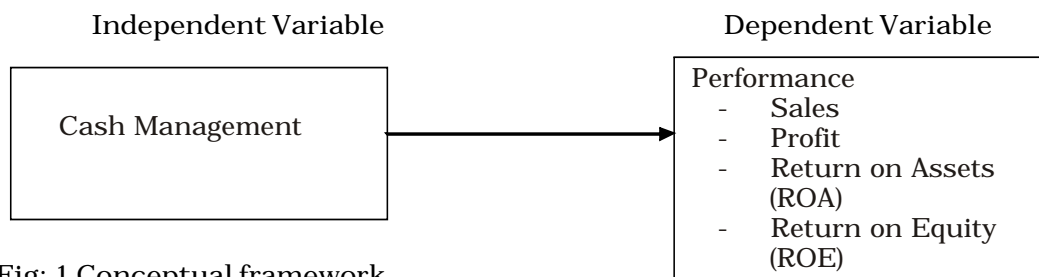


Fig: 1 Conceptual framework

Methodology

The research used both qualitative and quantitative tools for analyzing data. In effect the research was carried out by employing data collection techniques including questionnaires and interviews as advocated by Curran and Blackburn (2001) where they averred that a single study may use qualitative and quantitative techniques and procedures as well as primary and secondary data. Data was analyzed using descriptive statistics: weighted averages, mean and standard deviation. Regressions Analysis which indicate the impact of Cash Management on Performance and Correlation analysis which shows the relationship between the variables (cash management and performance) were used. Simple linear regression analysis with the formula $y=a+bx$ where a & b are the regression coefficient, y =slope of the line and x =the intercept was then used to determine and quantify the relationship between the variables (cash management and performance of SMEs). The performance model adopted for this study was as summarized below:

$P = 0 + 1CM + e$ where: 0 , and $1cm$, are coefficients; CM - Cash Management; P - Performance indicator and e - Error variable.

Results and Discussions

The study sought to investigate if cash management affects the performance of small and medium enterprises in (SMEs) Nigeria. Table 1 therefore, presents the frequency and percentage distribution of the findings on the independent variable cash management in the two local government areas of Kaduna State Nigeria. From the table it can be seen that 65.7% of the respondents stated that their firm has cash balance policy and that the cash conversion cycle (CCC) is being monitored in their firm while 52.9% of them agree that optimally in cash management is being achieved in their firm. This finding is in consonance with the assertion of Peel and Wilson (1996) who averred that Smaller firms should adopt formal working capital management (cash inclusive) routines in order to reduce the probability of business

Closure, as well as to enhance business performance and that the managing director plays a major role in formulating formal or informal policy. It also confirms with the assertion of Howorth and Westhead (2003), that small companies focus only on working capital management where they expect to improve marginal returns and Emmanuel et al(1990), and Dent (1996) who stated that in firms of all sizes, a basic aim of management accounting routines is to control vital areas and to monitor, and hopefully improve, performance and that small firms need to particularly control and monitor their working capital because they are generally associated with a higher proportion of current assets relative to large firms. This finding also confirms the findings of Shin and Soenen (1998) whose results show that reducing the cash conversion cycle to a reasonable extent increases firms' profitability.

S/No.	Item	No		Yes		Average	Average response
		F	%	F	%		
1	Does your firm have cash balance policy?	64	34.3	122	65.7	.6569	Yes
2	Is the conversion cycle (CCC) of your firm being monitored?	64	34.3	122	65.7	.6569	Yes
3	Is optimally in cash management being achieved?	88	47.1	98	52.9	.5294	Yes

The findings on specific question which were used to collect data with regard to cash management are presented in parts 1.1 to 1.3

Does the firm have cash balance policy?

The research on this question reveals that 65.7% of SMEs as seen on table 1 stated that they have cash balance policy as a strategy that assist them to manage their cash position. This finding concurs with the views of Ross et al (2008) who averred that cash balance policy which ensures the determination of the optimal cash to hold by considering the trade-off between the opportunity cost of holding too much cash and the trading cost of holding too little. This assertion was also stressed by Atrill (2006) who averred that there is need for careful planning and monitoring of cash flows over time so as to determine the optimal cash to hold. The finding corroborate that of Waweru (2003) who established that most businesses studied had a set of minimum cash balance level which guarded them against running out of cash. This finding is however inconsistent with a finding by Kwame (2007) who established that small firms rarely pay attention to setting up a cash balance policy but simply consider cash-balance as the result of differences in cash inflows and outflows without any guidelines.

