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Studying the Effect of Working Capital Management on the Profitability of Companies Listed In Tehran Stock Exchange

Farshad FarhadiBezminabadi*, Seyyed Hasan Salehnezhad, Khosro FaghaniMakrani
Department of Accounting, Sari Branch, Islamic Azad University, Sari, Iran

A B S T R A C T
In this study, the effect of working capital management on the profitability of companies listed in Tehran Stock Exchange has been examined. Working capital management is the management of current assets such as cash, short-term investments, receivable accounts and inventories, and current liabilities of business units. Therefore, the aim of this study is that to examine the effects of variables of working capital management, liquidity and profitability of the companies listed in Stock Exchange. The statistic sample was consisted of 107 companies, which were studied during 2007 to 2011. The ROE variable was used as a criterion of profitability and the dependent variable. The variables of the cash flow, the flow of goods, current ratio and current investment of markets were used as independent variables and variables of financial leverage and sales growth were used as control variables. The results showed that the cash conversion cycle, company's size and flow of goods had a negative impact on profitability, however this impact on the current ratio was reversed.

Keywords: Company's Profitability, Working Capital Management, Liquidity, Company's Size, Financial Leverage And Sales Growth.

INTRODUCTION

Listed companies in Tehran Stock Exchange play a significant role in the development of the capital markets and company's economy. A major part of investments are done through financial markets (exchanges) in developed countries. The main effect of the problems of third world countries and especially our country is the lack of suitable strategy and structure for individuals' and humans' capital. The assessment of Working capital management of these companies depends on many factors that complicate the decision-making for analysts and technology experts. On the other hand, this decision-making should be done with higher precision and speed due to the rapid change and growing environment. Most previous researches and studies had emphasized on long-term financial decisions of companies' executives. In particular, researchers in the various issues often analyzed the financial structure, investment in fixed assets, operating profits and companies' share; while investment in current assets and the use of short-term financial resources are the main items of the balance sheet of companies. But the impact of these items and on the other hand, the assessment of the relationship between working capital management on assets returns and earnings per share have not been considered. This study aims to provide solutions to corporate executives that how to increase their corporate

* . Corresponding Author
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value by investment in receivable accounts and inventory or how they can control (shortening) the conversion into cash and improve companies' performance and efficiency. Companies would be unable to pay the debt and obligations are remain with irreparable losses if the working capital management is not applying well. According to Smith[1] working capital management has considerable impact on companies' risk and profitability and therefore the value of the company. In fact, the working capital management can be defined as the balance between risk and profits. Hence, there is a probability of bankruptcy for companies with mismanagement of working capital, even though there is a positive profitability. In the environment of challenging economic that the international organizations are searching new ways to grow and improve financial performance and to reduce the risk, working capital is considered as an important source to improve the financial performance. Yet, active working capital management is the basic requirement of an organization's ability to adapt in a challenging economy. The working capital management is to follow a delicate balance between maintaining liquidity to support daily operations and the maximization of short-term investment opportunities[2]. Currently, the companies' cash position is under adverse conditions and due to the inflationary situation prevailing in the country, most of Iranian companies prefer to convert cash into other assets, which makes companies unable to pay the debts and impair the reputation of the organization. However, experiences have shown that the working capital management is the main reasons for most companies that deal with financial distress and ultimately their bankruptcy.

The working capital management is one of the most important areas of financial management and managing organizations, because they directly affect the liquidity and profitability of the companies .There is a possibility of bankruptcy for companies that are exposed to improper management of working capital even though with positive profitability. The working capital management deals with current assets and liabilities .Current assets of a company are a considerable part of the total assets. Excessive levels of current assets can lead to the realization of investment with returns lower than normal. However, companies with few current assets will have some deficits and problems in the ordinary course of operations[4]. Overall, in this study we sought to examine the impact of the working capital management on profitability of companies listed in the Tehran Stock Exchange. The answer to this question seems to be very effective for required and unrequired corporate managers as well as actual, potential and institutional investors and independent auditors.

THEORETICAL FOUNDATIONS OF THE STUDY

Definition and nature of the working capital

The working capital is obtained by current liabilities minus current assets. And current assets and liabilities are defined as follows. Current assets are probable economic sources and interests in future that is controlled by a unit of exchange due to last exchanges and events that is achieved less than a fiscal period and current liabilities are economic benefits in the future (less than a fiscal period) that would probably lose due to current commitments of the exchange unit[5].

