

## **CASH MANAGEMENT AND PROFITABILITY OF CEMENT INDUSTRIES IN KENYA**

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### **Abstract**

*Kenya's building and construction sector is amongst the most rapidly growing, experiencing an average growth rate of 14.2% for the period 2006 – 2011. Currently, the industry has six manufacturers namely; East African Portland Cement Company, Bamburi Cement Ltd, Athi River Mining, Cemtech, National Cement and Pandlu Cement. Thus, cash management assumes more significance than other current assets because cash is the most important asset that a firm holds. The objective of the study is to determine the extent to which cash management can affect profitability management in cement industries in Kenya. Descriptive research design was adopted. Questionnaires were administered to the target population. The results reveal that most of cement industries in Kenya are able to collect their debts in time, they use cash balances to meet their current obligations and are able to invest surplus cash wisely to increase their income levels. It is therefore recommended that organizations put in place a set of liquidity management policies and procedures will improve profits, reduce the risk of corporate failure and Management should also strive to maintain a very low cash conversion cycle as longer cycles may have negative effect on the liquidity of the companies because cash will be tied in raw material, inventory or account receivable.*

*Keywords: Cash management, Cash conversion, Profitability, Credit policy, Cement Industry*

## INTRODUCTION

All over the world, various corporate firms highly recognized the importance of cash management since it helps in increasing profitability. If cash management is properly monitored, these firms achieve the desired motives of holding cash, which include transactional, speculative and precautionary motives (Smith 2000).

Uwugbe, Uwalomwa and Egbide (2011) carried out an investigation on cash management and corporate profitability in some selected listed manufacturing firms in Nigeria. Cash conversion cycle was used as the measure for cash management. Meanwhile, current ratio, debt ratio and sales growth were used as control variables. The study utilized secondary data while Pearson's correlation and regression analysis were used in analyzing the data for a sample of 15 listed manufacturing companies in Nigeria between 2005-2009. The study suggested that managers could create positive value for the shareholders by reducing the cash conversion cycle to a possible minimum level and also accounts receivables should be kept at an optimal level.

Cash management is essential to every business that desires to meet up with its short-term financial obligations. (Akinsulire, 2003) asserts that the success of any business venture is predicated on how the management has planned and controlled its cash flows. According to Olowe (2008), cash management is concerned with the efficient management of cash so as to achieve an optimum level of cash in the firm's working capital. Cash represents the basic input necessary to start and keep a business running. A company needs to maintain sufficient cash to keep its business running smoothly. Cash shortage will disrupt the firm's operation and can even lead to insolvency. Excessive cash will tie down unnecessarily long-term capital with a result that the return on capital employed will be low. A firm thus needs to maintain sound cash position.

Cash management is a concept that is receiving serious attention all over the world especially with the current financial situations and the state of the world economy. The concern of business owners and managers all over the world is to devise a strategy of managing their day to day operations in order to meet their obligations as they fall due and increase profitability and shareholder's wealth. Cash management, in most cases, are considered from the perspective of working capital management as most of the indices used for measuring corporate cash are a function of the components of working capital (Eljelly, 2004).

The importance of cash management as it affects corporate profitability in today's business cannot be over emphasis. The crucial part in managing working capital is required maintaining its liquidity in day-to-day operation to ensure its smooth running and meets its obligation (Eljelly, 2004). Cash plays a significant role in the successful functioning of a

business firm. A firm should ensure that it does not suffer from lack-of or excess cash to meet its short-term compulsions. A study of cash is of major importance to both the internal and the external analysts because of its close relationship with day-to-day operations of a business (Bhunia, 2010). Dilemma in cash management is to achieve desired tradeoff between cash and profitability (Raheman et al, 2007). Cash requirement of a firm depends on the peculiar nature of the firm and there is no specific rule on determining the optimal level of cash that a firm can maintain in order to ensure positive impact on its profitability.

The major reason for slow profits is wrong cash management policies or strategies. Performance of any organization or business is assessed by the way they succeed or fail in the way they intend to achieve their objectives. Cash management offers huge cash opportunities that could be released with sustainability within a relative short period of time but organizations or companies which fail in their cash management policies face a challenge of reduction in their profitability levels (Loneoux & Fazeeria, 2004). It's against this background therefore that the research intends to find out whether it is the same situation in Cement industries in Kenya that cash management affects the profitability levels in a company.

