"The relationship between cash conversion cycle and financial characteristics of industrial sectors: an empirical study"

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The relationship between cash conversion cycle and financial characteristics of industrial sectors: an empirical study

Abstract

This study aims to investigate the relationship between cash conversion cycle and financial characteristics. A sample of Jordanian different industrial sector of 11 was selected covering the period 2005-2011 listed on the Amman Stock Exchange (ASE). Cash conversion cycle is an important measure for companies in measuring the operating cycle where the work cycle of raw materials for the purposes of manufacturing and production that ends the existence of a good or service offers customers ready. Hence, the flow of financial resources in firms is very important supply chain and presents the center of attention. The results of this study indicate there is statistically significant and positive relationship between cash conversion cycle and independent variables, such as: debt, market, productivity, liquidity and dividends indicator at different significant level 1% and 5%, and the size indicator is weak relationship with significant level at 10% and there is no significant relationship with profitability indicator and cash conversion cycle. The researchers recommend to the need for the companies to balance the internal policies of the collection, inventory and payment and update these measures depending on market conditions and competition. Also, there is sufficient flexibility to deal with customers of all types.

Keywords: cash conversion cycle, financial characteristics, industrial sector, Jordan. **JEL Classification:** M41, G14.

Introduction

Cash management decision is one of the important decisions because of the scarcity of financial resources of many companies, and for different objectives and, as we know that cash is the most liquid assets, where cash is considered an important element in the management of the company's operational process in order to achieve success. The cash management is a function of financial management and that are interested financing and investment operations as the cash component affects the performance of the companies and the competitors in markets. A lot of companies interesting to think in the following decisions: capital structure, capital budgeting and the decision of the working capital where the decision of the working capital is the important decisions that affect of the performance of companies in terms of liquidity, which is reflected on the profitability and hence the level of competition in the market as it may determine the survival or the company out of the market (Appuhami, 2008)

The liquidity management is one of the important issues in terms of financial management affect the returns and risk associated with in the short term in terms of how to manage current liabilities (Lancaster, 1999). The cash conversion cycle used in many companies as a measure of the risks and returns associated with the management of liquidity. To measure this session the time required converting cash into cash when stocks are bought and passing through the process of production, processing and then marketed and sold and catching the price in cash or cash collection futures (Keown, 2003; Appuhami, 2008). The liquidity management assets associated with liabilities, which plays an important role in the success of financial management where if the company cannot manage its position in terms of liquidity will not be able to pay its current obligations of the assets traded at the time of maturity. On the basis of this result, many companies rely on external funding, which could face problems in the adoption of safeguards against the funding or the problem of repayment in the short term as he may face a lot of companies is a problem, which is that external funding is available has easily, especially if the company is small or do not have high financial capabilities, which could lead eventually to obtain external financing at a cost of high and companies has thus succeeded in finding financing as a first step and failed to pay and determine the price because of the high cost Jose et al. (1996).

The methods of measuring and evaluating the company's liquidity are cash conversion, which measures the time it takes between the cash payment of the purchase of raw materials and inventory stage then stage of collection of accounts receivable by customers. The conventional measures of liquidity is the current ratio and liquidity ratio and these ratios used heavily in the analysis of financial statements of companies that focus on the statement of financial position is a classic, but the cash conversion cycle measure of talk in the administration of the concept of liquidity where the link between the concept of the balance sheet and income statement so as to identify Index of time and time importance of cash (Moss and Stine, 1993).

Financial management focuses on the financing of the company through capital structure decisions and capital budgeting as we mentioned earlier as that

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associated with the concept of working capital management, which was developed as a concept for measuring the liquidity of the companies in recent period (Lyroudi and Lazaridis, 2000). The assets and liabilities is the important elements in the statement of financial position and explain how to manage the company's assets to repay obligations and is also the working capital management of the important issues that link between profitability and risk, which is reflected in the company's market value (Smith, 1980).

There are many ways to measure the working capital management through the statement of financial position, which is based on the assets and liabilities as expressed through a cash conversion cycle and it calculates the number of days of actual to buy raw materials and sell with cash (Eljelly, 2004). The length of the cash conversion cycle will vary from company to company and from the sector to sector where the measure opportunities for each company based on the analysis of the performance of the company.