The working capital of the company includes the amounts that are invested in Current assets. If current liabilities were deducted from current assets, then the net working capital would be obtained. The working capital management is the determination of the size and composition of sources and uses of working capital so that the wealth shareholders would be increased[6].

Working capital management consists of decisions related to the required long-term financing for funding of current assets in an exchange unit. The consumption of working capital

is a part of current assets, which is more than current liabilities and it is funded through long-term debt and equity.

Each exchange units with the current profitable more than one has a positive working capital. For a certain level of current liabilities, the more the working capital in the exchange unit, the higher the current ratio would be. Long-term loan agreements often include controls on maintaining a certain amount of working capital[7].

The main objective of working capital management is desirable liquidity, which means a condition that is not facing the excess or deficiency of abnormal liquidity.

The cash management is a process that helps companies to optimize the use of cash. Wilner[8] in the definition of cash management said: Cash management is the management of company's funds in order to maximize the availability to cash and the interest income of unused funds".

Profitability

The management is responsible to owners of capital. Owners are interested in operating profit. Profitability means the return to investments acquired through the efforts of the management. The influence of company's operation for market value of its investments is important for owners of capital.

Deloof [8] analyzed a sample of Belgian companies during the period of 1992 to 1998. The result of his analysis confirmed that Belgian companies could improve their profitability by reducing the accounts receivable collection period and the reduction of inventories circulation. He also found that companies' lower profits was expected to pay their accounts.

Net profit of a business institute is a measure of the success or failure of any business institute. From the perspective of economists, profit is considered as a stimulus to economic activity. In other words, the economic benefit is the difference between total revenue and total explicit and implicit costs. Accountants often start the beginning of the definition of the accounting profit concept with two economic benefits concepts, which are: changes in the level of well-being and maximization of profits. Comprehensive profit is the change in equity of a business unit during a period which represents the preservation of capital. Another definition of profit is to test the successfulness or unsuccessfulness of activities in a business unit, which we should consider that the received cash is more (less) than the spent cash (invested) in a long term or not. This definition reflects the concept of maximization of profits[6].

Working capital and the profitability are two interrelated subjects

Sialsafdar and Chaudhry[9] conducted a study entitled "Relationship between Working Capital Management and Firm Profitability: Manufacturing Sector of Pakistan". They used the cash conversion cycle (CCC) to assess the efficiency of working capital management. They also used the return on total assets to assess the profitability. The results indicated a negative significant relationship between cash conversion cycle and its components with the return of assets. The study concluded that there was a positive relationship between firm size and return on total assets, and there was an inverse relationship between debt ratio and liquidity with return on total assets.

In a study about the relationship between working capital management and profitability of the companies listed in Tehran Stock Exchange, Yaghoobnejad et al[2] announced that there was an inverse relationship between working capital management and profitability. The results showed that if the increasing in collection of receivables, payment of debts, the inventory cycle and cash conversion cycle lead to a decrease in the company's profitable and managers can achieve the possible minimum level of a positive value for shareholders by reducing collection periods, payment of debts, the inventory cycle and the cash conversion cycle.

Liquidity and profitability are the two major subjects, which receive the particular interest of financial experts and management executives. Of course, liquidity is more important and it is said that 'if a company is not profitable, then it is sick, but if it does not have liquidity, then it is dying". In other words, it is probable that a company is not profitable but it survives but it cannot survive without liquidity. The main objective of capital management, which is one of the strategies for financial management, is to obtain desirable liquidity, which means a condition that the company is not facing surplus or deficiency of an abnormal liquidity. Liquidity represents the company's ability to short-term obligations. In other words, liquidity is the relationship between the company's cash payment that will be available in a short term and it is the cash that the company will require[10].

Study hypotheses

1. The efficiency of working capital management has a significant effect on profitability of companies listed in Tehran Stock Exchange.

