

Relationship between Working Capital Management and Financial Performance (in Tehran Stock Exchange)

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ABSTRACT

This study investigated the relationship between working capital management and financial performance in Tehran Stock Exchange in the food and chemical industries. The aim of the present study as a research method is applied. For the purpose of working capital management, the Askeling theory in four dimensions, the cash conversion cycle, payment of accounts payable, accounts receivable collection period, inventory turnover period, and financial performance based on the theory of Johnson and Svynn; investment return and a defined hypothesis and four sub-hypotheses were designed.

The population of the present study, listed companies in Tehran Stock Exchange in the chemical industry and the food is the food of the 32 companies, 48 companies from the chemical industry in a 4 year period from 2007 to 2010 is selected.

In the research of software SPSS, survey and test methods Kolmogorov - Smirnov is used. The results indicated a significant relationship between working capital management and financial performance of listed companies in Tehran stock exchange in chemical and food industry.

KEYWORDS: Tehran stock exchange (TSE), stock, working capital management, financial performance, liquidity, profitability

INTRODUCTION

Working capital is the difference between a company's current assets (cash, receivables, inventories) and current liabilities (accounts payable) forms. There are often problems with insufficient working capital to 80% of time is allocated to financial managers. Lack of working capital, which is often called a liquidity shortage is the main cause of the plague, many companies are failing (Sonja Banvs, 2011).

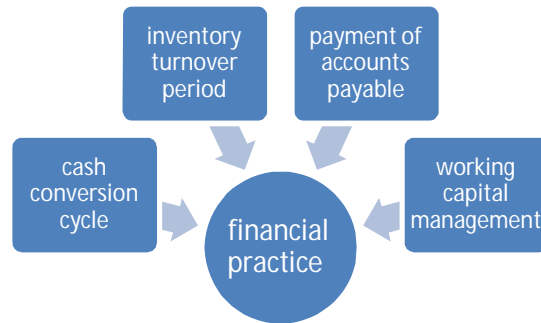
Despite the importance of working capital in organizations, organizational literature has traditionally focused on the study of long-term financial decisions, the researchers analyzed further study in the field of investment, Capital Structure, dividend evaluation organizational Similar have Resources. But the investment that companies are doing on short-term assets, and resources to work with a maturity of less than one year, they constitute the bulk of the company's balance sheet, and in this economic climate challenge international organizations to develop new ways to improve their financial performance and decreased risk search, working capital is considered as an important resource for improving financial performance (Fathi and Tavakoli, 2009).

Usually, a significant portion of corporate resources be invested in working capital, which adds to the importance of working capital management. In addition, the companies that get the funds that are spent for various purposes. For examples, companies can use to keep sufficient stock of the credit policy, the sales increase. As maintaining adequate inventories, could reduce the market risk of inventory shortages at a time of high demand, and the production schedule to avoid delays and interruptions. Or use the credit policy, the company increased sales.

On the other hand, may hold too much inventory, or giving credit to customers who make a lot of cash in working capital is blocked. Above can be used in working capital management, must be examined. The financial performance of the major topics of interest to shareholders, creditors, governments and managers are. To evaluate the financial management section covers the use of performance measurement: investors (shareholders) in order to evaluate the success of their investment managers interested in applying. Creditors to assess the extent and rate of pay credit. The most important aspect to consider is whether the investment value has been created for them or not? In other words, if it is worth investing in a good financial result increased or not?

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The conceptual model



Hypothesis

1. Between working capital management and financial practice in the food industry and chemical companies listed in Tehran Stock Exchange has a significant relationship.

1-1 .between cash conversion cycle and financial practice in the food industry and chemical companies listed in Tehran Stock Exchange has a significant relationship.

1-2. between payment of accounts payable and financial practice in the food industry and chemical companies listed in Tehran Stock Exchange has a significant relationship.

1-3. between receivables collection period and financial performance in the food and chemical companies listed in Tehran Stock Exchange has a significant relationship.

1-4. between inventory turnover period of financial practice in the food industry and chemical companies listed in Tehran Stock Exchange has a significant relationship.

