A SURVEY OF THE NON-LINEAR ASSOCIATION OF WORKING CAPITAL MANAGEMENT WITH PERFORMANCE AND INVESTMENT IN COMPANIES LISTED ON TEHRAN STOCK EXCHANGE

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Abstract: *Working capital is one of the important items of entities' assets and economic enterprises and it plays an important role in financial decisions. It is expected that overinvestment in working capital has positive effect, namely for companies with low working capital. On the other hand, overinvestment in working capital is the source of adverse effects on shareholders' value. In addition, for the companies with extra working capital, investment is a good solution to reduce working capital from one period to another one and it leads to increase of company performance. Thus, this study attempted to evaluate the effect of working capital management on performance and investment of companies listed on Tehran Stock Exchange (TSE). To do this, data of 155 companies listed on TSE during 2010-2014 and multi-variate regression are used. The studies showed that there was an inverse U-form relationship between net operating working capital and return on assets and investment of company. There was no significant association between net operating working capital and return on stock.*

Keywords: *Working capital, Performance, Return on stock, Return on assets, Investment.*

INTRODUCTION

Development of commercial activities leads to quantitative and qualitative development of financial management and management is being sophisticated. The continuity of economic enterprise activities mostly depends upon their short-term resources management. Thus, working capital is one of the important items of assets of economic enterprises and entities with crucial role in financial decisions. Working capital management plays important role in daily performance of business entities. Thus, working capital management is an important financial element in company and it has direct effect on liquidity and profitability of each

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enterprise (Raheman and Nasr, 2007). Working capital management is the management of current debts and assets. Mismanagement in current assets can have considerable costs. Overinvestment in current assets dedicates limited financial resources of business unit as applied in profitable cases and it imposes opportunity cost (Shabahang, 1994). Thus, obtaining relationship between these factors and financial performance and profitability of companies can help financial managers to optimize them (Rezayi *et al.*, 2013). Working capital management pursues growth opportunities effectively to allocate money optimally and use opportunities properly. Working capital management process includes decisions about various aspects of existing cash flow investment, maintaining definite level of inventory and accounts payable and received management (Gitmen, 2009). The aim of selection of this topic is to find about the association between changes in working capital with investment opportunities of companies listed on TSE.

THEORETICAL BASICS

Funding is done through various resources. Any funding source has specific effects on return and risks of business unit owners. Generally, funding theories are classified into three basic parts of capital budgeting, capital structure and working capital management (Samiloglu and Demirgunes, 2008). Working capital management is optimal combination of working capital items, current assets and debts as maximizing shareholder's wealth (Rahnamayerudposhti *et al.*, 2010). Indeed, working capital management is an important component of planning for short-term funding and it includes materials and goods inventory management, accounts received and payable. Net working capital indicates the current assets more than current debts and is supported *via* long-term loan and equity (Shabahang, 2008). The increasing importance of working capital in continuance of business unit activities causes that various strategies are considered for working capital management. By using various strategies regarding working capital management, business units can affect liquidity of company (Rahnamayerudposhti *et al.*, 20100. Under certainty condition, sale, costs, payment time and other cases are clear and all companies keep current assets at the lowest level. In terms of uncertainty, the condition is changed and companies are obliged to keep minimum cash flow and inventory based on payments, sale and expected order time and other extra value as called reliability reserve. Aggressive investment policy of companies for current assets causes that cash flow and inventory are kept at low level. Mostly, aggressive policy has the highest return but it has also high risk. Conservative policy is opposite (Jannesari, 2012). Working capital managers apply two strategies for working capital management including current asset strategies and current debt strategies

(Rahnamayerudposhtiand Kiayi, 2008). Various factors affect working capital , policies of working capital in organization as cash flow management, debt ratio, operating cash flow, risk control tools, etc. Working capital management components include creditors'pay out period, claim collection period, inventory turnover period and cash conversion cycle. The criteria of evaluation of performance based on accounting models and relevant reward plans can notmove along benefits of shareholders and other extra-organizational groups and this reduces benefits conflict (Hiss and Phan, 1991). By formation of theories in economic profit or residual profit, some models are proposed to compute economic profit. In these models, net operating profit after tax and capital cost are defined as economic profit or residual profit. The main purpose of enterprises is maximizing wealth of shareholders and value creation for enterprises is the only way to achieve this aim (Bacidore *et al.*, 1997). Financial report users apply various criteria and evaluate company performance. There are various methods to evaluate performance and they are divided into three types of accounting models, economic and market-based models. Investment is a process in which capital goods are used to generate goods or other services. Long-term investment is a class of investment as kept for continuous use in business unit activities. An investment is classified as non-current asset if it is kept for a long-term or its delegation by investors has some limitations (Pakdelan, 2012). The higher the uncertainty to general conditions of society, the lower the investment probability in society.