2. The size of company has a significant effect on profitability of companies listed in Tehran Stock Exchange.

3. Liquidity has a significant effect on profitability of companies listed in Tehran Stock Exchange.

METHODOLOGY

It is a variable that is measured, manipulated or selected by the researcher to determine its influence or association with other variables. In the current study, the following variables were considered as independent variables:

1. Working Capital Management: it is used to calculate the cash conversion cycle variable, which is calculated as follows:

Cash conversion cycle= receivables collection + Inventory cycle - Payment of debt

Receivables collection= (average accounts receivable/ sales) * 365

Inventory cycle= (average inventory/ cost of goods sold) * 365

Payment of debt= (average payable accounts / cost of goods sold) * 365

2. Liquidity: In the present study, the flow of inventory and current ratio was used in order to measure this variable:

Current ratio= current assets/ current debt

Inventory cycle= (average inventory/ cost of goods sold) * 365

3. Size of the company: the current investment of market was used to calculate the company's size. The current investment of market is the market value of equity that is defined as follows:

Company's size = market value of equity=

= Market value per share * Number of shares in the hands of shareholders

B) The dependent variable:

It is the main variable that appears as a subject of study. Answers can be found to resolve the issue by analyzing the dependent variable. In the current study, the profitability ratios were used to calculate the dependent variable. In this study, the following variable was used as profitability ratio:

Return on equity (ROE): This variable is calculated through dividing operating profit by total equity.

C) Control variables:

They are variables that are included in the model for modifying the findings to show accurate relationships. In this study, two variables of sales growth and financial leverage were used as control variables. The definition of each of these variables is as follows:

Sales growth= ((Sales this year - sales last year)/ sales last year) * 100
Financial Leverage= assets/ equity

The population and sampling method and sample size

1- The population

The population studied in this research was the companies listed in Tehran Stock Exchange since the beginning of 2007 to 2011 for a period of 5 years. The sample population was selected with respect to the following conditions:

1. Due to increase comparability between them, the financial year end is 20 March.

2. The activities of the company are not financing or investing. The study population was consisted of all industries except the investment industry of financial and services intermediation[†]. The investment industry of financial and services intermediation, banking and financial and services institutions have been removed from the population because of their specific nature of activities and lack of information needed to calculate some variables

3. The required data are available. The information necessary to calculate the study variables and testing hypotheses are extractable from public reports for the stock.

4. They have been accepted in Tehran Stock Exchange since 2007.

Table1. Restrictions for companies please draw table left to right

frequency	restrictions description
421	The total number of companies before restrictions
357	have been accepted in Tehran Stock Exchange since 2007
317	are not among banks, insurance and investment companies, etc.
264	Their End of fiscal year is end of March.
251	Companies that have not changed their fiscal year during the study period
149	Companies that their financial information is available during the study period
149	**The total remaining companies**

Statistical sampling method and sample volume

Sampling is the selection of a number of people, events and objects of a defined community as the community representative. The number of samples was obtained using Cochran formula. According to population size (149 companies out of 421 companies listed in Tehran Stock Exchange), the statistic sample in this study was 107 companies. Compared to the estimate of the number of samples depending on the scale hypothesis variables of this study, the following formula was used. One of the usual formulas to calculate the sample size is Cochran formula.

$$n = \frac{Nt^2 p(q)}{Nd^2 + t^2 p(q)}$$

$$n = \frac{149(1.96)^2.5(.5)}{149(0.05)^2 + 1.96^2.5(.5)} = 107$$

N = statistic population
t = percentile of standard normal distribution which is equal to 1.96 in this study
P = is equal to 0.5 to achieve the maximum sample size

q = (1-p) = is equal to 0.5
d = absolute error, which is equal to 0.05.

The study methodology

This study is considered as an applied research, an empirical research and a cross-correlation research in terms of purpose, method and data collection, respectively, which is based on the combined analysis of data. Collection and classification of data was done in Excel and EVIEWS software was used for data analysis

The study designs is based on the approach of Ex-Post Facto (through previous data). On the other hand, the study is a cross-correlation one. According to the nature of the data, it is considered as a quantitative research. It is considered as applied research according to the purposes. And to evaluate the hypothesis of the study and given the nature of the data which is based on the previous quantitative data.

The **RAHAVARDENOVIN** software and archival information of Tehran Stock Exchange were used to collect data.

Data collection method: The data used in this study is divided into two categories: Information related to theoretical subjects of the study has been collected from different sources such as books, magazines, domestic and foreign articles from reputable Web sites or libraries.