1. Theoretical framework

1.1. Cash conversion cycle concept. Cash conversion cycle defined by many researchers as expressed Jose et al. (1996) daily management of assets and liabilities that practiced an important role in the success of companies. Keown et al. (2003) pointed out that the cash conversion cycle is the sum of days average collection period and the inventory period minus the average repayment period for receivables payable. As expressed Eljelly (2004) as cash gap, he explain as the period of time between the actual expenses for production and actual cash received by a special sale of goods or services.

The cash conversion cycle is important measure in the management of working capital, which measures the gap between expenses and costs paid on purchases and sales to get the price (Padachi, 2006; Jordan, 2003).

1.2. The relationship between the components of cash conversion cycle. Jordan (2003) describes the cash conversion cycle in three stages, an inventory stage after the production process and here interested companies generally cost inventory as it works to reduce days of inventory for several reasons, including cost and also may be some products operations damage. The second stage is the stage of collection of accounts receivable by customers and here must be the policy balanced and long-term in terms of the speed of collection and to cover any obligation addition to re-investment of cash received and thus provide sufficient liquidity for companies to do its job operating daily. The third stage is the stage of repayment account payables to creditor. In this stage the company exposed to study the days keep company

with cash and reinvestment opportunities Other and non-payment on the due date for creditors, but that may have on companies additional cost to the benefits of the delay, which could raise the price of a product or service in addition loss the company's reputation in the market as a result of non-payment at maturity date may also affect the delay in payment of payables companies lose for early discount.

The determinants of cash conversion cycle is to determine the relationship between the liquidity that is supposed to be maintained by the companies and the degree of dealing with suppliers and customers, which may contribute to increased profitability. Where if the inventory period short, the company may be exposed to risks where it should retain a certain percentage to meet any liabilities to an emergency in goods and services, or even to exploit better opportunities to put goods on the market in the sense timing of time better than it is now, as well as whether the collection period short could lose company customers that's where a lot of customers want repayment period on the long-term receivables and finally if the company increased repayment period, it may lead to the loss of an early discount and other incentives so the company also balance in these policies (Sheffi, 2005).

1.3. Literature review. Many studies explain the relationship and effect between the cash conversion cycle or working capital management and multiple variables such as profitability, debt and other variables.

Moss and Stine (1993) explain that the size of the companies has to do with moral negative with a cash conversion cycle as companies with large size, which have conversion cash short and vice versa. The results indicate the existence of a relationship of moral and positive between cycle length transfer cash between the current ratio and liquidity ratio.

Lyroudi & Lazaridis (2000) suggests that the profitability of the company depends on working capital management where the cash conversion cycle has a significant impact with the company's liquidity.

Filbeck & Krueger (2003) examine the factors affecting the management of working capital, such as interest rates, where they found that the increase in the interest rate increases the length of the cash cycle businesses. Nobanee et al. (2004) suggests that the better performance of the company through inventory and which must be available at any time, as there must be speed to convert to cash and increasing annual inventory turnover rate. Padachi (2006) analyze trends in working capital management and its impact on business performance in industrial companies, but indicated that companies need to constant change in working capital policy, based on the process of creating money in the market and constantly provided with increase domestic investment through increased inventory and accounts receivable, which leads to low profitability. Teruel & Solano (2007) suggests that corporate profitability increased by reducing the days of collection, inventory, but in a balanced manner and therefore it affects the operating cycle length. Hutchison et al. (2007) study also indicated the presence of a significant relationship between the length of the operating cycle and returns on investment in companies.

Raheman and Nasr (2007) analyze the impact of the elements of working capital management with liquidity and profitability through a sample of companies where the results indicate the presence of a significant and negative relationship between them.

Appuhami (2008) indicates that operating cash flow is an important element and have a significant impact with working capital management. Nazir and Afza (2008) suggests that the return on assets variables, leverage, operating cycle and indicator Tobin's q have a significant impact on working capital, where this effect varies according to the type of industry in the market. Samiloglu and Demirgunes (2008) analyze the impact of working capital management on companies with profitability and the results of the study is the existence of a relationship between profitability and average collection, inventory and leverage while the variable sales growth has a significant positive relationship with profitability.