Economic and investment enterprises by two methods can take investment decisions. These two methods include present net value as considered investment classic theory and final efficiency of investment is Keynesian investment theory (MosaviJahromi, 2008). Overinvestment problem states that the probability that management can misuse its decisions making power or acceptnon-profitable projects or high risky endangering the benefits of shareholders and creditors (Hosseini Ahangari, 2010). Management can invest optimally in two states of Managerial Overinvestment and overinvestment in risky projects (Risk Shifting or Asset Substitution) (Sowisi, 2013).

REVIEW OF LITERATURE

Kroes and Manikas (2014) evaluated the relationship between cash flow management and financial performance of American companies. Gomes (2013) in a study evaluated the non-linear relationship between working capital management and profitability of Portuguese companies. Olayinka (2012) conducted a study as effective factors on working capital in Nigeria. Nazir and Afza (2010) evaluated effective factors on working capital management. Rahman

and Nasr (2007) evaluated the effect of working capital on profitability of 94 companies listed on Pakistan stock market during 1999-2004. Deloof (2003) evaluated the relationship between working capital management and profitability of company for a sample of 1009 Belgian companies during 1992-96.

Shin and Sonen (1998) evaluated the relationship between cash conversion cycle and profitability of company for a big sample during 1974-75 of American companies. Yahyazade *et al.*, (2014) evaluated the relationship between working capital management and profitability of TSE companies. Vaez *et al.*, (2014) evaluated the relationship between ownership concentration and board structure with working capital management efficiency. Vaez *et al.*, (2013) evaluated the effective factors on working capital management of TSE companies. Yaghubnejad eta l., (2010) evaluated the association between working capital management and profitability in companies listed on TSE. Izadinia and Taki (2010) evaluated the impact of working capital management on profitability of companies listed on TSE.

STUDY HYPOTHESIS

In this study, hypotheses include as:

First Main Hypothesis

There is a non-linear relationship between working capital management and company performance (This relationship is direct at lower levels of working capital and inverse in high levels of working capital).

First Sub-hypothesis

There is a non-linear relationship between working capital management and stock performance (return on stock)(this relationship is direct in lower level of working capital and inverse at high level of working capital).

Second Sub-Hypothesis

There is a non-linear relationship between working capital management and operating performance (return on assets) of company (this relationship is direct at lower level of working capital and inverse at high level of working capital).

Second Main Hypothesis

At high levels of working capital, there is an inverse relationship between working capital management and company investment.

Study population and study sample

Study population is companies listed on TSE during 2010-2014. In this study, samplesare selected by systematic elimination method. The sample consists of all existing companies in study population meeting the criteria as their fiscal year ending to 12/29 in each year to put the data together and being applied in the form or panel or pooled data. During the study period, there is no fiscal period to compare the financial performance results. The required data for study variables exist during 2009-2014 to do the computations properly and they are not investment, financial and credit institutions, banks, insurance and holding. As it was mentioned, *x* companies were selected as study sample. Each company had 5 sets of extracting financial data in financial statements and other data resources during 2010-2014.

DATA COLLECTION METHOD AND MEASURES

For data collection regarding study literature, library and document studies are used. To achieve required data for study hypothesis processing, existing data is extracted from Rahavard Novin software and financial statements of companies listed on TSE from certified site of TSE. Data collection measure in this study is databases, extract data from TSE, thesis, domestic and international papers and valid internet sources.

STUDY FINDINGS

Descriptive Statistics

Applied descriptive statistics in this study are mean, medium, standard deviation, maximum and minimum. Mean is the main and important central measure showing the gravity and balance point of distribution. The mean of stock return is 0.378. Median is a point dividing the sample into two equal parts. In other words, 50% of observations are before and 50% of observations after it, median of stock return are 0.086. Generally, dispersion criteria are those evaluating observations around the mean. One of the most important dispersion criteria is standard deviation. This criterion for stock return variable is 0.931. The highest value of stock return is 4.943 and the lowest value is –0.784. In addition, maximum and minimum values of operating return are 0.631, –0.426, respectively and mean and median are 0.094 and 0.082, respectively.

Inferential Statistics

Inferential statistics in this study include Pearson correlation test and multi-variate regression to detect the independent and dependent variables with the control of effect of other variables. To be sure of reliability of results, assuming tests of using regression are used.