Required raw information and data of companies to examine the research hypotheses were collected through **RAHAVARDENOVIN** software and when necessary through a direct reference to companies financial statements in DVDs issued by the Tehran Stock Exchange and the website (www.Rdis.ir)

RESULTS

The following table shows the descriptive statistics of study variables include mean, standard deviation, minimum and maximum:

Table 2. Descriptive statistics of variables

	Return on equity	working capital management	Current ratio	financial leverage	company's size	growth sales	Inventory cycle
mean	0.408	246.6	1.34	3.72	44669166	0.613	181.3
median	0.38	223.2	1.23	2.72	227825	0.14	154.73
maximum	10.04	1900.78	7.24	65.17	2.25E+10	113.39	962.22
minimum	-16.94	1.57	0.15	1.11	8601.6	-0.91	-147.32
standard deviation	0.998	190.4	0.8	5.17	9.73E+08	6.929	134.91
Skewness	-7.701	2.961	3.104	8.47	23.06119	16.16	2.295704
Elongation	190.7	19.4	17.59	88.5	532.8797	263.2	11.59
Jarque-bera	790722.3	6614.6	5605.9	161306.6	6306308	1533300	21.07.2
Profitability	0.00	0.00	0.00	0.00	0.00	0.00	0.00

The Jarque-bera for this statistic with a chi-square distribution with 2 degrees of freedom examined the assumption of normal distribution. If this statistic is greater than chi-square with 2 degrees of freedom, then the hypothesis H_0 is rejected. In other words, according to the table it can be seen that the significance level for Jarque-bera for study variables is more than 0.05, which reflects the normality of variables.

The Jarque-bera statistics combines two measures of skewness and elongation to test the hypothesis of normal distribution. The statistic for this test, which is asymptotically distributed as chi-square with 2 degrees of freedom, is as follows:

$$JB = \frac{S^2}{6/T} + \frac{(K-3)^2}{24/T}$$

Where S^2 is the skewness measure (sample) and K is the elongation measure (sample). The normality test is Jarque-bera test with a chi-square distribution with 2 degrees of freedom, and the null hypothesis is the normality of residuals. The normality test, this value shows the least likely validity of hypothesis H_0 for JB statistic. If it is less than 5%, then the hypothesis H_0 is rejected (At 95% level).

Introducing study model and testing hypotheses:

The original model for this study is as follows:

$$\mathbf{Profitability_{it}} = \alpha_0 + \alpha_1 \mathbf{Working\ Capital\ Management\ Efficiency_{it}} + \alpha_2 \mathbf{Firm\ Size_{it}} + \alpha_3 \mathbf{Liquidity_{it}} + \alpha_4 \mathbf{Financial\ Leverage_{it}} + \alpha_5 \mathbf{Sales\ Growth_{it}} + \varepsilon_{it}$$

According to the original model for each of the hypotheses, the desired model is considered as follows:

In this section, study hypotheses for all samples per year were analyzed using panel data model and Eviews7 software.

Testing the first hypothesis

H_0: the efficiency of working capital management does not have a significant effect on the profitability of companies listed in Tehran Stock Exchange.

H_1: the efficiency of working capital management has a significant effect on the profitability of companies listed in Tehran Stock Exchange.

In this section, the first hypothesis was tested which states that the efficiency of working capital management has a significant effect on the profitability of companies listed in Tehran Stock Exchange.

$$\mathbf{Profitability_{it}} = \alpha_0 + \alpha_1 \mathbf{Working\ Capital\ Management\ Efficiency_{it}} + \alpha_2 \mathbf{Financial\ Leverage_{it}} + \alpha_3 \mathbf{Sales\ Growth_{it}} + \varepsilon_{it}$$

Table 3. The results of estimating the first model please draw table left to right

p-value	t-statistic	SD	estimated value	coefficient	Variable
0.00	10.09	0.0496	0.501	-	Fixed
0.00	-4.81	0.016	-0.08	α_1	efficiency of working capital management
0.00	5.82	0.004	0.027	α_2	Financial Leverage
0.277	1.08	0.002	0.002	α_3	Sales growth
Durbin-Watson=1.96		F=8.11 P value= 0.00		R^2=0.69	

The results of estimating the model indicated that the variable of efficiency of working capital performance had a significant negative effect on the profitability of listed companies. The F statistic of the total model represented the significancy and well-being of the model. The H_0 was that the model is not good and H_1 was that the model is good. The above F statistics shows that H_0 is rejected and H_1 is accepted. The value of R^2 was 0.69, which suggests that 0.69 explains the changes of dependent variable to independent variables of the model. The Durbin-Watson statistics also suggested that there was no autocorrelation problem.