As the study of Uyar A. (2009) which included nonfinancial companies in the Istanbul market, found a significant and negative relationship between the length of the cash conversion cycle and the size of the company and its profitability.

Karaduman et al. (2010) analyze the impact of working capital management revenue in the Turkish companies listed where results indicate the need for a balance between profitability and risk, which could lead to influence financial decisions. Dong and Su (2010) found moral and negative relationship between cash conversion cycle and performance and positive relationship between the average payables and performance. They found that the managers can enhance profitability by reducing the average collection and storage, and also that the longer period to repay receivables creditor gives the company a better chance to invest in opportunities and to increase profitability.

Nobanee et al. (2011) suggest the existence of a negative and significant relationship between the cash conversion cycle and return on assets while Karaduman et al. (2011) indicate the presence of trace of the cash conversion cycle with performance through improved net working capital. Vijayakumar (2011)

indicate the presence of a strong and negative relationship between the performance and the average collection period. Johnson & Templar (2011) suggest that the current cash flows have a significant effect on corporate profitability.

2. The data and methodology

This study used a quantitative methodology analysis. The paper focuses on the industrial sample listed of Amman Stock Exchange (ASE).

2.1. Population and sample. The sample for the population is taken from 2005-20011 from the Amman Stock Exchange in Jordan for 11 industrial sectors, namely: Chemical Industries, Mining & Extraction Industries Sector, Tobacco & Cigarettes Sector, Electrical Industries, Paper & Cartoon Industries, Engineering & Construction Industries Sector, Pharmaceutical & Medical Industries Sector, Food & Beverages Sector, Printing & Packaging Sector, Glass & Ceramic Industries Sector, Textile, Leather & Clothing.

2.2. Hypotheses. This study used an empirical methodology to test the hypotheses through used cash conversion cycle as suggested by Keown et al. (2003). The following hypotheses' statement are summarized as follows:

Main hypothesis: There is no statistical significant relationship between cash conversion cycle (CCC) and financial characteristics (FC).

We test this hypothesis which divided to sub hypotheses:

H01: There is no statistical significant relationship between cash conversion cycle and (CCC) and debt index (DI).

H02: There is no statistical significant relationship between cash conversion cycle (CCC) and productivity index (PRI).

H03: There is no statistical significant relationship between cash conversion cycle (CCC) and liquidity index (LI).

H04: There is no statistical significant relationship between cash conversion cycle (CCC) and profitability index (PI).

H05: There is no statistical significant relationship between cash conversion cycle (CCC) and market index (MI).

H06: There is no statistical significant relationship between cash conversion cycle (CCC) and size index (SI).

H07: There is no statistical significant relationship between cash conversion cycle (CCC) and dividends index (DVI).

2.3. Variables and model of study. 2.3.1. Dependent variables. The dependent variables are productivity index (PRI), which is calculated as total asset turnover, profitability index (PI) as the ratio of return on assets liquidity index (LI), as the current ratio and debt index (DI) measured by debt ratio, market index (MI) measured by price to book value, size index (SI) measured by log of total assets, dividends index (DVI) measured by dividend per share (Keown et al., 2003; Nobanee et al., 2011; and Gill, Biger and Mathur, 2010.)

2.3.2. Independent variable. The independent variable is cash conversion cycle as Keown et al. (2003) indicated:

Cash Conversion Cycle = Days of Sales Outstanding + + Days of Sales in Inventory – Days of Payables Outstanding.

Days of Sales Outstanding (DSO) = Accounts receivables / $\{Sales / 365\}$.

Days of Sales in Inventory (DSI) = Inventories / {Cost of goods sold / 365}.

Days of Payables Outstanding (DPO) = Accounts payables / {Cost of goods sold / 365}.

2.3.3. Model of Study.

$$\begin{split} X_{it} &= \alpha_0 + b_1 DSO_{it} + b_2 DSI_{it} + b_3 DPO_{it} + \\ &+ b_4 CCC_{it} + \varepsilon_{it}, \end{split} \tag{1}$$

where (X_{it}) is dependent variables: $X_{it} = DI$, *PRI*, *LI*, *PI*, *MI*, *SI*, *DVI*.