CORRELATION TEST OF VARIABLES

The results in Pearson correlation show that there is no significant correlation between net operating working capital, positive deviation of operating working capital and negative deviation of net operating working capital with stock return of companies. However, the net operating working capital and positive deviation of net operating working capital have inverse and significant correlation with operating return and negative deviation of net operating working capital with direct and significant correlation with operating return. In addition, net operating working capital and positive deviation of net operating working capital with inverse and significant correlation with investment and negative deviation of net operating working capital has direct and significant correlation with investment. Also, it was observed that independent variables of study had no strong correlation with each other (Correlation statistics is lower than ±0.8). There is no problem in model estimation.

Regression Test

In each regression model, special hypotheses are established in case of violation of one of them, good properties of estimation of regression factors or hypothesis test can face problems. Some basic hypotheses of regression include mean of disturbance term (residuals), e_t is zero. Disturbance term (e_t) has normal distribution. In addition, we should be sure of statistical distribution of the variable being tested. Disturbance terms in various observations are non-correlated or independent. Multiple co-linearity in regression analysis of ordinary least squares is evaluated by Variance Inflation Factor (VIF). Disturbance term variance is equal to $^2\delta$, it means that $^2\delta V(e_t) =$.

Normality Test of Dependent Variables

Jarque-Bera test is used to evaluate normality of dependent variables. Based on this test, as significance level is less than 0.05, distribution of dependent variables is not normal. If sample size is big enough, deviation of normality is not important. Based on central limit, we can say even in the absence of normality, test statistics follow suitable distributions asymptotically. The lack of justification of this hypothesis is ignored (Abade, 2013).

Evaluation of Reliability of Variables

Reliability of study variables means that the mean and variance of variables are fixed over time and covariance of various is fixed during various years. Thus, using these variables in the model doesn't create spurious regression. To do this, *Im-Pesaran*-Shin and *Levin-Lin-Chu tests and Dickey Fuller tests are used. To do this*

analysis, Im-Pesaran-Shin test is used. The result of the test showed that significance level of study variables is less than 5% and all study variables are reliable at the studied period. Then, a good method for data analysis is identified.

STUDY HYPOTHESES TEST

First Sub-hypothesis Test, First Main Hypothesis

To estimate coefficients of model of first sub hypothesis of first main hypothesis of study, to determine pooled data method and homogeneity and non-homogeneity of them, Chow and F-Limer's statistics are applied. The result of chow test shows that the obtained probability for F statistics is higher than 5%.

Thus, to test these models, data is applied as pooled.

As shown in Table 1, in Model 1, significance level of positive deviation of net operating working capital is bigger than 0.05. There is no significant association between positive deviation of net operating working capital and stock

