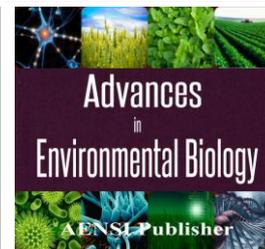




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# The Impact of Working Capital Management and Capital Structure on the Profitability of the Tehran Listed Firms

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### ABSTRACT

Considering the challenging environment of economics, the assets and liabilities of the firms have attracted significant attention in the economic entities. That is, optimal management of working capital is a competitive advantage of the firms. In addition, the budgeting and financial decisions are the main fields of decision making in the publicly owned corporations and should be established to maximize the firm value for the stockholders. Cost of equity is the element playing a key role in capital budgeting and relies on the capital structure of the firms. As a consequence, research and development plan might have an essential impact on the firms' profitability. This study seeks to find empirical evidences about the impact of working capital management and capital structure on the firm's profitability. In doing so, a sample composed of Tehran listed firms during the years from 2001 to 2010. The regression results show that there is a direct significant relationship between working capital management and capital structure of the firms listed on the Tehran Stock Exchange.

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## INTRODUCTION

Working capital management is known as a significant dimension of the financial management of the firms. Efficient working capital management includes planning and controlling the current assets and liabilities which resolve the short-term insolvency risk and excessive investments in these assets. Many scholars, however, conducted studies about the components of working capital management and its impact on the firms' profitability. For example, Samiloglu & Demirnes [13] found that the period of accounts receivable, inventory and leverages is significantly associated with firms' profitability [2]. On one hand, the trade-off theory and the pecking order theory describe the factors impacting capital structure. Firms' profitability is a factor influencing on the two theories of capital structure. Based on the trade-off theory, tax benefits increase the tax benefits of the firms with debts. On the other hand, the probable bankruptcy costs decrease the value of the firms with lower debts. Therefore, capital structure might provide a balance between tax benefits and probable bankruptcy costs. In doing so, these two factors neutralize each other in optimum usage of debts in the capital structure. The pecking order theory describes that the organizations cover a special hierarchy in financing their resources. The formation of this hierarchy is the consequence of the information asymmetry. Based on this theory, the existing information asymmetry among the managers and external investors leads managers to finance their needs through internal resources rather than the external resources. This theory states that the profitable firms borrow less amounts and the financial managers are tightly associated with the capital structure and try to achieve the optimal compound of finance resources or capital structures. According to the above mentioned points, it is expected that working capital management and capital structure significantly associate with the firms' profitability. Therefore, this study examines the impact of working capital management and capital structure on the profitability of the firms listed on the Tehran Stock Exchange.

#### Research background:

Garcia and Solana [5] examined the impact of working capital management on the profitability of SMEs in Spain. Their findings showed that there is a significant negative relationship between the profitability of SMEs and inventory turnover and average collection period. Finally, it was found that Spanish SMEs can increase their

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firms' value by minimizing cash conversion cycle. Samiloglu & Demirnes [13] tried to find the relationship between profitability and working capital management in a sample of manufacturing firms of Turkey during 1998 to 2007. Their results confirm the significant inverse association between average collection period, average inventory, leverages and profitability. The firm's growth and profitability were found to have significant direct relationships. Frank and Goyal [3] investigate the relationship between earnings and capital structure. They found that more profitable firms tend to issue more debt securities. In addition, larger firms are more participating in the liability markets, but smaller firms tend to participate in the stock markets. Zubayeri found that there is a direct relationship between financial leverage and profitability and this association becomes negative for the operating leverage. Chowdhury and Chowdhury [1] conducted a study to examine the impact of capital structure on the value of the firms listed on the Bangladesh Stock Exchange. Their findings revealed that maximizing the wealth of the shareholders requires an optimal compound of debts and capital; however, the cost of equity is negatively correlated and should be minimized as much as possible. Gill *et al* [6] considered the relationship between working capital management and profitability of the American listed firms and concluded that the managers might create value for their shareholders by reducing the number of days to collect receivables. Jiang *et al* [9] investigated 742 Chinese firms from 35 different industries during 1999 to 2004 in order to evaluate the impact of competitive markets on the capital structure. They also showed that the level of market competitiveness significantly impacts the capital structure and deviation from optimal capital structure. Increasing the competitiveness of the products, deviations from the optimal capital structure decreases. Rahman *et al* [12] tried to find the influence of working capital on the organizational performance of Pakistan firms during 1998 to 2007. They concluded that cash conversion cycle and inventory turnover significantly affect the firm's performance. Enqvist *et al* [2] disclosed that there is a negative relationship between cash conversion cycle and the firm's profitability. Nobanee and AlHajjar [11] explored the relationship between working capital management, performance and operating cash flows. It was found that the managers might increase the profitability and operating cash flows through the shortening cash conversion cycle and collection period.

#### *Methodology:*

This is a survey study using regression models to analyze the data. Two methods are used to test the hypotheses and quantitatively analyzes of data. As the first step, Pearson correlation coefficient has been used to measure the relationship between working capital management, capital structure and profitability. As the second phase, regression analyzes have been employed to estimate the casual relationship between profitability and working capital management and profitability. Based on this fact, this study aims to analyze the impact of working capital management and capital structure on the profitability of the listed firms. The required data is collected by different methods such as library studies, literature review and verified databases such as the softwares of Tehran Stock Exchange and financial statements. Finally, the data have been analyzed by EXCEL and SPSS.