### **Cement Industry in Kenya**

Kenya's building and construction sector is amongst the most rapidly growing, experiencing an average growth rate of 14.2% for the period 2006 – 2011. Over the same period, Kenya's economic growth, as measured by the real Gross Domestic Product rate (GDP) averaged only 4.3% declining to 4.38% in 2011 from 6.33% in 2006. Currently, the industry has six manufacturers namely; East African Portland Cement Company, Bamburi Cement Ltd, Athi River Mining, Cemtech, National Cement and Pandlu Cement. According to the Central Bank's Monthly Economic Review for 2012, cement consumption increased at an average rate of 14.1% for the period 2006 – 2011, with consumption reaching 3.43 million tonnes (mT) in 2011, up from 1.57mT in 2006.

The key drivers of this growth in consumption included rising demand for housing (which triggered an upsurge in private sector funded housing developments), the commercial construction boom fuelled by increased foreign investment, and extensive government and donor-funded spending on the country's mega infrastructure projects. As a result, per capita consumption (PCC) of cement increased at an average rate of 10.7% for the period to 83.9 kilograms (Kg) in 2011 from 50.0Kg in 2006 despite relative stagnation in annual population growth.

Additional cement capacity arising from new entrants and capacity increments by existing players resulted in excessive supply, eroding the gains in cement consumption growth

by pushing down prices considerably. The 14.3% drop in the price of a 50Kg cement bag to KES 660 in June 2011 from KES 770 in December 2010 is an indication of these competitive pricing dynamics that resulted in the three companies experiencing erratic revenue growth. The effects of rising competition and high production costs (electricity and fuel) were compounded by a difficult macroeconomic environment, pushing up cost-to-income ratios significantly and dampening net income growth and the profitability margins.

### **Statement of the Problem**

Despite the fact that cash management in corporate firms involves managing money to maximise cash availability and profitability which involves synchronization of business cash receipts perfectly with cash payments bearing abroad aspect of maximising profits, corporate firms have failed to attain the desired levels of profitability (Van Horne, 2006) Cash management represents an important component of working capital management (Akinyomi & Tasié, 2011; Malik, Waseem & Kifayat, 2011).

Literature revealed that several studies on working capital management have been conducted both in the advanced market economies and developing economies (Wongthatsanekorn, 2010; Abbasi & Bosra, 2012). These studies have reported the relationship between working capital management and financial performance (Hutchison, Farris II & Anders, 2007; Akinyomi & Tasié, 2011). Since smaller firms experience difficulties in accessing external finance, they rely more strongly on internally generated funds than large firms. Given the increased competitive environment in Rwanda as a result of a good investment climate guaranteed by the government, most private companies are facing increased competition with some realizing a decline in profitability, with such trends, it is important for any company to ask and try to answer the question on how cash management could be enhanced. Many companies have negative cash flows which result in difficulties in funding business commitments such as paying suppliers, meeting payroll demands and paying taxes. Holding inadequate amount of cash or cash equivalent interrupts the normal flow of most business activities (Van Horne, 2006).

This study has answered that question by investigating the relationship between cash management and profitability of a firm using Cement Industries from the year 2009-2010.

### **Objective of the Study**

- i) To determine the effect of credit policy on profitability of Cement Industries.
- ii) To examine relationship between cash conversion cycle and profitability Cement Industries

## THEORETICAL LITERATURE

### Cash Management

Efficient cash management involves the determination of the most favourable 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 cited in Nyabwanga, et al., 2011). Cash management is fundamental to every business that desires to meet up with its short-term financial obligations. Cash management consists of taking the necessary actions to maintain adequate levels of cash to meet operational and capital requirements and to obtain the maximum yield on short-term investments. Uwuigbe, Uwalomwa and Egbide (2011) observed that cash management assumes more significance than other current assets because cash is the most important asset that a firm holds. Cash, unlike fixed assets or inventories does not produce goods for resale, notwithstanding management's considerable time is devoted to managing cash.

### Credit Policy

Credit Policy can be viewed as written guidelines that set the terms and conditions for supplying goods on credit, customer qualification criteria, procedure for making collections, and steps to be taken in case of customer delinquency. This term can also be referred to as collection policy. It is also the guidelines that spell out how to decide which customers are sold on open account, the exact payment terms, the limits set on outstanding balances and how to deal with delinquent accounts.