3. Empirical results

Table 1 shows the descriptive analysis of the dependent variables. This table calculates the average of each dependent variable in each industrial sector within the period of 2005-2011. This table shows: total asset turnover, return on assets current ratio, debt ratio, price to book value, log of total assets, and dividend per share. The results indicated the average in each industry sector. The results shows the debt ratio is high in Electrical Industries (53.81), and low in Glass & Ceramic Industries Sector (21.57); total asset turnover is high in Tobacco & Cigarettes Sector (0.805) and low in Textile, Leather & Clothing (0.201); the current ratio is high in Glass & Ceramic Industries Sector (2.70) and low in Paper & Carton Industries (1.11), dividend per share is high in Mining & Extraction Industries Sector (0.42) and low in Glass & Ceramic Industries Sector (0.00); return on assets is high in Mining & Extraction Industries Sector (15.65) and low in Glass & Ceramic Industries Sector (-7.03); price to book value is high in Mining & Extraction Industries Sector (3.45) and low in Glass & Ceramic Industries Sector (0.55); log of total assets is high in Mining & Extraction Industries Sector (9.24) and low in Glass & Ceramic Industries Sector (7.27). This results show the Mining & Extraction Industries Sector is high in dividend per share, return on assets, price to book value and in log of assets because this sector is very important in local economy and supports all industries.

Industrial sectors	DR	TAT	CR	DPS	ROA	PTBV	LOG TA
Engineering & Construction Industries Sector	42.08	0.546	1.57	0.02	1.97	1.53	8.19
Chemical Industries	32.15	0.523	1.69	0.02	2.39	1.13	8.05
Textile, Leather & Clothing	23.32	0.201	1.58	0.07	3.19	0.88	8.229
Glass & Ceramic Industries Sector	21.57	0.403	2.70	0	-7.03	0.55	7.27
Printing & Packaging Sector	31.96	0.629	2.04	0.07	7.79	1.09	7.30
Paper & Carton Industries	44.20	0.346	1.11	0.01	-0.318	1.56	7.60
Electrical Industries	53.81	0.498	1.56	0.01	1.74	1.29	8.50
Pharmaceutical & Medical Industries Sector	31.64	0.407	2.42	0.05	4.21	1.43	8.31
Food & Beverages Sector	33.38	0.714	1.54	0.02	2.61	1.37	8.37
Tobacco & Cigarettes Sector	40.77	0.805	1.56	0.32	10.41	1.58	8.15
Mining & Extraction Industries Sector	34.31	0.741	2.15	0.42	15.65	3.45	9.24

Table 1. Descriptive analysis of average of each dependent variables from 2005-2011

Table 2 shows the average of each independent variable as descriptive analysis for days of sales outstanding, days of sales in inventory, days of payable outstanding and cash conversion cycle. The results indicated that high days of sales outstanding found in Pharmaceutical & Medical Industries Sector (P&MI) – 2.40 and low in Tobacco & Cigarettes Sector (T&C) – 1.70 and Mining & Extraction Industries Sector (M&E) – 1.70, because high cost of products in Pharmaceutical & Medical Industries so the firms sell at account receivables

and low in Tobacco & Cigarettes Sector because the sensitively this products for need in all customers and important product in Mining & Extraction Industries. In days of sales in inventory, the high days in Textile, Leather & Clothing (TL&C) – 2.49 and low in Mining & Extraction Industries Sector (M&E) – 1.79, because the Textile, Leather & Clothing sector need to storage at the attractive time and all firms bought the raw martial at discount quantity. In days of payable outstanding the high days in Paper & Carton Industries (P&C) – 2.22 and

low in Mining & Extraction Industries Sector (M&E) - 1.54. Because to enhance reinvestment the nature of this industry to recover the cost. Finally,

cash conversion cycle is high in Pharmaceutical & Medical Industries Sector (P&MI) - 2.56 and low in Paper & Cartoon Industries (P&C) - 1.73.