BACKGROUND OF RESEARCH

Studies abroad

1. In their study of the relationship between working capital management and liquidity Hara studied. In this study, the cash conversion cycle, inventory cycle, payment of creditors, collection of receivables, current ratio, net operating income, firm size, debt ratio and the ratio of financial assets. The results of this study, the Pearson correlation and regression analysis was done, it was revealed that the cash conversion cycle and its components, including the inventory cycle, payment of creditors and the collection of profitability, the relationship there is a significant inverse. (Rahman Vnasr (2007)

2. Research conducted to evaluate the efficiency of working capital management. Net trading activity in this study as a measure of working capital management efficiency was considered. In this study of 58,985 during the years 1975 to 1994 were studied. The results, based on Jensen's alpha male and regression analysis was more indices showed a significant relationship between cash conversion cycle and its components, including the period of collection, payment of creditors, the inventory cycle and profitability is. (Shin Vsvynyn, 1998)

3. To evaluate the performance of working capital management research conducted between 1991 and 2001. In this study, the criteria for evaluating the efficiency of working capital Management Company enjoy the cash conversion cycle, cycle trips and sightseeing operating working capital was used. In this study of 427 companies were selected as samples. The results indicated that the criteria for evaluating the working capital management that are useful for assessment of working capital management, the Company also help yield analysis misstatement. (Anand Vgvpta, 2002)

Research conducted in the country

4. Effects of working capital management on the viability of listed companies in Tehran Stock Exchange by Abdullah tachycardia Nyav Nasrayzdy design research has been done in 2009. This study provides empirical evidence about the effects of working capital management on the viability of small sample sizes and large Iranian companies during the period 2001 to 2008. To this end, 400 companies were selected as sample for the study. The results show that the cash conversion cycle and return on assets has created a significant negative relationship. (Izadi Nia and tachycardia, 2008)

5. Reaction of investors to the financial performance of companies in the form of a research project carried out in 2008. The purpose of this research is to answer the question whether the decisions of investors over-react to information about the performance of both companies is whether these factors leads to overreaction. For this purpose 75 companies listed in Tehran Stock Exchange for the periods 1997 to 2006 the company was selected as a sample. For data analysis, Student's t test was used. The results obtained indicate that institutional investment managers and investors in their decisions than the individual variables of sales, profits, cash flow and return on the sensitivity of the show too. (Sinai and Rudsar2008)

6. Explore the effects of intellectual capital on the financial performance of fuzzy approach pharmaceutical companies in the form of a research project carried out in 2008. The present study explained the effects of intellectual capital on the Company's financial performance. Performance evaluation, corporate financial statements, and to measure intellectual capital, a questionnaire has been used with 96% reliability. Then extracted three independent variables in the regression model explained the effects of intellectual capital on corporate financial performance have been studied population. The results have shown that variables related to human capital and financial performance of each company to have a positive impact, while variable capital structure has no significant effect on firm performance (civilian and Bhnmyry, 2008).

METHODS AND POPULATION

In this study, the survey method was used. Survey, all companies listed in Tehran Stock Exchange are in the chemical and food industries. There are many companies in this industry because it is in this industry.

Sample:

48 chemical companies and 32 food companies.

Data analysis and hypothesis testing

At this stage, the data collected with the help of software Smirnov test of Kolmogorov (SPSS and EXCEL) can be analyzed.

Test hypotheses

In this test, Kolmogorov - Smirnov survey data is used to check the assumption of normality. To examine the main hypothesis and secondary hypotheses to test the main hypothesis, we studied and analyzed.

Hypothesis 1-1: The cash conversion cycle of financial practice in the food industry and chemical companies listed in Tehran Stock Exchange has a significant relationship.

$$ROI_i = \alpha_0 + \alpha_1 C_i + e$$

$$H_0 : \alpha_1 = 0$$

$$H_1 : \alpha_1 \neq 0$$

Correlations

		ROI	C
ROI	Pearson Correlations	1	.313**
	Sig. (2-tailed)	.	.005
	N	80	80
C	Pearson Correlations	.313**	1
	Sig. (2-tailed)	.005	.
	N	80	80

** . Correlations is significant at the 0.01 level

As can be seen the correlation coefficient between the return on investment (ROI) and cash conversion cycle (C) vs. .313%, indicating that there is a direct linear relationship between two variables is. According to the tables which $P - Value = 0.005$ are smaller than 5%, so the regression is significant. The hypothesis ($H_0 : \alpha_1 \neq 0$) is rejected and H1 is confirmed in other words In other words, it is the variability of return on investment (ROI) and cash conversion cycle (C) there is a relation.