Businesses, in an attempt to meet up with sales target and competition, adopt various business strategies to maintain good relationship with their customers. One of such strategies is the selling of goods to its customers or rendering services to its clients on credit as such management need to have viable credit policies to enhance the collectability of the credit sales to boost company's liquidity and to reduce the risk of bad debt.

According to Lawrence (2003), the objective of managing accounts receivable is to collect receivable without losing sales from high-pressure collection techniques. Accomplishing this objective encompasses; credit selection and standard which involve the application of technique for determining which customer should receive credit. This process involve evaluating the customer's creditworthiness and comparing it to the firm's credit standard, its minimum requirements for extending credit to customers and credit monitoring which involves ongoing review of the firm's account receivable to determine whether customers are paying according to the stated credit terms. Slow payments are costly to a firm's investment in account receivable. Debtor management means the process of decisions relating to the investment in business debtors. In credit selling, it is certain that we have to pay the cost of getting money from debtors

and to take some risk of loss due to bad debts. To minimize the loss due to not receiving money from debtors is the main aim of debtor management

Economic conditions and firms credit policies are the chief influence on the level of a firm's account receivable (James, 2002). The trade-off between increase in the market share through credit sales and the collectability of the account receivable affects firm's liquidity and its eventual profitability. A firm may report large profit and still suffer liquidity problem if bulk of its transactions are in account receivable and collection policy is not effective. Credit and collection policies encompasses the quality of accounts accepted, the credit period extended, the cash discount given, certain special terms and the level of collection expenditure. In each case, the credit decision involves a trade-off between the additional profitability and the cost resulting from a change in any of these elements.

Receivable management begins with the decision of whether or not to grant credit. Where goods are sold on credit, a monitoring system is important, because without it, receivable will built up to excessive levels, cash flow (liquidity) will decline and bad debts will offset the profit on sales. Corrective action is often needed and the only way to know whether the situation is getting out of hand is to set up and then follow a good receivable control system (Eugene, 1992).

The credit policy of a company depends on the nature of its business. (Eugene, 1992), states that optimal credit policy, hence the optimal level of accounts receivable, depends on the firm's own unique operating conditions. A firm with excess capacity and low variable production cost should extend credit more liberally and carry a higher level of receivable than a firm operating at full capacity on slim profit margin. However, even though optimal credit policy vary among firms or even for a single firm over time, it is still useful to analyze the effectiveness of the firm's credit policy in an overall aggregate sense.

One major factor that plays a vital role in the management of debt is the credit policy of the business organization. An effective credit policy should increase both liquidity and profitability and reduce the risk of bad debt. A loose credit policy will increase sales and profitability at the expense of liquidity and risk bad debt while a strict credit policy in the other hand will increase liquidity and reduce the risk of bad debt but also reduce sales and profitability. So, businesses should make credit policy at optimum level where profitability and liquidity will be equal. In developing the credit policy of a business, the management of need to be very careful not to be too strict to repel both existing and potential customers and not to be loose to hold bulk of working capital in account receivable that collectability is not feasible. Debtor collections period should be shorter than the date obligation to external parties will fall due (Padachi, 2006).

### **Cash Conversion Cycle (CCC)**

Cash conversion cycle is another measure of corporate liquidity management (Moss & Stine, 1993). It measures the time lag between cash payments for purchase of inventories and collection of receivables from customers. The CCC is used as a comprehensive measure of working capital as it shows the time lag between expenditure for the purchase of raw materials and the collection of sales of finished goods (Padachi, 2006). The Day to day management of firm's short term assets and liabilities plays an important role in the success of the firm. Firms with glowing long term prospects and healthy bottom lines do not remain solvent without good liquidity management (Jose, et al., 1996).

### **Profitability**

Profitability is the primary goal of all business ventures. Without profitability the business will not survive in the long run. So measuring current and past profitability and projecting future profitability is very important. Profitability is measured with income and expenses. Income is money generated from the activities of the business. For example, if crops and livestock are produced and sold, income is generated. However, money coming into the business from activities like borrowing money does not create income. This is simply a cash transaction between the business and the lender to generate cash for operating the business or buying assets.

