

# Investigating the Relationship between Cash Conversion Cycle with economic Evaluation Criteria and Stock Returns in the Companies Accepted in the Tehran Stock Exchange

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## ARTICLE INFO

## ABSTRACT

The purpose of this research has been to investigate the relationship between the cash conversion cycle with the economic evaluation criteria and the stock returns. The spatial domain of this research has been the companies accepted in the Tehran Stock Exchange and the time domain has been between the years from 2010 to 2016. This research was post-event and applied type, and since the research data has been collected without researcher's involvement, it is a semi-experimental research type and it has been a correlation type with regard to the analysis of relationships between variables.

In this research, based on the systematic elimination method, 99 companies were selected as statistical samples and in order to collect data, the document mining in the context of financial reports provided by companies accepted in the Tehran Stock Exchange has been used.

The results of this research indicate that there is a significant difference between the cash conversion cycle and the economic evaluation criteria, which include the economic value added, refined economic value added, market value added, and also stock returns.

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**KEYWORDS:** *Cash Conversion Cycle, Economic Evaluation Criteria, Stock Returns, Stock Exchange.*

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## 1. Introduction

The main factor that each investor puts into specific consideration in his/her decision makings is the rate of return. It means that the investors are looking for the most productive opportunities to

invest their surplus resources in the capital markets. On the other hand, in the field of stock returns forecasting, which is one of the topics of interest among investors and financial researchers, so far, many efforts have been made to provide a

model that can predict the stock returns in a reliable manner. Rahnama Roudposhti (2007): the market value added reflects the investor's assessment of the company, and maximizing it is the goal of any company seeking to maximize shareholders' wealth, because with the growth of stock price and the increase of its market value practically and realistically, the wealth of the shareholders of the company is increased. Therefore, the value added changes of each company's market indicate a change in the wealth of its shareholders. Talebnia and Shojaa (2011): the market value added, which is a wealth-generating indicator for the shareholder's class, is influenced by the judgment about the economic value added. Theoretically, the value of a company on a given date is a function of capital market expectations to the economic value added of the coming years. Market value added is created when the market value of business units is greater than the capital implemented in it. The higher the market value added is; it means that the capital market expects more economic value added to be created in the future. Investors by establishing a communication bridge between the stock returns and other accounting information (including cash flow information) can partly predict the stock returns, provided that the accounting information affects the price, or in other words, the market in terms of efficiency is located at the strong level. Future stock returns may depend on different factors. The tendency to use cash-based accounting information has been increasing in recent decades. In many empirical researches that have been performed over these years, the relationship between cash accounting variables and the stock returns of companies has been investigated variously. The market value added, which is a wealth-generating indicator for the shareholder's class, is influenced by the judgment about the economic value added. Theoretically, the value of a company on a given date is a function of capital market expectations to

the economic value added of the coming years. The purpose of this research is to investigate and study the economic evaluation criteria as criteria resulted from accounting data, in a way to investigate whether these criteria are capable of determining and measuring the increase or decrease of wealth created in the business units or not; if such a capability exists, how much is its ratio compared to the stock returns?

## 2. Theoretical Bases and Research Overview

Talebnia and Shojaa (2011): one of the most useful performance evaluation criteria and also the prediction of the value of companies' stock is the economic value added criterion. The company's management intends to maximize shareholders' wealth based on the economic value added. Unfortunately, many companies estimate the final benefit of their products, regardless of the opportunity cost of their capital. Maximizing offers not only a solution to this problem, but also always creates incentives in managers for maximizing shareholders' wealth. The economic value added is also closely related to the current net value. The economic value added shows that the value of the company depends on the management performance directly. The economic value added is related to the market value of the company, because the value of stock is a function of the economic value added of the upcoming predictions. Finally, economic value added as a performance measurement criterion is less subject to accounting distortions. Fernandez (2002) conducted a research to investigate the relationship between the economic value added and the wealth created for shareholders. His sample included 269 companies. He concluded that the correlation between the economic value added and the wealth created for the shareholders was only 17.66 percent, and 60 companies with negative economic value had positive created wealth and 64 companies with positive economic value added, had negative created wealth. Finally,