	E&C	CI	TL&C	G&C	P&P	P&C	EI	P&MI	F&B	T&C	M&E
DSO	1.86	2.03	1.95	1.80	1.82	2.08	1.96	2.40	1.87	1.70	1.70
DSI	2.15	2.22	2.49	2.41	2.34	2.07	2.24	2.40	1.92	2.06	1.79
DPO	1.87	1.84	1.73	1.65	1.61	2.22	1.85	2.14	1.75	1.73	1.54
CCC	2.14	2.31	2.54	2.43	2.40	1.73	2.29	2.56	2.00	1.84	1.89

Table 2. Descriptive analysis of average of each independent variables from 2005-2011

Table 3 analyzes the correlation of coefficient independent variables with the dependent variable debt ratio for the industrial sectors. The results indicated that the correlation coefficient in the variable days of sales in inventory (DSI) and days of payables outstanding (DPO) and cash conversion cycle (CCC) was 0.276, 0.338, 0.337 respectively, and the value of sig = 0.015, 0.000, 0.003 which is less than the significance level of 5%. The relationship is strong at significance of 1% of DPO and CCC and 5% of DSI where the coefficient of determination of the independent variable is 7%, 15% and 11%. These percentages show changes in the dependent variable, debt ratio.

Table 3. Correlation analysis results

	$DI_{it} = \alpha_0 + b_1 DSO_{it} + b_2 DSI_{it} + b_3 DPO_{it} + b_4 CCC_{it} + \varepsilon_{it}$					
	DSO	DSI	DPO	CCC		
R	0.003	0.276	0.388	0.337		
R ²	0.000	0.076	0.150	0.113		
Sig	0.981	0.015**	0.000***	0.003***		

Note: ***, ** and * indicate significance at 1%, 5% and 10% level, respectively.

Table 4 analyzes the correlation of coefficient independent variables with the dependent variable total asset turnover for the industrial sector. The results indicated that the correlation coefficient in the variable days of sales outstanding (DSO), days of sales in inventory (DSI), days of payables outstanding (DPO) and cash conversion cycle (CCC) was 0.542, 0.659, 0.445 and 0.379 respectively, and the value of sig = 0.000, 0.000, 0.000, 0.001 which is less than the significance level of 1%. The relationship is strong at significance level of 1% where the coefficient of determination of the independent variable is 29%, 43%, 19% and 14%. These percentages show changes in the dependent variable, total asset turnover.

Table 4. Correlation analysis results

	$PRI_{it} = \alpha_0 + b_1 DSO_{it} + b_2 DSI_{it} + b_3 DPO_{it} + b_4 CCC_{it} + \varepsilon_{it}$					
	DSO	DSI	DPO	CCC		
R	0.542	0.659	0.445	0.379		
R^2	0.294	0.434	0.198	0.144		
Sig	0.000***	0.000***	0.000***	0.001***		

Note: ***, ** and * indicate significance at 1%, 5% and 10% level, respectively.

Table 5 analyzes the correlation of coefficient independent variables with the dependent variable current ratio for the industrial sector. The results indicated that the correlation coefficient in the variable days of sales in inventory (DSI) and days of payables outstanding (DPO) and cash conversion cycle (CCC) was 0.249, 0.306, 0.362 respectively, and the value of sig = 0.029, 0.007, 0.001 which is less than the significance level of 5%. The relationship is strong at significance level of 1% of DPO and CCC and 5% of DSI where the coefficient of determination of the independent variable is 6%, 9% and 13%. These percentages show changes in the dependent variable, current ratio.

Table 5. Correlation analysis results

	$LI_{it} = \alpha_0 + b_1 DSO_{it} + b_2 DSI_{it} + b_3 DPO_{it} + b_4 CCC_{it} + \varepsilon_{it}$					
	DSO	DSI	DPO	CCC		
R	0.050	0.249	0.306	0.362		
R ²	0.002	0.062	0.093	0.131		
Sig	0.668	0.029**	0.007***	0.001***		

Note: ***, ** and * indicate significance at 1%, 5% and 10% level, respectively.