Profitability may be regarded as a relative term measurable in terms of profit and its relation with other elements that can directly influence the profit. Profitability is the relationship of income to some balance sheet measure which indicates the relative ability to earn income on assets. Irrespective of the fact that profitability is an important aspect of business, it may be faced with some weakness such window dressing of the financial transactions and the use of different accounting principles. (Pandy, 2005)

### **Empirical Literature**

Bhutto, Abbas, Rehman & Shah, (2011) conducted an investigation on the relationship between cash conversion cycle with firm size, working capital approaches and firm's profitability in Pakistan. Secondary data were collected from the financial statements of 157 non-financial companies comprising on 12 industrial groups listed on the Karachi Stock Exchange, Pakistan for the year 2009. The firms with negative equity and profitability were excluded from the study. Data analysis was carried out using Pearson correlation and Analysis of Variance (ANOVA). The result revealed that length of cash conversion cycle has negative relationship with sales revenue, return on equity (ROE) and financing policies of the firms and has positive relationship

with total assets, return on assets. Cash management is usually measured by cash conversion cycle (CCC) calculated by the number of days between actual cash expenditures on purchase of raw materials and actual cash receipts from the sale of products or services (Eljelly, 2004).

Eljelly (2004) carried out an empirical investigation on the relation between profitability and liquidity on a sample of joint stock companies in Saudi Arabia. Liquidity was measured by current ratio and cash gap (cash conversion cycle). Secondary data were obtained from the annual accounts of the selected companies. Using correlation and regression analysis the study found significant negative relation between the firm's profitability and its liquidity level, as measured by current ratio. This relationship was more evident in firms with high current ratios and longer cash conversion cycles. At the industry level, however, the study found that the cash conversion cycle or the cash gap was of more importance as a measure of liquidity than current ratio that affects profitability. The size variable was also found to have significant effect on profitability at the industry level.

Wongthatsanekorn (2010) conducted a study on the impact of cash-to-cash cycle time, inventory conversion period, receivable conversion period, and payable deferral period of private hospital in Thailand. Data for the study were obtained from the financial reports of listed private hospitals in Stock Exchange of Thailand across 13 private hospital populations, from 2002 to 2008. The results of the regression analysis revealed that a negative relationship existed between payable deferral period and asset turnover. Meanwhile, no significant relationship was reported between each of company size, sales growth, financial debt level, and annual gross domestic product growth.

Raheman & Nasr (2007) carried out a study on the effect of different variables of working capital management including average collection period, inventory turnover in days, average payment period, cash conversion cycle, and current ratio on the net operating profitability of Pakistani firms. Sample firms included ninety-four Pakistani firms listed on Karachi Stock Exchange for a period of 6 years from 1999-2004. From result of the regression analysis carried out, they reported that there was a negative relationship between variables of working capital management including the average collection period, inventory turnover in days, average collection period, cash conversion cycle and profitability. Besides, they also indicated that size of the firm, measured by natural logarithm of sales, and profitability had a positive relationship.

Ebben and Johnson (2011) investigated the relationship between cash conversion cycle and levels of liquidity, invested capital, and performance in small firms over time. In a sample of eight hundred and seventy-nine small U.S. manufacturing firms and eight hundred and thirty-three small U.S. retail firms, cash conversion cycle was found to be significantly related to all three of these aspects. Firms with more efficient cash conversion cycles were more liquid,

required less debt and equity financing, and had higher returns. The results also indicated that small firm owners/managers may be reactive in managing cash conversion cycle. The study highlighted the significance of cash conversion cycle as a proactive management tool for small firm owners.

## **Theoretical Framework**

### ***Clark Theory of Profitability***

Clark begins his theory with an analysis of a profit-less economy and taking into account its key futures. The profit less economy is compared with profit-generating economies and significant differences were identified to indicate the causes of profit. This method was adopted by Schumpeter and Knight. The profit-less economy is refer to as 'static state', in which all factors are constant and not subject to change, the market is assumed to be perfect; hence the absence of monopoly and entrepreneurial efforts are rewarded according to management wage levels. There is perfect mobility and flow of all economic units in a frictionless environment; in short all impediments to perfect competition are dissolved.

Any change in these factors will produce a tremor in the system but the economy will adjust and settle at new equilibriums. So changes in population and capital will result in corresponding fluctuations in wages and interest rates, the economy will absorb these changes and then settle back to a static state. Similarly, changes in techniques of production will affect output and prices; adoption of the same techniques by other producers will cause a shift in the equilibrium, but once these become ubiquitous the equilibrium will resume. The ability of the economy to endure such changes is due to the competitive equilibrium dynamics of the free market. Competition, remarks Knight, has the "tendency to eliminate profit or loss and bring the value of economic goods to equality with their cost" (Knight, 1921).