Table 1
Results of first sub-hypothesis of first main hypothesis

| Model No. 2		Model No. 1		
Significance level	Coefficients	Significance level	Coefficients	Variable
0.049	0.564	0.055	0.553	Constant
–	–	0.551	0.032	Positive deviation of net operating working capital
0.717	0.05	–	–	Negative deviation of net operating working capital
0.006	0.052	0.007	–0.051	Company size
0.981	–0.083	0.902	0.449	Intangible assets
0.005	0.441	0.006	0.425	Financial leverage
0.649	–0.009	0.568	–0.013	Fixed assets growth
0.422	0.577	0.366	0.651	Cash
0.001	0.683	0.000	0.723	Operating cash flow
		Model No. 1		
0.151	Coefficient of determination		3.709	F statistics
0.137	Adjusted coefficient of determination		0.000	Significance level of F statistics
2.408	Durbin Watson test		0.597	White significance level test
		Model No. 2		
0.149	Coefficient of determination		3.546	F statistics
0.135	Adjusted coefficient of determination		0.000	Significance level of F statistics
2.408	Durbin Watson test		0.695	White significance level test
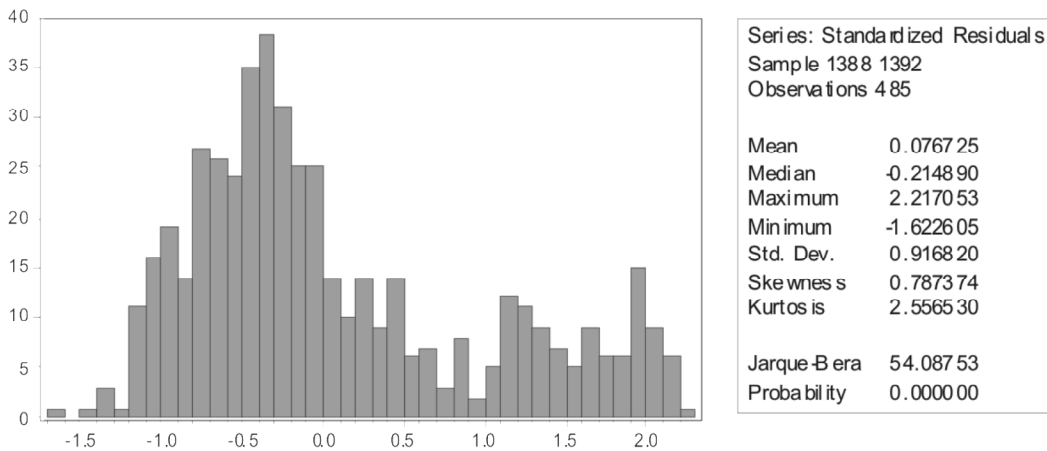
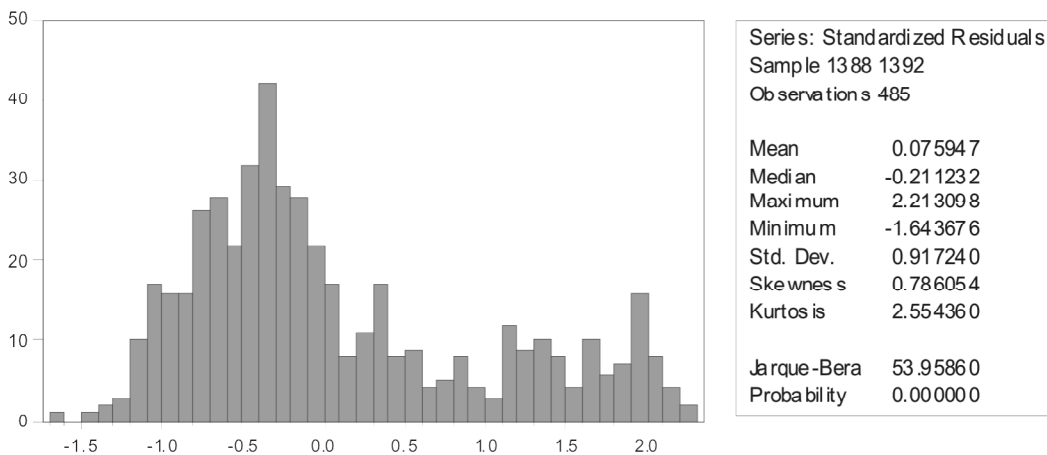**Figure 1: Dispersion chart of disturbance terms of model 1**

Figure 2: Dispersion chart of disturbance terms of model 2

return of companies listed on TSE. ON the other hand, in Model 2, significance level of negative deviation of net operating working capital is bigger than 0.05 and there is no significant relationship between negative deviation of net operating working capital and stock return of companies listed on TSE. Thus, there is no significant association between net working capital and stock return of companies and first sub-hypothesis of first main hypothesis is not supported. For control variable of company size, significant level is less than 0.05 and coefficient is negative and there is a significant and inverse association between company size and stock return. For control variables of financial leverage and operating cash flow, significant level is less than 0.05 and coefficient is positive and there is a direct and significant association between financial leverage and

operating cash flow with stock return. Durbin-Watson statistics of models is 2.408 ranging 1.5 to 2.5. Significance level of F statistics is 0.000 as lower than 0.05 and it shows significance of models. Also, adjusted coefficient of determination of applied models is about 13% and it shows that about 13% of dependent variable changes are explained by independent variables and it is acceptable. It is worth to mention that significance level of White test for above model is above 0.05 and it shows lack of variance Heteroscedasticity .Chart of disturbance terms of models is shown in Figures 1, 2. Although result of Jarque-Bera test shows non-normality of disturbance terms, the chart of its values has similar dispersion of normal distribution and there is no serious problem in this regard.

Second Sub-hypothesis Test of First Main Hypothesis of Study

To estimate coefficients of models of second sub-hypothesis test of first main hypothesis, at first to determine pooled data , homogeneity or non-homogeneity, chow test and F-Limer's statistics are used. Result of Chow test shows that the probability for F statistics is less than 5% and to test these models, the data are used as panel. Significance level of Hausman test is less than 0.05. To estimate coefficients of mentioned models, fixed effects model is used.

As shown in Table 2, in Model 3, significance level of positive deviation of net operating working capital is smaller than 0.05 and the coefficient is negative. There is a significant and inverse association between positive deviation of net operating working capital and operating performance of companies listed on TSE. ON the other hand, in Model 4, significance level of negative deviation of net operating working capital is smaller than 0.05 and coefficient is positive and there is a significant and direct relationship between negative deviation of net operating working capital and operating performance of companies listed on TSE. Thus, there is a significant and non-linear association between net working capital and operating performance of companies and this relationship is at first direct and then inverse. Thus, second sub-hypothesis of first main hypothesis is supported. For control variable of company size, cash and operating cash flow has direct and significant relationship with operating performance of company and financial leverage and assets growth variables have inverse and significant association with operating performance of company.