Monitoring of Cash Conversion Cycle

The research reveals that 65.7% monitor their cash conversion cycle and it therefore agrees with the assertion of Peel et al (2000) that Small firms need to particularly control and monitor their working capital because they are generally associated with a higher proportion of current assets relative to large firms, less liquidity, volatile cash flows, and a reliance on short term debt. They further stated that a popular measure of WCM is the cash conversion cycle, i.e. the time lag between the expenditure for the purchases of raw materials and the collection of sales of finished

Deloof (2000) also averred that longer cash conversion cycle increases profitability because it leads to higher sales. However, corporate profitability also decreases with cash conversion cycle, if the costs of higher investment in working capital rise faster than the benefits of holding more inventories and/or granting more trade credit to customers. It also concurred with the investigation by Shin and Soenen (1998) on the relation between a measure of the cash conversion cycle and corporate profitability whose result indicates that managers can create value for their shareholders by reducing the cash conversion cycle to a reasonable minimum.

Whether Optimality is being Achieved

On this question the study revealed that 52.9% of the respondents stated that they achieved optimum cash management. This finding agrees with the study by Kwame (2007) which established that the setting up of a cash balance policy ensures prudent cash budgeting and investment of surplus cash. It also agrees with the findings by Kotut (2003) who established that cash budgeting is useful in planning for shortage and surplus of cash and has an effect on the financial performance of the firms so also the assertion by Ross et al. (2008) that reducing the time cash is tied up in the operating cycle improves a business's profitability and market value furthers the significance of efficient cash management practices in improving business performance.

Regression Analysis for Cash Management

Regression Analysis was carried out on cash management via hypothesis as indicated below to determine whether the independent variable can be relied on in explaining the change in the dependent variable, performance of Small and Medium Enterprise (SMEs) in Nigeria.

Hypothesis

The null hypothesis that cash management does not have a significant effect on the performance of Small and Medium Enterprises in Nigeria is tested at 5% level of significant using linear regression analysis

Table 2 Table of regression analysis

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	96.895	6.167		15.711	.000
	Cash Management	23.757	9.054	.624	2.624	.039
a. Dependent Variable: Performance of SMEs, R ² = 0.389, R = 0.624						

$$Y = 96.865 + 23.757 * x$$

The above analysis shows that the value of the correlation R = 0.624, implying that there is 62.4% linear relationship between the cash management and performance of SME. The coefficient of determination (R²) of .389 or 38.9% suggests that cash management can explain up to 38.9% of the change in performance.

The p-value (0.039) of the slope of the regression model is less than 0.05 we therefore reject H_0 and conclude that working capital management (Cash) have a significant effect on the performance of Small and Medium Enterprises in Nigeria. This also means that at 5% level of significance or 95% level of confidence, cash management plays a significant role in the performance of Small and Medium Enterprises in Nigeria and that the model is statistically significant in explaining the change in the dependent variable (performance) considering that the *P-value* is less than .05 at the 95% level of confidence.

This finding is consistent with the study of Bardia (2004) who discovered a positive relationship between liquidity and profitability in the steel giant (SAIL) of India for the period 1992-2002 and is further supported by the findings of Lazaridis and Tryfonidis (2006), that profitability was found to be statistically significant with the cash conversion cycle of firms listed in the Athens Stock Exchange for the period 2001-2004 which also agrees with the earlier finding of Shin and Soenen (1998) who relate efficient management of working capital with enhanced profitability by analyzing whether the Cash Conversion Cycle had some potential impact on the profitability of a sample of firms listed on the US Stock Exchange in which they found that a reasonable reduction in the Cash Conversion Cycle could lead to an increase in the firms' Profitability.

The finding also agrees with the assertion by Ross et al. (2008) that reducing the time cash is tied up in the operating cycle improves a business's profitability and market value further the significance of efficient cash management practices in improving business performance. It however contrasts that of Afeef (2011) which shows an insignificant negative association of -0.142 between the cash conversion cycle (CCC) and the operating profit to sales (OPS). The value of R-square (0.389) implies that 38.9% of the performance of SMEs in Nigeria is determined by the working capital management (Cash). This study, therefore, established that there is need to implement sound cash management policies and monitoring systems by managers of SMEs in Nigeria so as achieve optimum results.