Table 6 analyzes the correlation of coefficient independent variables with the dependent variable return on assets for the industrial sector. The results indicated that the correlation coefficient in the variable days of sales outstanding (DSO), days of sales in inventory (DSI), days of payables outstanding (DPO) was 0.231, 0.386 and 0.297 respectively, and the value of sig = 0.043, 0.001, 0.009 which is less than the significance level of 5%. The relationship is strong at significance level of 1% of DSI and DPO where the coefficient of determination of the independent variable is 23%, 38% and 29%. These percentages show changes in the dependent variable, return on assets.

Table 6. Correlation analysis results

	$PI_{it} = \alpha_0 + b_1 DSO_{it} + b_2 DSI_{it} + b_3 DPO_{it} + b_4 CCC_{it} + \varepsilon_{it}$					
	DSO	DSI	DPO	CCC		
R	0.231	0.386	0.297	0.156		
R^2	0.053	0.149	0.088	0.024		
Sig	0.043**	0.001***	0.009***	0.176		

Note: Asterisks ***, ** and * indicates significance at 1%, 5% and 10% respectively.

Table 7 analyzes the correlation of coefficient independent variables with the dependent variable price to book value for the industrial sector. The results indicated that the correlation coefficient in the variable days of sales outstanding (DSO), days of sales in inventory (DSI) and cash conversion cycle (CCC), was 0.232, 0.648 and 0.463 respectively, and the value of sig = 0.042, 0.000 and 0.000 which is less than the significance level of 5%. The relationship is strong at significance level of 1% of DSI and CCC and 5% of DSO where the coefficient of determination of the independent variable is 23%, 64% and 46%. These percentages show changes in the dependent variable, price to book value.

Table 7. Correlation analysis results

	$MI_{it} = \alpha_0 + b_1 DSO_{it} + b_2 DSI_{it} + b_3 DPO_{it} + b_4 CCC_{it} + \varepsilon_{it}$					
	DSO	DSI	DPO	CCC		
R	0.232	0.648	0.131	0.463		
R^2	0.054	0.419	0.017	0.214		
Sig	0.042**	0.000***	0.255	0.000***		

Note: ***, ** and * indicate significance at 1%, 5% and 10% level, respectively.

Table 8 analyzes the correlation of coefficient independent variables with the dependent variable log of total assets (size) for the industrial sector. The results indicated that the correlation coefficient in the variables, days of sales in inventory (DSI) and cash conversion cycle (CCC), was 0.481 and 0.208 respectively, and the value of sig = 0.000, and 0.070 which is less than the significance level of 1% and 10%. The relationship is strong at significance level of 1% of DSI and 10% of CCC where the coefficient of determination of the independent variable is 23% and 4%. These percentages show changes in the dependent variable, log of total assets.

Table 8. Correlation analysis results

	$SI_{it} = \alpha_0 + b_1 DSO_{it} + b_2 DSI_{it} + b_3 DPO_{it} + b_4 CCC_{it} + \varepsilon_{it}$					
	DSO	DSI	DPO	CCC		
R	0.016	0.481	0.082	0.208		
R^2	0.000	0.231	0.007	0.043		
Sig	0.893	0.000***	0.479	0.070*		

Note: ***, ** and * indicates significance at 1%, 5% and 10% leve, respectively.

Table 9 analyzes the correlation of coefficient independent variables with the dependent variable dividend per share for the industrial sector. The results indicated that the correlation coefficient in the variable days of sales outstanding (DSO), days of sales in inventory (DSI), days of payables outstanding (DPO) and cash conversion cycle (CCC) was 0.412, 0.463, 0.343 and 0.335 respectively, and the value of sig = 0.000, 0.000, 0.002, 0.003 which is less than the significance level of 1%. The relationship is strong at significance level of 1%

where the coefficient of determination of the independent variable is 17%, 21%, 11% and 11%. These percentages show changes in the dependent variable, dividend per share.

Table 9.	Correlation	analysis	results
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	$DVI_{it} = \alpha_0 + b_1 DSO_{it} + b_2 DSI_{it} + b_3 DPO_{it} + b_4 CCC_{it}$						
	DSO	DSI	DPO	CCC			
R	0.412	0.463	0.343	0.335			
R^2	0.170	0.215	0.117	0.113			
Sig	0.000***	0.000***	0.002***	0.003***			

Note: ***, ** and * indicates significance at 1%, 5% and 10% level, respectively.