he concluded that the economic value added is not able to measure the wealth created for shareholders. Ramana (2005), by using analysis and regression, tested the relationship between the economic value added and the market value added in Indian companies, and compared it with the common accounting criteria (net operating profit after tax deduction, profit before interest and tax, etc.). The result of this investigation indicates that the economic value added is not superior to the conventional accounting criteria. Kyriazis and Anastassis (2007) by investigating the relationship between market value added and value added in the Greek companies, analyzed data related to 121 companies during a seven-year period. The results indicated the rejection of Stewarts' claim indicating that there is a relationship between the market value added and the economic value added with the stock returns. They introduced the reason of the lack of justifying relation as how to calculate the weighted average cost of capital, the adjustments made and the status of the Greek stock exchange. The studies related to the economic value-added spread ability in explaining stock returns has been performed only at a minimum level. The study of the economic value added spread has been done only by De Wet and Du Toit(2008). In this small study, a sample of 83 companies, listed on the Johannesburg Stock Exchange, was conducted. The study showed that the economic value added spread has a great superiority in explaining the stocks returns. Maditinos et al. (2009) investigated the criteria of economic value added and market value added and the profit of each stock and the rate of return on equity in relation to the stock returns of companies, and thus stated that the economic value added and the profit of each stock could be explained further and the better result is obtained if both factors are entered into the model. Keller (2012) studied about the performance evaluation of companies by using value added, and concluded that in order to offer information about

the performance of companies, there is a need for reforms in the method of providing accounting information, and one of the reasons that can be mentioned for the destruction of large companies such as Enron can be the offering of information that does not reflect the true value of company. Keller expresses the use of value added as a first step to remove this problem.

### 3. Research Methodology

The intended statistical population in this research is all companies accepted in the Tehran Stock Exchange. The reason for choosing companies accepted in the stock exchange is that the accessibility to the financial information of these companies is more, and also due to the regulations and standards of the Tehran Stock Exchange, the financial reports data of these companies is more homogeneous. In this research, all available data are used to select a sample. First, all companies that could take part in the sampling of company were selected, then among all of the existing companies the companies that did not have any of the following conditions were excluded and eventually all the remaining companies have been selected for the test.

- 1) The financial year of the company should end on the end of March each year.
- 2) They have not changed the financial year during the research time period.
- 3) They have been actively involved in the stock exchange during the research time period.
- 4) Intended information should be available to extract data.
- 5) The company should not be investment or financial intermediary company.
- 6) The activities of companies under investigation should not be seasonal.

The research time period is also the period from 2010 to 2016.

Considering all of the above mentioned conditions, 99 companies were selected as the statistical sample, and in order to collect data,

document mining in the context of financial reports submitted by the companies accepted in the Tehran Stock Exchange has been used. The present research is a post-event applied research in respect of type, in which actual information and various statistical methods are used to reject or confirm hypotheses. In this research, a survey-comparative method has been used, and for collecting the required data, the theoretical issues and financial information based on the audited financial statements of the companies under investigation and the library method (stock exchange archive) have been exploited; then the intended data was prepared through collecting the data of selected companies by referring to the financial statements, explanatory notes and by using Denasahm and Tadbirpardaz software, as well as the compact discs of the financial information of the stock exchange companies. Eviews7 software has been used to make all estimates.

#### 4. Research Variables and How to Measure Them

The variables of this research are classified into three groups.

##### 4.1 Dependent Variables

Annual stock return, economic value added, refined economic value added, market value added of company  $i$  in the year  $t$ .

##### 4.2. Operational Definition of Dependent Variables

###### 4-2-1- Annual Stock Returns

If an investor invests in securities, he/she expects his/her stocks price to increase. In fact, due to the stock price increase, he/she expects more returns. Stock returns is a set of advantages that are allocated to ordinary stocks during a period, including the difference in stock price at the beginning and at the end of intended period, as well as other advantages such as dividends and advantages obtained from capital increase (Dastgir

and Khodabandeh, 2003); which the following formula has been used to measure it.