Summary

In this section, the summary of the findings of the study are base on the specific research objectives of the study. Finding of the study showed that 65.7% of the respondents stated that their firm has cash balance policy and that the cash conversion cycle (CCC) is being monitored in their firm while 52.9% of them agree that optimality in cash management is being achieved in their firm. It therefore, reflects the views of researchers like, Peel and Wilson (1996) who argued that Smaller firms should adopt formal working capital management (cash inclusive) routines in order to reduce the probability of business closure, as well as to enhance business performance and that the managing director plays a major role in formulating formal or informal policy. It also reflects the empirical research of scholars like Shin and Soenen (1998) whose results show that reducing the cash conversion cycle to a reasonable extent increases firms' profitability.

Data analysis of the study shows that there was 62.4% positive linear correlation between the cash management and performance of SME. This positive linear relationship between cash management and performance apart from being strong indicates that cash management was statistically significant in explaining the

change in the performance of Small and Medium Enterprises in Nigeria. The coefficient of determination (R^2) which is 38.9% also suggests that cash management can explain up to 38.9% of the change in performance and thus determining the performance of SMEs in Nigeria. In addition, p-value (0.039) of the slope of the regression model is less than 0.05 indicating that at 5% level of significance or 95% level of confidence, cash management plays a statically significant role in the performance of SMEs in Nigeria as was found by Lazaridis and Tryfonidis (2006), that profitability was found to be statistically significant with the cash conversion cycle of firms listed in the Athens Stock Exchange. The study established that there is need for SMEs to implement sound cash management policies and monitoring systems by managers of SMEs in Nigeria so as achieve optimum results.

Conclusion

Cash is a liquid asset like cheques, money orders and bank drafts that a business owns. Its management therefore involves efficient collection and disbursement of cash and any temporary investment. It can therefore be said that the objective of cash management is to meet cash disbursement as per payment schedule, meet cash collection as per schedule and minimize funds locked up as cash balance by maintaining optimum cash balance while, motives of holding cash are transaction, speculative and precautionary. Thus, maintaining optimum level of cash in an organization is called cash management. Key elements involved in this activity are cash forecasting, balances management, administration of cash receipts and disbursements, and internal control (i.e. bank reconciliation).

Organizations need to carefully plan and monitor cash flows over time so as to determine the optimal cash to hold. Some studies have established that the setting up of a cash balance policy ensures prudent cash budgeting and investment of surplus cash. Monitoring of the cash budget is vital for meeting optimum level. Longer cash conversion cycle increases profitability because it leads to higher sales. However, corporate profitability also decreases with cash conversion Cycle, if the costs of higher investment in working capital rise faster than the benefits of holding more inventories and/or granting more trade credit to customers. Efficient cash management involves the determination of the optimal cash to hold by considering the trade-off between the opportunity cost of holding too much cash and the trading cost of holding too little which together with other elements of Working Capital will lead to the growth, sustenance and prosperity of SMEs. The study therefore, concludes that implementation of sound cash management policies and monitoring systems are vital for small and medium enterprises (SMEs) growth and survival in Nigeria.

Recommendations

An observation of analysis and test carried out using statistical tool all indicate a positive results of correlation, correlation coefficient and P-value which means that there is linear correlation between cash management and performance of SMEs, change in performance can be explained by cash management and that cash is very significant or influential in the performance of SMEs. In this regard, therefore, the cash balance policies including investment of surplus, borrowing, disbursement and credit transactions instituted should continue to be monitored. For the SMEs that do not have such policies and monitoring system they should introduce them

for efficient and effective management of their cash.

In any business, if the cash flow positions remain positive then, there is no cause for alarm. What the business need do is to hold on to the existing policies and efforts but make adjustment when the need arise. If however, there exist a sign which may result to adverse effect, options such as shortening the operating cycle by increasing the efficiency of Operating Cycle's components and reduce the cash committed to them, shortening account receivable collection days but maintain the same level of sales which requires the adoption of more aggressive collection of account receivables and tighter control of inventory level, make effort to increase the profit margin through increasing price, reducing cost of sales and operating expenses and engage in short-term borrowing of cash which could be used to finance temporary increases in working capital could be considered.

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