4. Discussion of the results

The cash conversion cycle is the important metrics in companies, which rely heavily on cash management policies. This policies and procedures depend on companies and vary from one company to another and depend on the company's financial situation where they show flexibility in policies through the financial strength. The procedures and policies must be consistent with the policies of competitors in the market so that the company can compete and survive.

The cash conversion cycle standard of liquidity and related customer and supplier which are working with each other to increase profitability note that all companies working on a balance between the number of days of collection, inventory and payables where the spin-day collection largely considered an indication of the complexity of the company in its dealings with customers in repayment terms many of them want to pay in installments, as well as the inventory period a little considered index is unhealthy in some goods that require inventory for a longer period than the other so as to exploit opportunities time in launching the product to the market. Finally increase in the number of days payment of accounts payable lose companies a chance discount and other benefits.

Through the results and lower index number of days of collection give companies an opportunity to reinvestment which improves cash flow for companies and increase the chance of the company to repay accounts payable obligations, allowing them greater discounts and therefore the companies adopting a policy of collecting balanced with a tendency to speed collection and customers choice good to provide, through the concept of accounts receivable. Also increase the repayment period payables arising from the companies may lead the company to a loss of discount and may lose its reputation with suppliers if delays that are not within the contract or are unanticipated arise.

The reduction of the inventory period affect the effectiveness of the company, which could reduce the costs involved and reflected positively on prices as companies reduce the inventory period to a minimum to retain the high turnover rate of inventory also keeps to meet customer requests in a timely manner.

Conclusions

The management of cash transfers in the companies is important and the responsibility of the department of finance, which is working to hold the balance between return and risk and in a form which works to matching assets with current liabilities as it tries to corporate cash management in an effective manner consistent with the company's policies with respect to receivables, inventory and payables. The results of this study indicate that there is statistically significant and positive relationship between cash conversion cycle and independent variables, namely: debt, market, productivity, liquidity and dividends, indicator at significant level of 1% and 5%; and the size indicator is in weak relationship with significant level of 10% and there is no significant relationship with profitability index and cash conversion cycle.

This study explains what happened in the global financial crisis and that was from one of the causes faltering loans and the lack of guarantees, which led to the failure and get out of the market for some banks have extended this global financial crisis to foreign countries and Arabic, which relates to these countries foreign-invested.

This effect depends on the amount sovereign wealth fund of the State in those countries affected by the global financial crisis as for Jordan is considered the financial sector is strong and has a high liquidity, which reflected positively on industrial companies by giving them credit and there are strong measures by the central bank as a regulator enforces and monitors and regulates credit operations in terms of the type and size is also working commercial banks to obtain guarantees in excess of the volume of credit have and this is a positive point with banks. So we think that the magnitude of the impact in Jordan was low in the global financial crisis and there was a relative decrease of investments in some periods, but there vogue in periods of other companies because of procedures of banks in hedge increase the granting of credit or bank or may be psychological impact. The researchers recommend to the need for the companies to balance the internal policies of the collection, inventory and payment and update these measures depending on market conditions and competition. Also, there is sufficient flexibility to deal with customers of all types.