Durbin-Watson statistics of models is 2.022, 0.042, respectively ranging 1.5 to 2.5. Significance level of F statistics is 0.000 as lower than 0.05 and it shows significance of models. Also, adjusted coefficient of determination of applied models is about 67, 76% and it shows that about 67, 76% of dependent variable changes are explained by independent variables and it is acceptable. It is worth to mention that using EGLS leads to elimination of probable variance
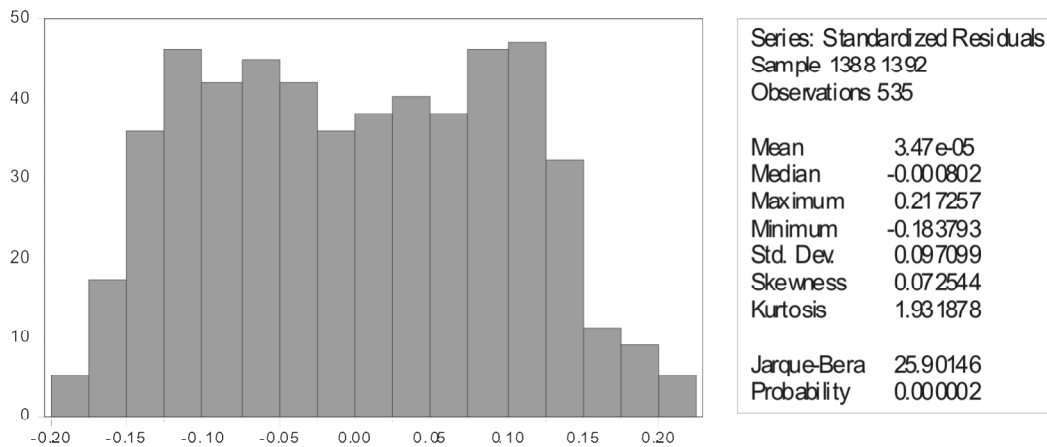
Table 2
Results of second sub-hypothesis test of first main hypothesis

Model No. 4		Model No. 3		
Significance level	Coefficients	Significance level	Coefficients	Variable
0.005	0.08	0.001	0.099	Constant
–	–	0.000	–0.018	Positive deviation of net operating working capital
0.02	0.018	–	–	Negative deviation of net operating working capital
0.000	0.013	0.000	0.013	Company size
0.988	0.003	0.735	0.09	Intangible assets
0.000	–0.307	0.000	–0.32	Financial leverage
0.027	–0.006	0.053	–0.006	Fixed assets growth
0.000	0.315	0.000	0.324	Cash
0.000	0.165	0.000	0.15	Operating cash flow

Model No. 3			
0.679	Coefficient of determination	159.359	F statistics
0.674	Adjusted coefficient of determination	0.000	Significance level of F statistics
2.022	Durbin Watson test	Estimated generalized least squares (EGLS)	

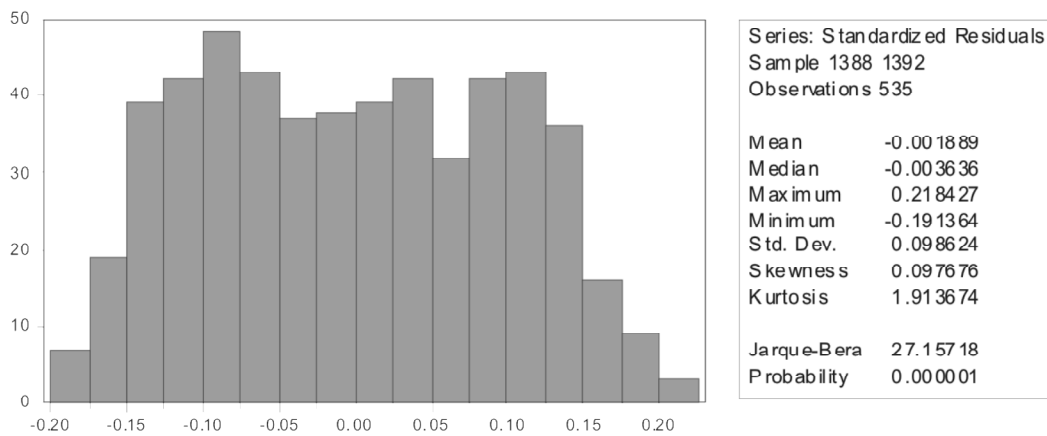| Model No. 4			
0.765	Coefficient of determination	245.931	F statistics
0.762	Adjusted coefficient of determination	0.000	Significance level of F statistics
2.042	Durbin Watson test	Estimated generalized least squares (EGLS)	

Heteroscedasticity. Chart of disturbance terms of models is shown in Figures 3, 4. Although result of Jarque-Bera test shows non-normality of disturbance terms, the chart of its values has similar dispersion of normal distribution and there is no serious problem in this regard.