Testing the second hypothesis

H_0: the company's size does not have a significant effect on the profitability of companies listed in Tehran Stock Exchange.

H_1: the company's size has a significant effect on the profitability of companies listed in Tehran Stock Exchange.

In this section, the second hypothesis was tested which states that the company's size has a significant effect on the profitability of companies listed in Tehran Stock Exchange.

$$\text{Profitability}_{it} = \alpha_0 + \alpha_1 \text{Firm Size}_{it} + \alpha_2 \text{Financisl Leverage}_{it} + \alpha_3 \text{Sales Growth}_{it} + \varepsilon_{it}$$

Table 4. The results of estimating the second model

Variable	p-value	t-statistic	SD	estimated value	coefficient
Fixed	0.00	9.68	0.032	0.315	-
company's size	0.00	-3.78	0.386	- 1.46	α_1
Financial Leverage	0.001	3.26	0.006	0.022	α_2
Sales growth	0.334	0.966	0.002	0.002	α_3
Durbin-Watson=1.79			F=25.2 P value= 0.00		R^2=0.73

The results of estimating model indicated that the variable of company's size had a significant negative effect on the profitability of listed companies. One of the factors affecting the company's profitability (and hence efficiency) is company's size. The size of companies can provide opportunities to reduce business risk through diversification. A variety of products, big market, the increase of share in product market, economies of scale and low cost products are potential benefits that largely increase the company's profitability. In addition, the number of shares and corporate shareholders would able many buyers and sellers to buy and sell shares of these companies, as a result, the risk of liquidity would be reduced for shareholders of large companies and shareholders will expect lower profitability. The F statistic of the total model represented the significancy and well-being of the model. The H_0 was that the model is not good and H_1 was that the model is good. The above F statistics shows that H_0 is rejected and H_1 is accepted. The value of R^2 was 0.73, which suggests that 0.73 explains the changes of dependent variable to independent variables of the model. The Durbin-Watson statistics also suggested that there was no autocorrelation problem.

Testing the third hypothesis

H_0: the liquidity does not have a significant effect on the profitability of companies listed in Tehran Stock Exchange.

H_1: the liquidity has a significant effect on the profitability of companies listed in Tehran Stock Exchange.

In this section, the third hypothesis was tested which states that the liquidity has a significant effect on the profitability of companies listed in Tehran Stock Exchange.

$$\text{Profitability}_{it} = \alpha_0 + \alpha_1 \text{Current Ratio} + \alpha_2 \textit{Inventory turnover}_{it} + \alpha_3 \text{Financial Leverage}_{it} + \alpha_4 \text{Sales Growth}_{it} + \varepsilon_{it}$$

Table 5. The results of estimating the third model please draw table left to right

Variable	p-value	t-statistic	SD	estimated value	coefficient
Fixed	0.000	6.8	0.05	0.345	-
Current ration	0.009	2.61	0.02	0.045	α_1
inventory cycle	0.000	- 4.25	0.015	- 0.067	α_2
Financial Leverage	0.000	4.16	0.006	0.026	α_3
Sales growth	0.269	1.1	0.002	0.002	α_4
Durbin-Watson=1.72			F=28.9 P value= 0.000		R^2=0.87

The results of estimating model indicated that the variable of current ration had a significant positive effect on the profitability of listed companies. But the variable of inventory

cycle had a significant negative effect on the profitability of listed companies. The F statistic of the total model represented the significance and well-being of the model. The H_0 was that the model is not good and H_1 was that the model is good. The above F statistics shows that H_0 is rejected and H_1 is accepted. The value of R^2 was 0.87, which suggests that 0.87 explains the changes of dependent variable to independent variables of the model. The Durbin-Watson statistics also suggested that there was no autocorrelation problem.