1)

$$R = \frac{(1 + \alpha_1 + \alpha_2)P_1 + DPS - P_0 - \alpha_1(\text{par value})}{P_0 + \alpha_1(\text{par value})}$$

That in the aforementioned equation,  $\alpha^1$  is the percentage of capital increase from the place of demands and cash balances,  $\alpha^2$  is the percentage of capital increase from the place of savings, and  $\alpha^1(\text{par value})$  is the percentage of increase in capital from the place of demands and cash balances to the nominal value of each stock.

##### 4.2.2. Economic Value Added

Financial economists call economic value added, economic profit or residual profit. The economic value added is the criterion used for overall monitoring in the area of value creation in the company. Economic value added is not a strategy; it is a method that measures the results. As it was mentioned in the previous sections, for the calculation of economic value added, which is the dependent variable in this research, we need three main variables: a) operating profit after tax deduction; b) corporate return rate; c) cost rate of capital.

In the following we describe how to calculate each one of these factors intended for calculating and obtaining economic value added as well as the final calculation of economic value added:

Operating profit after tax deduction: This amount is obtained through the following equation: 1) Net profit (accounting) 2) Privileged dividends 3) Interest cost 4) Tax saving of interest cost 5) Increase in capital equivalents.

Capital cost: The capital cost of the determined years of company consists of two components: the cost of interest-bearing debts and the cost of corporate equity; the cost of capital employed in the company is obtained by the weighted average of these two components, that the weight of each one of these components is also composed of the

market value of each one of them. The mentioned equation is as follows (Talebnia and Shojaa, 2011):

2)

$$WACC = \left\{ \frac{D}{D+E} \right\} kd + \left\{ \frac{E}{D+E} \right\} ke$$

WACC: Weighted average cost of capital, *D*: Market value of interest-bearing debts, *E*: Equity market value, *kd*: Cost of interest-bearing debts, *ke*: Cost rate of equity

The cost of interest-bearing debts of each year has been considered equal to the average interest rates expected on the facilities announced by the Central Bank of the Islamic Republic of Iran for the industry and mining sector of the same year. The cost rate of equity for each year of the

company has also been calculated and determined through the capital assets pricing model. According to this model, the company's capital cost is obtained by the following equation.

$$3) E(ri) = rf + \beta (E(rm) - rf)$$

*E(ri)*: Expected stock returns, *Rf*: Risk-free return rate,  $\beta$ : Systematic risk factor

*E(rm)*: Market returns

Each one of the factors of the above equation, that is risk-free returns, systematic factor, and market returns have been determined and calculated as follows:

The risk-free return rate is considered to be the interest rate of public participation bonds; this rate for different years is in accordance with table 2:

**Table 2:** Interest Rate of Participation Bonds in the Years 2010- 2015

Year	2010	2011	2012	2013	2014	2015	2016
Interest rate of public participation bonds	12	11	15	15	21	20	20

Source: Central Bank of the Islamic Republic of Iran

$\beta$  also indicates the sensitivity ratio of the company's return to the market returns obtained from the following equation (Talebnia and Shojaa, 2011):

4)

$$\beta = \frac{cov(ri, rm)}{var(rm)}$$

*ri*: Stock returns, *rm*: Market return

The quarterly information of Tehran Stock Exchange has been used to calculate beta. For this purpose, the stock price information, cash profit per stock, bonus stock and the priority right to buy stock of the companies under study to calculate stock returns rate and the total index of stock market to calculate the stock market rate at the end of each quarter for the years 2010-2015 were extracted from Rahavard Novin software and after calculating the stock returns rate and market returns rate by using the above equation, the beta coefficient of each year of the company was calculated.