The Second Main Hypothesis Test of Study

To estimate coefficients of models of second mainhypothesis test, at first to determine pooled data and homogeneity or non-homogeneity, chow test and F-Limer's statistics are used. Result of Chow test shows that the probability for F statistics is less than 5% and to test these models, the data are used as panel. By performing Hausman test, the necessity of using fixed or random effects method is evaluated. Significance level of Hausman test is less than 0.05. To estimate coefficients of mentioned models, fixed effects model is used. The results of testing the mentioned models by fixed effects and Estimated Generalized least squares (EGLS) are achieved.

	Series: Standardized Residuals
	Sample 1388 1392
	Observations 535
	Mean 3.47e-05
	Median -0.000802
	Maximum 0.217257
	Minimum -0.183793
	Std. Dev. 0.097099
	Skewness 0.072544
	Kurtosis 1.931878
	Jarque-Bera 25.90146
	Probability 0.000002

Figure 3: Dispersion chart of disturbance terms of model 3

	Series: Standardized Residuals
	Sample 1388 1392
	Observations 535
	Mean -0.001889
	Median -0.003636
	Maximum 0.218427
	Minimum -0.191364
	Std. Dev. 0.098624
	Skewness 0.097676
	Kurtosis 1.913674
	Jarque-Bera 27.15718
	Probability 0.000001

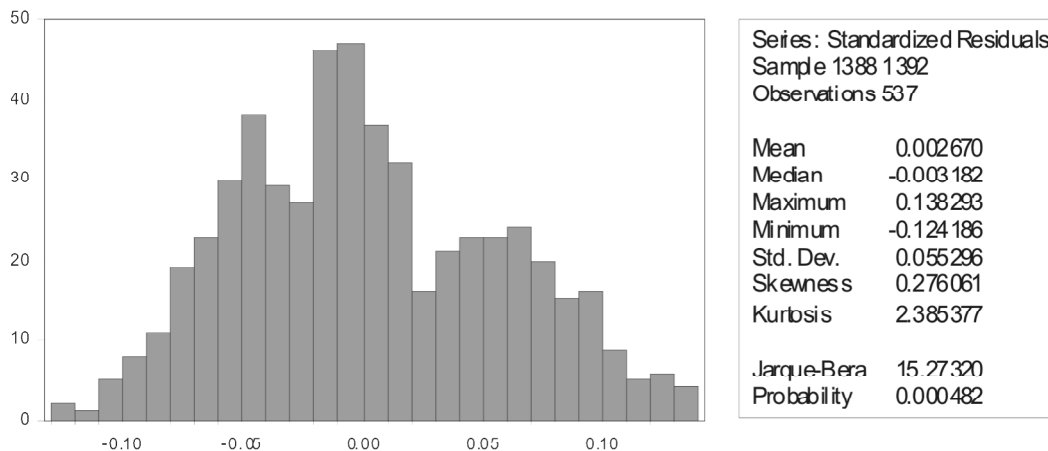**Figure 4: Dispersion chart of disturbance terms of model 4**

As shown in Table 3, in Model 5, significance level of positive deviation of net operating working capital is smaller than 0.05 and the coefficient is negative. There is a significant and inverse association between positive deviation of net operating working capital and investment of companies listed on TSE. ON the other hand, in Model 6, significance level of negative deviation of net operating working capital is smaller than 0.05 and coefficient is positive and there is a significant and direct relationship between negative deviation of net operating working capital and investment of companies listed on TSE. Thus, there is a significant and non-linear association between net working capital and investment of companies and this relationship is at first direct and then inverse. Thus, second

Table 3
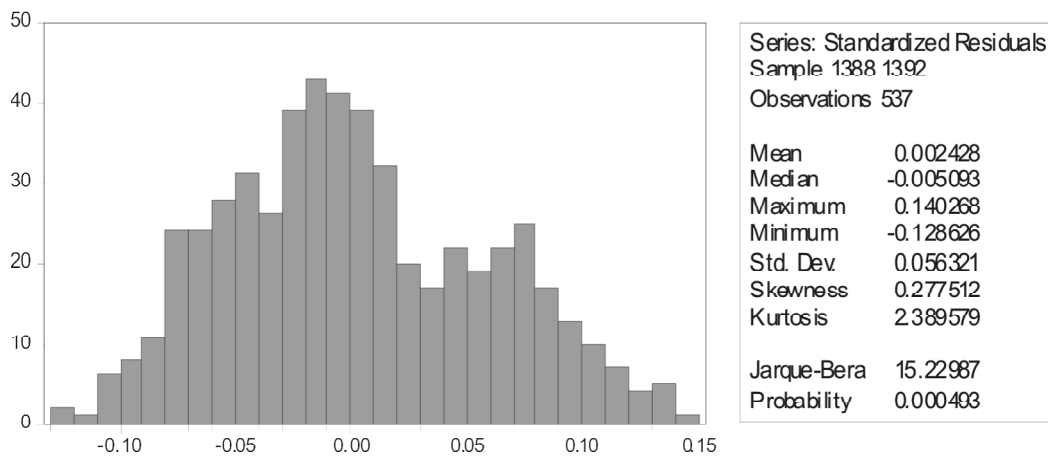**Results of second main hypothesis test**