Real economies as noted by Clark will, however, not buffer such changes instantaneously as there will necessarily be a time lag. It is into this frictional delay that the entrepreneur seeks to enter and make his profit before equilibrium returns and consumes his profit. Profit is hence a transitional phenomenon: "untransformed increments of wages and interest" (Siddiqi, 1971), its temporary nature demands from the entrepreneur a dynamic endeavour to seek out or generate opportunities on which he can capitalize. This process is summed up in Clark's statement that "dynamic forces, then, account today for the existence of an income that static forces will begin to dispose of tomorrow" (Siddiqi, 1971).

Economies are, however, in constant change, the five variables mentioned by Clark are never static; population and capital are in constant growth, innovation in production and management of resources are continually researched and consumer demands are subject to

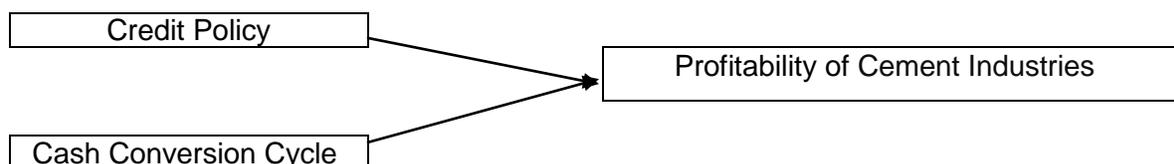
ever-changing fashions and trends. The entrepreneur thus finds permanence for as long as he can keep ahead of the changes, react before competitors and organize his efforts with sound knowledge of the market. Clark's analysis determines that the essential cause of profit is change. These changes yield a surplus in the market prior to equilibrium and they are the sought-after profits of the entrepreneur.

### **Schumpeter Theory of Profitability**

Following on the method of Clark, Schumpeter developed the 'circular flow model' in which a profit-less economy is described where perfect competition extinguishes surpluses of monopoly and friction. The analyses of the 'circular flow' economy differ in detail from the 'static state' model of Clark. So departures between an ideally competitive environment and actual economies yield the causes of profit. Schumpeter, however, is far more selective in his approach than Clark. Schumpeter identifies the single notion of innovation as paramount, so that changes based upon innovation are the cause of profit. Gradual changes in population and capital would easily be anticipated by the market and hence present no opportunity for the entrepreneur. Schumpeter goes on to describe five areas in which innovation will lead to profit generation (Siddiqi, 1971): Innovations in commodities, either by introducing new products or improving old ones; Innovations in production techniques; Finding new and fertile markets; Locating new resources and raw materials; Changes in industrial organization.

The entrepreneur is for Schumpeter an innovator, who by virtue of his innovation is able to break from the competition, acquire a transitory monopoly in which he can accrue profits until his competitors catch up, but, before they do so, he is able to move on to further innovation in new fields. Schumpeter did not see the entrepreneur's reward as a surplus value but rather as a functional reward linked to his innovative ability (Siddiqi, 1971). The impact of innovation was huge, leading to gales of creative destruction as innovations caused old inventories, ideas, technologies, skills, and equipment to become obsolete. Schumpeter saw the model of perfect competition in which different companies sold similar goods at similar prices produced through similar techniques as immaterial to progress.

Figure. 1 Conceptual Framework



## **RESEARCH METHODOLOGY**

### **Research Design**

The researcher adopted descriptive research design that necessitates the usage of facts or information already available which was then analyzed to make a critical evaluation and ensure clarity of research. This was considered appropriate because it was more concerned with describing the characteristics of a particular phenomenon like the stakeholders of cement industries by seeking to answer questions like what, when and how (Zikmund, 2000).

### **Target Population**

Target population represents all cases of people or organizations which possess certain characteristics; it is the larger group from which a sample is taken (Mugenda and Mugenda, 2003). The population of this study was drawn from employees of Cement Industries in Kenya from management, sales and accounts departments. The target population was all the employees of the three departments. This is because the employees of those departments are involved directly with customers or the cash of the company and decision making.