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The stock return rate (*Rj*) of companies has been calculated by using the following equation (Talebnia and Shojaa, 2011):

$$5) Rj = \frac{(pt + pt - 1) + D + S + W}{pt - 1}$$

*Rj*: Stock return rate of company; *j*, *pt*: Stock price at the end of the quarter; *t*, *Pt-1*: Stock price at the beginning of the quarter *t*; *D*: Dividend per stock; *S*: Stock premium of each share; *W*: Priority right to buy every stock. To calculate the market return, the ratio of change in the total index at the end of each quarter period has been investigated and obtained through the following equation (Talebnia and Shojaa, 2011):

6)

$$rm = \frac{It - It-1}{It-1}$$

*It*: is total market indicator at the end of the quarterly period; *t*, *It-1*: is total market index at

the beginning of the quarter; and  $t$ ,  $E(rm)$  is the average rate of return on investment in the market portfolio. Considering that the intended market portfolio is the Tehran Stock Market portfolio, the return changes in the past are used and changes in the Tehran Stock Exchange index are used to represent the market returns that has been calculated as follows (Talebna and Shojaa, 2011):

$$E(rm) = \sqrt{\frac{I_t}{I_0}} - 1$$

$E(rm)$ : is the average rate of return on investment in the market portfolio;  $I_t$ : is total market index at the end of the research period;  $I_0$ : is total market index at the beginning of the research period; and  $X$ : is the number of the years of research. Once the above factors were determined and calculated, the capital cost of each year of the company is calculated through the capital asset pricing model. Capital employed: The capital employed in the company has been obtained by collecting the book value of the company's equity, its interested debts, and the balance of capital equivalents at the beginning of each financial year. Regarding the interested debts, it should also be said that for calculating the capital employed in the company, the facilities received by the companies have been added to their long-term debts; in this process, the interested debts, regardless of their short-term or long-term, have been determined.

Then the economic value added is calculated as follows:

8)

$$EVA = NOPAT - (WACC) \times Capital$$

In the aforementioned equation ( $NOPAT$ ) is net operational profit after tax, ( $WACC$ ) is weighted average cost of capital ( $Capital$ ) is the capital of company (Talebna and Shojaa, 2011).

The refined economic value added is measured as follows:

$$9) \quad REVA = (r - WACC) * M Capital$$

In the aforementioned equation ( $r$ ) is the company's stock returns rate and  $M Capital$  is the

same as the market value of the company's assets, which are obtained as follows:

Current debts without interest - the book value of debts + the value of privileged stocks and ordinary stocks =  $M Capital$

#### 4-2-3- Market Value Added

Market value added is obtained from the difference between the book value of equity and the stock market value (Ahmadpour and Yahyazadehfar, 2004).

#### 4.3 Independent Variable

Cash conversion cycle of the company  $i$  in year  $t$ .

##### 4.3.1 Operational Definition of the Independent Variable:

The following approaches have been used to calculate the Cash Conversion Cycle:

$$11) \quad CCC = RCP + ICP - PDP$$

$CCC$ : Cash Conversion Cycle,  $RCP$ : Receivable Collection Period,  $ICP$ : Inventory Cycle Period,  $PDP$ : Payable Deferral Period.

#### 4-4. Control Variable

Company size: A relative variable that shows the size and magnitude of the company. This variable is measured based on the natural logarithm of each company's sale per year.

The following models have been used to test the hypotheses (Talebna and Shojaa, 2011):

$$EVA_t = \alpha_0 + \beta_1 CCC_t + \varepsilon$$

$$REVA_t = \alpha_0 + \beta_2 CCC_t + \varepsilon$$

$$MVA_t = \alpha_0 + \beta_3 CCC_t + \varepsilon$$

$$Bt = \alpha_0 + \beta_4 CCC_t + \beta_5 Size_t + \varepsilon$$

#### 5. Research Hypotheses

Considering the theoretical foundations of research and the research objectives, the hypotheses of this research are compiled as follows. First Hypothesis: There is a significant relationship between the cash conversion cycle and the economic value added. Second Hypothesis: There is a significant relationship between the cash conversion cycle and the refined

economic value added. Third Hypothesis: There is a significant relationship between the cash conversion cycle and the market value added. Fourth Hypothesis: There is a significant

relationship between the cash conversion cycle and the stock returns.