Model No. 6		Model No. 5		
Significance level	Coefficients	Significance level	Coefficients	Variable
0.000	0.084	0.000	–0.072	Constant
–	–	0.000	–0.017	Positive deviation of net operating working capital
0.000	0.027	–	–	Negative deviation of net operating working capital
0.000	0.006	0.000	0.007	Company size
0.003	–0.432	0.003	–0.439	Intangible assets
0.68	0.003	0.976	0.0002	Financial leverage
0.000	0.014	0.000	0.013	Fixed assets growth
0.048	0.068	0.374	0.029	Cash
0.000	0.116	0.000	0.107	Operating cash flow

Model No. 5			
0 0.34	Coefficient of determination	38.938	F statistics
0.331	Adjusted coefficient of determination	0.000	Significance level of F statistics
1.665	Durbin-Watson		Estimated generalized least squares (EGLS)

Model No. 6			
0.39	Coefficient of determination	48.367	F statistics
0.382	Adjusted coefficient of determination	0.000	Significance level of F statistics
1.574	Durbin-Watson		Estimated generalized least squares (EGLS)

main hypothesis is supported. For control variable of company size, fixed assets growth and operating cash flow has direct and significant relationship with investment of company and control variable of intangible assets has inverse and significant association with investment of company. Durbin-Watson statistics of models is 1.665, 1.574, respectively ranging 1.5 to 2.5. Significance level of F statistics is 0.000 as lower than 0.05 and it shows significance of models. Also, adjusted coefficient of determination of applied models is about 33, 38% and it shows that about 33,38% of dependent variable changes are explained by independent variables and it is acceptable. It is worth to mention that using EGLS leads to elimination of probable variance Heteroscedasticity.

Chart of disturbance terms of models is shown in Figures 5, 6. Although result of Jarque-Bera test shows non-normality of disturbance terms, the chart of its values has similar dispersion of normal distribution and there is no serious problem in this regard.

Figure 5: Dispersion chart of disturbance terms of model 5

Series: Standardized Residuals	
Sample 1388 1392	
Observations 537	
Mean	0.002670
Median	-0.003182
Maximum	0.138293
Minimum	-0.124186
Std. Dev.	0.055296
Skewness	0.276061
Kurtosis	2.385377
Jarque-Bera	15.27320
Probability	0.000482

Figure 6: Dispersion chart of disturbance terms of model 6

Series: Standardized Residuals	
Sample 1388 1392	
Observations 537	
Mean	0.002428
Median	-0.005093
Maximum	0.140268
Minimum	-0.128626
Std. Dev.	0.056321
Skewness	0.277512
Kurtosis	2.389579
Jarque-Bera	15.22987
Probability	0.000493

STUDY FINDINGS

Development of commercial activities leads to quantitative and qualitative development of financial management and this has sophisticated management. The continuance of activity of economic enterprises depends mostly upon their short-term resources management. Operating activities in normal period as annual depend upon working capital and its good management as the expected results are fulfilled and activity continuance is provided in long-term. The main purpose of working capital management is keeping good remain of each of components of working capital management. Successful business mostly depends upon the ability of financial managers in effective management of accounts receivable, inventory and accounts payable. Good level of working capital management is

the level in which there is a balance between risk and efficiency. Based on the first sub-hypothesis test of main hypothesis of study, two models are used. In the first model, an independent variable "Positive deviation of net operating working capital", six control variables "Firm size", "intangible assets", "financial leverage", "growth of fixed assets", "cash" and "operating cash flow", a dependent variable (stock return", pooled data model and least ordinary squares method. The result of testing the mentioned model showed that there was no significant association between positive deviation of net working capital and "stock return". In model 2, an independent variable "negative deviation of net operating cash flow", " six control variables "firm size", " intangible assets", "financial leverage", "fixed assets growth", cash", "operating cash", a dependent variable "stock return" pooled data and ordinary least square method are used.