Hypothesis 1-2: The payment of accounts payable and financial practice in the food industry and chemical companies listed on the stock exchange, there is no significant relationship.

$$ROI_i = \alpha_0 + \alpha_2 P_i + e$$

$$H_0 : \alpha_2 = 0$$

$$H_1 : \alpha_2 \neq 0$$

Correlations

		ROI	p
ROI	Pearson Correlations	1	.176
	Sig. (2-tailed)	.	.119
	N	80	80
p	Pearson Correlations	.176	1
	Sig. (2-tailed)	.119	.
	N	80	80

$$H_0 : \alpha_2 = 0$$

$$ROI_i = \alpha_0 + \alpha_2 P_i + e$$

$$H_1 : \alpha_2 \neq 0$$

As the above table show that the coefficient of correlation to determine the relationship between accounts payable payment period (P) and financial performance (ROI) for $r = .176$ is, therefore, $P - Value = 0.119$ given the significant level of 5% more. It is concluded that the hypothesis of a significant level 95% Confidence is denied. Suppose H_0 is accepted and H_1 rejected the premise of the model is not justified, then the variable accounts payable payment period (P), financial yields (ROI), there is no significant relationship.

Hypothesis 1-3: The collection of accounts receivable and financial performance in the chemical and food industries, companies listed on the stock exchange, there is no significant relationship.

$$H_0 : \alpha_3 = 0$$

$$ROI = \alpha_0 + \alpha_3 R_i + e$$

$$H_1 : \alpha_3 \neq 0$$

Correlations

		ROI	R
ROI	Pearson Correlations	1	.340
	Sig. (2-tailed)	.	.009
	N	80	80
R	Pearson Correlations	.340	1
	Sig. (2-tailed)	.	.
	N	80	80

According to the table, the correlation coefficient between the two variables 340% and is less than 5% significance level. Thus, the collection of accounts receivable, financial yields of the food industry and chemical companies listed on the stock exchange, there is no significant relationship. Also, according to the tables that is smaller than 5%, so the regression is significant. The hypothesis is rejected and H_1 is approved words. Determination coefficient equal to 141% normal probability plot of residuals face is reasonably on a straight line and plot the residual values against predicted values does not follow a specific process the assumption of constant variance is accepted. Watson camera test was performed to evaluate the correlation between the residuals, the coefficient of the number 1.682 show and show that the linear correlation between successive residuals does not exist.

After data analysis and survey results, the results indicate a significant relationship between working capital management and financial performance of listed companies in Tehran stock exchange is.

Hypothesis 1-4: The inventory cycle and fiscal performance in the food and chemical companies listed in Tehran Stock Exchange has a significant relationship.

$$H_0 : \alpha_4 = 0$$

$$ROI_i = \alpha_0 + \alpha_4 I_i + e$$

$$H_1 : \alpha_4 \neq 0$$

Correlations

		ROI	I
ROI	Pearson Correlations	1	.128
	Sig. (2-tailed)	.	.008
	N	80	80
I	Pearson Correlations	.128	1
	Sig. (2-tailed)	.008	.
	N	80	80

According to the table, the correlation coefficient between the two variables 128% and is less than 5% significance level. So the inventory cycle and fiscal performance in the food and chemical companies listed in Tehran Stock Exchange has a significant relationship. According to the tables $P - Value = 0.008$ which are smaller than 5%, so the regression is significant. The premise is denied or the other H1 is confirmed. Coefficient of determination equal to 16% is the graph of normal probability of residuals reasonably on a straight line; located plot (\hat{y}_i) of predicted values versus (e_i) values (residual) of a specific process to follow does not. Therefore, the assumption of constant variance is accepted. Watson camera test was performed to evaluate the correlation between the residuals obtained coefficient number 013/1 shows the pastoral setting of the linear correlation between successive residuals does not exist.

Hypothesis 1: The main hypothesis: between working capital management and financial practice in the food industry and chemical companies listed in Tehran Stock Exchange has a significant relationship.

$$ROI_i = \alpha_0 + \alpha_1 C_i + \alpha_2 P_i + \alpha_3 R_i + \alpha_4 I_i + e$$

$$H_0 : \alpha_1 = \alpha_2 = \alpha_3 = \alpha_4 = 0$$

$$H_1 : \alpha_1 \neq \alpha_2 \neq \alpha_3 \neq \alpha_4 \neq 0$$

Correlations

		ROI	C	P	R	I
ROI	Pearson Correlations	1	.313	.176	.340	.128
	Sig. (2-tailed)	.	.005	.119	.009	.008
	N	80	80	80	80	80
C	Pearson Correlations	.313	1	-.516	.165	.419
	Sig. (2-tailed)	.005	.	.000	.144	.000
	N	80	80	80	80	80
P	Pearson Correlations	.176	-.516	1	.430	.301
	Sig. (2-tailed)	.119	.000	.	.000	.007
	N	80	80	80	80	80
R	Pearson Correlations	.340	.165	.430	1	-.096
	Sig. (2-tailed)	.009	.144	.000	.	.396
	N	80	80	80	80	80
I	Pearson Correlations	.128	.419	.301	-.096	1
	Sig. (2-tailed)	.008	.000	.007	.396	.
	N	80	80	80	80	80