References

- 1. Appuhami, B.A Ranjith (2008). The Impact of Firms' Capital Expenditure on Working Capital Management: An Empirical Study across Industries in Thailand, *International Management Review*, Vol. 4, No. 1.
- Afza, T. and Nazir, M.S. (2008). Working Capital Approaches and Firm's Returns in Pakistan, *Pakistan Journal of Commerce and Social Sciences*, Vol. 1, No. 1, pp. 25-36.
- 3. Dong, H.P., Su, J. (2010). The Relationship between Working Capital Management and Profitability: A Vietnam Case, *International Research Journal of Finance and Economics*, ISSN 1450-2887.
- 4. Demirgunes, K. and Samiloglu, F. (2008). The effect of working capital management on firm profitability: Evidence from Turkey, *International Journal of Applied Economics and Finance*, Vol. 2, No. 1, pp. 44-50.
- 5. Eljelly, A.M.A. (2004). Liquidity-profitability tradeoff: an empirical investigation in an emerging market, *International Journal of Commerce & Management*, Vol. 14, No. 2, pp. 48-61.
- 6. Filbeck, G. and Krueger, T.M. (2003). An Analysis of Working Capital Management Results across Industries, *Mid American Journal of Business*, Vol. 20, No. 2.
- 7. Jordan, R.W. (2003). Fundamentals of Corporate Finance, 6th ed., McGraw-Hill Companies, Boston.
- 8. Jose, M.L., Lancaster, C. and Stevens, J.L. (1996). Corporate returns and cash conversion cycles, *Journal of Economics and Finance*, Vol. 20, No. 1, pp. 33-46.
- 9. Johnson, M. and Templar, S. (2011). The relationships between supply chain and firm performance the development and testing of a unified proxy, *International Journal of Physical Distribution & Logistics Management*, 41 (2), pp. 88-103.
- Karaduman, H.A., Akbas, H.E., Ozsozgun, A., Durer, S. (2010). Effects of working capital management on profitability: the Case for selected companies in the Istanbul stock exchange (2005-2008), International Journal of Economics and Finance Studies, Vol. 2, No. 2.
- 11. Karaduman, H.A., Akbas, H.E., Caliskan, A.O. & Durer, S. (2011). The Relationship between Working Capital Management and Profitability: Evidence from an Emerging Market, *International Research Journal of Finance and Economics*, No. 62, pp. 61-67.
- 12. Keown, A.J., Martin, J.D., Petty, J.W. and Scott, D.F. (2003). *Foundations of Finance*, 4th ed., Pearson Education, New Jersey.
- 13. Lyroudi, K. & Lazaridis, J. (2000). The cash Conversion Cycle and Liquidity Analysis of The Food Industry in Greece, Works paper, SSRN Paper Collection. Available at: http://papers.ssrn.com/paper.taf?abstract_id¹/₄236175.
- 14. Lancaster, C., Stevens, J.L. and Jennings, J.A. (1999). Corporate liquidity and the significance of earnings versus cash flow: an examination of industry effects, *The Journal of Applied Business Research*, Vol. 15, No. 3, pp. 37-46.
- 15. Moss, J.D. and Stine, B. (1993). Cash conversion cycle and firm size: a study of retail firms, *Managerial Finance*, Vol. 19, No. 8, pp. 25-34.

- 16. Nobanee, H., Abdullatif, M. & Al Hajjar, M. (2011). Cash conversion cycle and firm's performance of Japanese firms, *Asian Review of Accounting*, Vol. 19, No. 2, pp. 147-156.
- 17. Nobanee, H., Abdullatif, M. and AlHajjar, M. (2004). Cash Conversion Cycle and Firm's Performance of Japanese Firms, Emeraldgroup of publishing limited.
- 18. Padachi, K. (2006). Trends in working capital management and its impact on firms' performance: an analysis of Mauritian small manufacturing firms, *International Review of Business Research Papers*, Vol. 2, No. 2, pp. 45-58.
- 19. Raheman, A. and M. Nasr (2007). Working Capital Management and Profitability Case of Pakistani Firms, *International Review of Business Research Papers*, Vol. 3, No. 2, pp. 275-29.
- 20. Sheffi, Y. (2005). *The Resilient Enterprise: Overcoming Vulnerability for Competitive Advantage*, MIT Press, Cambridge, MA.
- 21. Smith K. (1980). Profitability versus Liquidity Tradeoffs in Working Capital Management, in Readings on the Management of Working Capital, New York: St. Paul, West Publishing Company.
- 22. Teruel, P.J.G. and Solano, P.M. (2007). Effects of working capital management on SME profitability, *International journal of Managerial Finance*, Vol. 3, No. 2, pp. 164-177.
- 23. Uyar, A. (2009). The Relationship of Cash Conversion Cycle with Firm Size and Profitability: An Empirical Investigation in Turkey", *International Research Journal of Finance and Economics*, Issue 24, pp. 186-193.
- 24. Vijayakumar, D.A. (2011). Cash Conversion Cycle and Corporate Profitability An Empirical Enquiry in Indian Automobile Firms, *International Journal of Research in Commerce, IT and Management*, Vol. 1, No. 2, pp. 84-91.