## 6. Research Results

### 6.1 Descriptive Statistics

The descriptive statistics of the research variables are presented in Table 1.

**Table 1:** Descriptive statistics of research

Variable	Median	Mean	Standard Deviation
Cash conversion cycle	162	178	12.3
Economic value added	0.511	0.468	0.702
Refined economic value added	0.428	0.526	0.321
Market value added	1623518	1532174	1412015
Stock returns	0.169	0.415	0.169

This table shows that the average economic value added is close to the refined economic value added and stock returns, but their standard deviations have significant difference with each other. The table also shows that, with respect to

the mean stock returns, the mean of cash conversion cycle is significantly higher.

### 6.2 Testing the Hypothesis

In this section, we will estimate the heterogeneity of variance that is due to the different characteristics of the companies.

**Table 2:** The Results of Arch LM Inconsistency Test of Research Model

Description	Statistics Amount	Probability
F-statistic	0.316225	0.046
Obs*R-squared	1.162117	0.046

\* Error level 5 percent

According to table 2, the *F* test statistic is not significant at 5percent level, so the assumption of the homogeneity of variance is confirmed and the

heterogeneity of the variance of disrupted sentences is rejected. The estimation method of the present model is based on the (compound) panel data.

**Table 3:** Lymer Test

Description	Statistics Amount	Degree of Freedom	Probability
Cross-section F	1.081447	98	*0.017
Cross-section Chi-square	192.315173	98	*0.016

\* Error level 5 percent

**Table 4:**Husmon Test

Description	Statistics Amount	Degree of Freedom	Probability
Cross-section F	7.815114	29	*0.032

\* Error level 5 percent

According to tables 3 and 4, the results of the two performed tests (in both tests: F and Husmon) show that the obtained probability is less than

5percent, and therefore the fixed effects method should be used in the corresponding regression model. In this research, Lynn and Levine test has been used.

**Table 5** Collective Unit Root Test on Variables by Lane and Levine Method

Variables	Statistics	Probability
Cash conversion cycle	5.157	*0.0016
Economic value added	3.269	*0.0037
Refined economic value added	-4.185	*0.0023
Market value added	-5.619	*0.0008
Stock returns	2.655	*0.0047

\*Error level 5 percent

According to tables 4 and 5, investigating the values of calculated statistics and their probability of acceptance, shows that the zero hypothesis indicating the dynamicity for all variables is rejected and all variables under study are at static level.

### 6.2.1 Testing the First Hypothesis

$H_0$ : There is not a significant relationship between the cash conversion cycleand the economic value added.

$H_1$ : There is a significant relationship between the cash conversion cycleand the economic value added.

**Table 6:** Regression Test of the First Hypothesis

Variable	Estimate Coefficient	Estimate Deviation	t Statistics	Significance Level
Constant	0.327	0.067	4.881	*0.036
Cash conversion cycle	-0.528	0.102	-5.167	*0.012

\*Error level 5 percent

**Table 7:**Ability to Explain the Significance of the Whole Model

R2		Durbin-Watson	ANOVA	
Coefficient of Determination	Refined Coefficient of Determination		F statistics	Significance Level
0.357	0.342	2.009	28.315	**0.000

\*\* Error level 1 percent

According to table 7, the estimate coefficient of the cash conversion cycle variable on the economic value added of companies (-0.528) indicates the negative and reverse effect of the

cash conversion cycle variable on the economic value added of companies. On the other hand, considering the significant level of t statistics, the cash conversion cycle variable on the economic



value added of companies (0.012), since it is lower than 5percent error level, the  $H_0$  hypothesis can be rejected with 95percent confidence, and it can be stated that there is a significant relationship between the cash conversion cycle and the economic value added. The experimental model of research is as follows:

$$EVA_t = 0/327 - 0.528 CCC_t + \varepsilon$$

**Table 8:**Regression Test of the Second Hypothesis

Variable	Estimate Coefficient	Estimate Deviation	t Statistics	Significance Level
Constant	0.629	0.202	3.113	*0.032
Cash Conversion Cycle	-0.357	0.074	-4.824	*0.018