To investigate the relationship between independent variables and hypotheses 1-1 to 1-4 in the dependent variable, multiple regressions was performed. Independent variables in the regression include: the cash conversion cycle, payment of accounts payable, accounts receivable collection period and inventory turnover and the dependent variable is: return on investment (financial performance) correlation between the 314%. Indicates there is a direct relationship between the independent variables to the dependent variable. Variable regression analysis was performed to test the significant difference between the results indicate that the variables: cash conversion cycle, the collection of accounts receivable and inventory turnover have a significant relationship with financial performance.

For removal of meaningless variables and final regression backward method is used. As can be seen, the independent variables of the cash conversion cycle, the collection of accounts receivable and inventory turnover remains that there are still significant.

The regression coefficient 314%, indicating that there is a direct relationship between the independent variable, the cash conversion cycle, the collection of accounts receivable and inventory turnover dependent variable (financial performance) is. These results confirm the assumptions underlying multiple regressions were tested and results were as follows:

- 1 - P-value Kolmogorov Smirnov test (KS) is greater than 5% of the normal assumption remains to be confirmed.
- 2 - In the independent study, the amount of cameras Watson statistic (DW) 1.082, which is due to its proximity to two of the independence assumption is also confirmed.
- 3- Plots of residual versus predicted regression model are symmetric about the zero line; the homogeneity of variance assumption is also confirmed subscribers.
- 4 - The problem of linear variables, by indexes VIF, (Variance Inflation factor) was investigated. Because all of the variables, the index is less than 5%, so there was a linear relationship between these variables. Therefore, all the assumptions underlying multiple regressions are established. The above conclusions are confirmed. We must also

examine the adequacy of the regression model. The F statistic was used for the purpose of considering the P-value=48% is smaller than 5%, and then the default rule is not adequate regression model.

Limitations of the study

1. Undoubtedly, many factors can improve the financial performance of companies in the food and chemical industries Tehran Stock Exchange to be effective. In this study, the relationship between working capital management and financial performance of the chemical industry and food companies in Tehran stock exchange has been studied.
2. Financial performance based on various theories have been defined and evaluated in the present study only the investment return criteria for evaluating financial performance are used. Also, due to the different industries, the two industries have been studied within the industry and also due to lack of access to information in the 4 years 1389-1386; some of the companies that participated in the study were excluded from the list of companies.
3. A result of this study is limited to two chemical and food industry is in stock and cannot be generalized to other industries, companies outside the scope of this study are not in stock.

CONCLUSIONS

The results of the survey: The survey results and analysis of data, the results indicate a significant relationship between working capital management and financial performance of listed companies in Tehran stock exchange is. The results of testing hypotheses: According to the results of testing Hypothesis 1 and Hypotheses its sub test hypothesis 1 and hypothesis Subsidiaries, for any hypothesis except sub-hypothesis 2 at a significance level of a domain, the mean You Pearson r test the significance level of .05 is smaller than the significant relationship between working capital management and the dimensions of accounts payable payment period than after the financial performance variables. To test the effect of independent variables on the dependent variable of the regression is used to test the hypotheses. According to Table 8 and. Thus, a single positive change in working capital management, cash conversion cycle, periods receivable collection period, inventory turnover merchandise, respectively 314%, 313%, 340/0 and 128% units of improving performance chemical and food industries, financial companies listed on the Tehran Stock Exchange.

Suggestions

1. Company plans to take, which could reduce the cash conversion cycle. This reduction is due to an increase in the efficiency of assets and other measures to gauge the performance of a manager is in implementing their decisions.
2. Companies a committee to investigate the matter, and economic decisions, in order to observe the optimal form of working capital. According to the working capital (current assets minus current debts difference) is very important, especially for small companies.
3. Companies must identify the factors affecting the company's working capital and improve performance through attention to these factors and working capital to the company.
4. Necessary factors influencing corporate policies, working capital policy (the policy of aggressive, conservative and moderate) working capital management, operational and tactical choice to pursue the policies defined.
5. Companies must use risk management tools, time collection, maintenance inventory, accounts payable payment period and cash cycle control through positive effects on financial performance indicators for the company to bring.

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