Testing the main model:

At the end, based on the main study model, the effect of independent variables on company performance as together (aggregation) have been investigated and the results are presented below:

$$\text{Profitability}_{it} = \alpha_0 + \alpha_1 \text{Working Capital Management Efficiency}_{it} + \alpha_2 \text{Current Ratio} + \alpha_3 \textit{Inventory turnover}_{it} + \alpha_4 \text{Firm Size}_{it} + \alpha_5 \text{Financial Leverage}_{it} + \alpha_6 \text{Sales Growth}_{it} + \varepsilon_{it}$$

Table 6. The results of estimating the main model

Variable	p-value	t-statistic	SD	estimated value	coefficient
Fixed	0.000	7.39	0.051	0.37	-
efficiency of working capital management	0.000	- 3.36	0.0246	- 0.082	α_1
Company's size	0.06	- 1.884	0.544	- 1.024	α_2
Current ration	0.001	3.15	0.019	0.062	α_3
inventory cycle	0.439	0.773	0.029	0.023	α_4
Financial Leverage	0.000	5.26	0.005	0.026	α_5
Sales growth	0.38	0.87	0.002	0.002	α_6
Durbin-Watson= 1.53			F=31.2 P value= 0.000		R^2= 0.75

The results of estimating the main model indicated that the variables of working capital management efficiency and company's size had a significant negative effect on profitability and the variable of current ration and inventory cycle had a significant positive effect on the profitability of listed companies

The F statistic of the total model represented the significance and well-being of the model. The H_0 was that the model is not good and H_1 was that the model is good. The above F statistics shows that H_0 is rejected and H_1 is accepted. The value of R^2 was 0.75, which suggests that 0.75 explains the changes of dependent variable to independent variables of the model. The Durbin-Watson statistics also suggested that there was no autocorrelation problem.

CONCLUSION

According to the results presented above, it can be briefly stated that among the independent variables, the working capital management, company's size and inventory cycle had a negative effect on return on equity and only the current ratio had a positive effect. Meanwhile, among the three examined hypotheses, the third hypothesis had the greatest R^2 value. This means that regardless of the type of impact, among the independent variables, the effect of current ratio and inventory cycle of goods was higher than the other two variables (working capital management and the size of the company). In addition, according to the Durbin-Watson, it can be argued that the first hypothesis had the lowest level of autocorrelation

in disruption terms than the two other ones, although the existence of correlation in disruption terms had been rejected for the three hypotheses and the lack of existence had been proven.

REFERENCES

1. Smith, k (1980). Profitability Versus Liquidity Trade offsin Capital Management, in Reading on the Management of the Working Capital, Ed. k. v. S t. Paul, West Publishing Company ,pp549-562.
2. Yaghoobnejad A., Vakilifard H., Babaee, R (2010). The Relationship Between Working Capital, Management And Profitability Of Listed Companies In Tehran's Stock Exchang, Financial Engineering And Securities Management (Portfolio Management).1(2).Pp 117- 138.
3. Rahnama Roodposhti, F. (2011). Examining And Clearing Working Capital Management Strategies In Firms Adapted In Stock Exchange Of Tehran, Accountants & Auditors Association.
4. Raheman and Naser. (2007). working capital management and profitability case of Pakistan firms. international review of business research paper , vol.3, pp. 279-300.
5. Shabahang, R. (2004). Theory of account, Audit organization press. vol1, 157. 2th press.
6. Raymond P. N. (2000). Fundamentals of Managerial Finance (Vol. 1). Samt press.
7. Wilner, B. S. (2000). The Exploitation of Relation in Financial Distress: The Case of Trade Credit, Vol. 55, pp. 153-178.
8. Deloof .M. (2003). Does Working Capital Management Affect Profitability of Belgian Firms? Journal of Business, Finance and Accounting, Vol.30, pp. 573-587.
9. Sialsafdar, M., Chaudhry, A. (2012). Relationship between working capital management and firm profitability: manufacturing sector of Pakistan"pp.1-16.
10. Shin, H. H., Soenen, L. (1998). Efficiency of Working Capital and Corporate Profitability, Finance Practice and Education, Vol8, pp.37-45.
11. Garcia- Teruel, P. J., Solano, P. J. (2007). Effects of Working Capital Management on SME Profitability, International Journal of Managerial Finance.Vol3, No2.pp164-177.