\*Error level 5 percent

**Table 9:**Ability to Explain the Significance of the Whole Model

R2		Durbin-Watson	ANOVA	
Coefficient of Determination	Refined Coefficient of Determination		F Statistics	Significance Level
0.284	0.275	2.302	31.619	**0.000

\*\* Error level 1 percent

According to table 9, the estimate coefficient of the cash conversion cycle variable on the refined economic value added of companies (-0.357) indicates the negative and reverse effect of the cash conversion cycle variable on the refined economic value added of companies. On the other hand, considering the significant level of t statistics, the cash conversion cycle variable on the refined economic value added of companies (0.018), since it is lower than 5percent error level, the  $H_0$  hypothesis can be rejected with 95percent confidence, and it can be stated that there is a

### 6.2.2 Testing the Second Hypothesis

$H_0$ : There is not a significant relationship between the cash conversion cycle and the refined economic value added.

$H_1$ : There is a significant relationship between the cash conversion cycle and the refined economic value added.

significant relationship between the cash conversion cycle and the refined economic value added. The experimental model of research is as follows:

$$REVA_t = 0/629 - 0/357 CCC_t + \varepsilon$$

### 6.2.3 Testing the Third Hypothesis

$H_0$ : There is not a significant relationship between the cash conversion cycle and the market value added.

$H_1$ : There is a significant relationship between the cash conversion cycle and the market value added

**Table 10 - Regression Test of the Third Hypothesis**

Variable	Estimate Coefficient	Estimate Deviation	t Statistics	Significance Level
Constant	0.516	0.103	5.009	*0.012
Cash Conversion Cycle	-0.487	0.095	-5.126	*0.005

\* Error level 5 percent

**Table 11:** Ability to Explain the Significance of the Whole Model

R2		Durbin-Watson	ANOVA	
Coefficient of Determination	Refined Coefficient of Determination		F Statistics	Significance Level
0.495	0.445	1.692	25.174	**0.000

\*\* Error level 1 percent

According to table 11, the estimate coefficient of the cash conversion cycle variable on the market value added of companies (-0.487) indicates the negative and reverse effect of the cash conversion cycle variable on the market value added of companies. On the other hand, considering the significant level of t statistics, the cash conversion cycle variable on the market value added of companies (0.005), since it is lower than 5percent error level, the  $H_0$  hypothesis can be rejected with

95percent confidence, and it can be stated that there is a significant relationship between the cash conversion cycle and the market value added. The experimental model of research is as follows:

$$MVA_t = 0/516 - 0/487 CCC_t + \varepsilon$$

### 6.2.3 Testing the Fourth Hypothesis

$H_0$ : There is not a significant relationship between the cash conversion cycle and the stock returns.

$H_1$ : There is a significant relationship between the cash conversion cycle and the stock returns

**Table 12 -** Regression Test of the Fourth Hypothesis

Variable	Estimate Coefficient	Estimate Deviation	t Statistics	Significance Level
Constant	0.284	0.047	6.042	*0.000
Cash Conversion Cycle	-0.629	0.203	3.098	*0.042

\*Error level 5 percent

**Table 13:** Ability to Explain the Significance of the Whole Model

R2		Durbin-Watson	ANOVA	
Coefficient of Determination	Refined Coefficient of Determination		F Statistics	Significance Level
0.269	0.248	1.967	30.165	**0.000

\*\* Error level 1 percent

According to table 13, the estimate coefficient of the cash conversion cycle variable on the stock returns of companies (-0.629) indicates the negative and reverse effect of the cash conversion cycle variable on the stock returns of companies. On the other hand, considering the significant level of t statistics, the cash conversion cycle variable on the stock returns (0.042), since it

is lower than 5percent error level, the  $H_0$  hypothesis can be rejected with 95percent confidence, and it can be stated that there is a significant relationship between the cash conversion cycle and the stock returns. The experimental model of research is as follows:

$$R_t = 0/284 - 0/629 CCC_t + \varepsilon$$

**Table 14 - Summary of Research Results**

Hypothesis	Hypothesis Description	Conclusion
First	There is a significant relationship between the cash conversion cycle and the economic value added	Confirmed
Second	There is a significant relationship between the cash conversion cycle and the refined economic value added	Confirmed
Third	There is a significant relationship between the cash conversion cycle and the market value added	Confirmed
Fourth	There is a significant relationship between the cash conversion cycle and the stock returns	Confirmed