The test result showed that there was no significant association between "negative deviation of net operating working capital and stock return. Thus, totally, there is no significant relationship between net operating working capital and stock return in companies. Regarding the second sub-hypothesis of first main hypothesis of study, two models are used. In the first model, an independent variable "positive deviation of net operating working capital", six control variables "firm size, intangible assets, financial leverage, fixed assets growth, cash, operating cash flow, a dependent variable "ROA", fixed effects model and EGLS method are used. The result of test of mentioned model showed that there was a significant and inverse association between "positive deviation of net operating working capital" and "ROA". In the second model, an independent variable "negative deviation of net operating working capital", six control variables of firm size, intangible assets, financial leverage, fixed assets growth, cash, operating cash flow, a dependent variable, ROA, fixed effects model and EGLS are used. The result of mentioned model test showed that there was a direct and significant association between negative deviation of net operating working capital and ROA.

Thus, there was an inverse U-form relationship between net operating working capital and ROA. Regarding the second main hypothesis test, two models are used. In the first model, an independent variable "positive deviation of net operating working capital", six control variables "firm size, intangible assets, financial leverage, fixed assets growth, cash, operating cash and a dependent variable, investment, fixed effects model and EGLS are used. Result of mentioned model test showed that there was an inverse and significant relationship between "positive deviation of net operating working capital" and "investment". In second model, an independent variable "negative deviation of net operating working capital", six control variables "firm size", intangible assets, financial leverage,

fixed assets growth, cash, operating cash flow, a dependent variable "investment", fixed effects model and EGLS are used. The result of testing the mentioned model showed that there was a direct and significant association between "negative deviation of net operating working capital" and "investment". Thus, there was an inverse U-form association between net operating working capital and investment.

CONCLUSION

This study evaluates the non-linear relationship of working capital management and performance and investment in companies listed on TSE. To do this, data of 155 companies listed on TSE are used during 2010-2014 and multi-variate regression is also applied. The result of studies showed that there was an inverse U-form association between net operating working capital with ROA and company investment and there was no significant association between net operating working capital and stock return. The first sub-hypothesis of first main hypothesis of present study is rejected. Second sub-hypothesis of first main hypothesis of present study is supported. Thus, the main first hypothesis of present study is supported. In addition, second main hypothesis of present study is supported.

References

Bacidore, J.M., Boquist, J.A., Milbourn, T.T. and Thakor, A.V. (1997), The Search for the Best Financial Performance Measure.*Financial Analysts Journal*, (May, June, 1997), 10-20.

Gitman, L.A. (2009), Principles of Managerial Finance. New York: Addison Wesley Publishers.

Hiss, C., Phan. P. (1991), CEO Tenure as the Terminant of CEO Pay.*Academy of Management Journal,* 34(3), 707-717.

HosseiniAhangari, Z. (2010),The impact of ownership structure on underinvestment and overinvestment.MA thesis.Social and economic sciences of Payam-e Noor University.

Jannesari, A. (2012), The impact of working capital management on profitability of small and medium business units. *Auditor Journal*. 58, 1-10.

MosaviJahromi, Y. (2008), Economic development and planning (Management and accounting), Payam-e Noor University publications.

Pakdelan, S. (2012), The evaluation of the relationship between financial leverage, cash flow, growth opportunities and firm size with decisions of investment in companies. MA thesis. Administrative and economic sciences of Mazandaran University.

Raheman, A., Nasr, M. (2007), Working Capital Management and Profitability-Case of Pakistan Firms. *International Review of Business Research Papers*, 3, 279-300.

Rahnamayerudposhti, F., Kiayi, A. (2008), The explanation of working capital management strategies in companies listed on TSE. *Journal of knowledge of accounting*. 13(6-13), 66-70.

Rahnamayerudposhti, F., Nikomaram, H., Heibati, F. (2010), The basics of financial management.First and second Volume.Terme publications.

Rezayi, N., Garkaz, M. (2013), The impact of working capital changes on investment opportunities. *Scientific-Research journal of assets and funding management*. 1(3), 99-118.

Samiloglu, F., Demirgunes, K. (2008), The Effect of Working Capital Management on Firm Profitability: Evidence from Turkey. *The International Journal of Applied Economics and Finance*, 2(1), 44-50.

Shabahang, R. (1994), Working capital management and cash budget (in the framework of comprehensive budget). *Accountant Journal*. 7(8), 80-93.

Shabahang, R. (2008), Financial management.Audit organization publications.First and second Volume.

Sowisi, A. (2013), The impact of financial limitation on the relationship between inefficiency of investment and operating efficiency with accounting conservatism. MA thesis. Islamic Azad University of Tehran Markaz.