### **Sample Size and Selection**

The sample size is fifty employees from top, middle and lower level employees of Cement Industries and research was conducted through a census. The researcher used non probability sampling method known as purposive sampling because of the qualitative nature of the study and since employees had the expertise, knowledge and skills regarding management of the organization they also contributed optimal appropriate data on cash management and profitability both in terms of relevance and depth.

### **Data collection Instrument**

The questionnaire used was self designed for the study and comprised of four sections. The first section contains background information of the respondents. The second section compromises of the cash management policies used in Cement Industries. The third section compromises of the benefits of cash management and the fourth section compromises other factors affecting financial performance. Secondary data from textbooks, journals, and internet materials was also considered to make the research factual and complete.

### **Reliability and Validity of the Data Collection Instruments**

Reliability is a measure of the degree to which a research instrument yields consistent results or data after trials while validity is the accuracy and meaningfulness on inferences which are based

on research results (Mugenda and Mugenda, 2003). The researcher conducted a pre-test of the questionnaires through a pilot study and randomly sampled five respondents at Kenya fluorspar company Ltd. The results obtained from pilot study helped the researchers ascertain the reliability of the data collection tools and necessary amendments is done to correct any inconsistencies

## ANALYSIS AND FINDINGS

### Payment of debts in time

Table 1. Showing payments of Debts

	Pearson correlation	N	Sig.(2 tailed)
Debts are paid in time	.151	58	.257

From Table 1, the repayment of debts have  $p < 0.5$ , the significance level has p-value of 0.00, this shows that the debt repayment are significance at  $p < 0.5$  and hence the company debts are all repaid in good time to help them meet their obligations in time. The results are in agreement with findings of Eljelly (2004) study which found significant negative relation between the firm's profitability and its liquidity level, as measured by current ratio.

### Investment of Surplus Cash

Table 2. Showing how surplus cash is invested in profitable ventures

	Pearson correlation	N	Sig.(2 tailed)
Investment of Surplus cash	.148	58	.268

From Table 2, the investment of surplus cash have  $p < 0.5$ , the significance level has p-value of 0.00, this shows that surplus cash investments are significance at  $p < 0.5$  and hence the company is able to properly invest the surplus cash to enable them increase their income levels.

### Use of Cash balances

Table 3. Showing ability of the company to use cash balance to meet their current obligations

	Pearson correlation	N	Sig.(2 tailed)
Use of Cash balance	.045	58	.735

From Table 3, the use of cash balance to meet current obligations have  $p > 0.5$ , the significance level has p-value of 0.00, this shows that the use of cash balance to meet current obligations are significance at  $p > 0.5$  and hence the company uses their cash balances to meet their current obligations in good time.

Cash conversion cycle measures the time lag between cash payments for purchase of inventories and collection of receivables from customers. The findings therefore indicate that Cement Industries have a positive cash conversion cycle.

## CONCLUSION

Effective cash optimization is critical to all organizations, especially in a tough economy. Cash is the lifeblood of organizations. An organization having a proper set of liquidity management policies and procedures will improve profits, reduce the risk of corporate failure and significantly improve its chances of survival. It also provides a strategic advantage especially in difficult economic times.

Managers can create profits for their companies by handling correctly the cash conversion cycle and keeping each different component (accounts receivables, accounts payables and inventory) to an optimum level.

The scope selected may not give a true representative on cash management and profitability of cement industries in Kenya. However, the researchers strived to be as objective as possible to ensure that the results obtained reflect the key factors that impact on financial performance of all cement industries in Kenya.

## RECOMMENDATIONS

Profitability is a major factor in the going concern of a business. Managers should strive to achieve a reasonable level of profitability in order to maximize their shareholders wealth. Cash conversion cycle measures the time lag it takes company's investment in raw material to be realized. Management should strive to maintain a very low CCC. A longer CCC may have negative effect on the liquidity of the companies because cash will be tied in raw material, inventory or account receivable. Managers can create value for their shareholders by reducing the number of days of accounts receivable and inventories to a reasonable minimum. Furthermore, companies are capable of gaining sustainable competitive advantage by means of effective and efficient utilization of the resources of the organization through a careful reduction of the cash conversion cycle to its minimum. In doing so, the profitability of the firm is expected to increase. Therefore, managers can create profits for their companies by handling correctly

the cash conversion cycle and keeping each different component (accounts receivables, accounts payables and inventory) to an optimum level.

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