## 7. Research Findings

Considering the hypotheses of this research, we compare the research results with other researches.

### 7-1. First Hypothesis

The test result of first hypothesis showed that there is a significant relationship between the cash conversion cycle and the economic value added. The result of this research correspond with the results of researches of Shariat Panahi and Badavar Nahandi (2004), Jamadardi (2003), Dodd and Chen (1996), and Behlak et al. (2012), and in contrary, it does not correspond with the results of Biddle et al. (1999); thus, it can be stated that when the ratio of cash conversion cycle in companies increases, the economic value added of that company will also decrease.

### 7-2. Second Hypothesis

The test result of second hypothesis showed that there is a significant relationship between the cash conversion cycle and the refined economic value added. The result of this research correspond with the research results of Jalbert et al. (2000), Jamadardi (2003), and Shariat Panahi and Badavar Nahandi (2004), in contrary, it does not correspond with the research results of Kashanipour and Resaian (2008), and Stewart (1993); thus, it can be stated that when the ratio of cash conversion cycle in companies increases, the refined economic value added of that company will also decrease.

### 7-3. Third Hypothesis

The test result of third hypothesis showed that there is a significant relationship between the cash conversion cycle and the market value added. The result of this research correspond with the research results of Stewart (1994), Lehn and Makhija (1996), Chang et al. (2007), Raie and Chawoshi (2003), in contrary, it does not correspond with the results of Shariat Panahi and Badavar Nahandi (2004), Zadmehr et al. (2012), and Stewart (1993); thus, it can be stated that when the ratio of cash conversion cycle in companies increases, the market value added of that company will also decrease.

### 7-4. Fourth Hypothesis

The test result of fourth hypothesis showed that there is a significant relationship between the cash conversion cycle and the stock returns. The result of this research correspond with the research results of Chang et al. (2007), Goodfary and Spinza (1996), and Lehn and Makhija (1996), in contrary, it does not correspond with the research results of Di Modris (2005) and Jamadardi (2003); thus, it can be stated that when the ratio of cash conversion cycle in companies increases, the stock returns of that company will also decrease.

## 8. Research Suggestions

### 8.1 Suggestions for Current Research

1- Investors, shareholders and other beneficiary groups are suggested to pay attention during the

investment period to the cash conversion cycle in related companies and as much as possible invest in the companies that have lower cash conversion cycle, so that they can access higher stock returns.

2- The companies are suggested to reduce the cash conversion cycle period in the company by employing the required strategies and planning, so that they have necessary access to the sufficient cash resources to fulfill the company's commitments and will be able to improve the economic performance criteria of their company, and the investors have more willingness to invest in the company.

3- The Tehran Stock Exchange Organization is suggested to classify companies according to the cash conversion cycle period, whereby proper information is provided to the investors and beneficiary groups to make investment decisions, so that information asymmetry is reduced and the transparency of information is increased and the risk of investment is also reduced.

## 8.2 Suggestions for Future Research

1- It is suggested to investigate the relationship between the cash conversion cycle with economic evaluation criteria and the stock returns in small and large companies as well as private production and non-production companies accepted in the Tehran Stock Exchange.

2- It is suggested to investigate the relationship between the cash conversion cycle with economic evaluation criteria and the stock returns in the strategic and non-strategic companies accepted in the Tehran Stock Exchange.

3- It is suggested to investigate the relationship between the cash conversion cycle with economic evaluation criteria and the stock returns in the companies with the initial supply of stock accepted in the Tehran Stock Exchange.

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