#### *Population and Sample:*

The population of this study is composed of the firms listed on the Tehran Stock Exchange. This population is selected due to the fact that the financial information of these companies is available and the information about these firms is homogenous. Four measures have been considered to select the sample including:

1. The firms have been listed on the Tehran Stock Exchange since the beginning of 2001 and their stocks have been traded by the end of 2010.
2. The banks, financial intermediaries and investment firms have been excluded from the sample.
3. The end of the fiscal years is consistent with the calendar year in order to eliminate the seasonal effects.
4. The detailed information on the annual financial statements and their market prices are available.

#### *Research Hypotheses:*

The first main hypothesis: Capital structure affects the firm's profitability.

Sub-hypothesis 1.1: The ratio of short-term debts to assets impacts firm's profitability.

Sub-hypothesis 1.2: The ratio of long-term debts to assets impacts firm's profitability.

Sub-hypothesis 1.3: The ratio of total debts to assets impacts firm's profitability.

The second main hypothesis: working capital management impacts the firm's profitability.

Sub-hypothesis 2.1: receivables management (reducing collection period) impacts firm's profitability.

Sub-hypothesis 2.2: Inventory management (reducing maintenance period) impacts firm's profitability.

Sub-hypothesis 2.3: Payment management (increasing payment period) impacts firm's profitability.

Sub-hypothesis 2.4: Cash conversion cycle management impacts firm's profitability.

The third main hypothesis: working capital management and capital structure impact the profitability of the firm.

**Findings:****Testing the first hypothesis:**

The first main hypothesis: Capital structure impacts firm's profitability. In the above hypothesis,  $\rho$  is the regression coefficient between the elements of capital structure and firms' profitability.

**Table 1:** Multivariate regression for predicting firms' profitability from the elements of the capital structure.

Statistical Variable	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	P. Value
Profitability and Capital Structure Elements	0.270	0.073	0.068	0.0001

Table 1 indicates that by using regression of the regression coefficient, a significant linear relationship between profitability and capital structure has been confirmed at 0.270 levels and the independent variables of capital structure might predict the percentage of change in the dependent variable of profitability. The significance level (0.0001) which is lower than the intended level (0.01), it is found that there is a linear relationship between the variables.

**Table 2:** Findings of regression analysis about the independent variables of the first main hypothesis.

$a + TOTAL\ DEBT\ \beta_2 + \beta_{long-term\ debt}\beta_1 + short-term\ debt = Profitability$				
Explanatory Variable	Variable Coefficient	t-statistics	p-value	VIF
Residual value		29.92	0.0001	
Short-term debts to Assets	0.501	3.78	0.0001	1.93
Long-term debts to Assets	- 0.290	- 4.35	0.0001	1.82
Total debts to Assets	0.29	2.19	0.029	1.75
F-statistic			14.96	
p-value			0.0001	
Durbin-Watson			1.292	

Based on the findings of VIF and Durbin-Watson, it is concluded that the independent variables are not multicollinear and table 4 also depicts that the t statistics of the capital structure variables are significant at 0.05 level of significance. This is because the significance levels of the variables of capital structure are lower than 0.05 level of significance level. In addition, it was found that F statistics is equal to 14.96 and p-value is 0.0001 which describes the significance of this statistic at the level of 0.05 and also R<sup>2</sup> shows that the explanatory variables might explain 6.07% of changes in the firm's profitability. Therefore, the first main hypothesis is confirmed and H<sub>0</sub> is rejected, then. This finding is consistent with the findings of Hadouk and James and Fama and French [3]. The first subsidiary hypothesis: The ratio of short-term debts to assets impacts firm's profitability.

Table 3 shows the findings related to the analysis of the subsidiary hypothesis.

**Table 3:** Correlation tests for the subsidiary hypothesis 1.1.

Statistical Index Variable	R	R <sup>2</sup>	p.value
Short-term Debts to Assets Ratio and Profitability	0.189	0.0357	0.0001

As shown in the table above, the linear significant relationship between two variables of short-term debts to assets and firms' profitability is 0.189 according to the Pearson correlation coefficient. The independent variable of short-term debts to assets can explain 3.57 percent of the variations related to the firms' profitability. Since the significance level (0.0001) is less than the significance level of 0.01, then there is a linear relationship between these two variables at 99 percent. Additionally, there is a positive direct relationship between these two variables. Therefore, the hypothesis is confirmed and H<sub>0</sub> is rejected. That is, increasing the ratio of short-term debts to the assets can increase the profitability and this is mainly due to the low costs of short-term debts. Most short-term debts have no costs and the financial cost of the short-term debts in the usual situations is less than the other debts. Consequently, it is concluded that the short-term debts lead to an increase in the resources of finance and profitability. The findings are consistent with the findings of Lara and Mesquita and Abor who documented a positive relationship between short-term debts and profitability.

Subsidiary hypothesis 2.1. The ratio of long-term debts to assets impacts firm's profitability.

Specific characteristics of the gathered data are analyzed by using Pearson correlation coefficient to test the hypothesis.

**Table 4:** Results of Correlation Test for the Relationship between Long-term Debts to Assets and Firms' Profitability.

Statistical Index Variable	R	R <sup>2</sup>	p.value
Long-term Debts to Assets Ratio and Profitability	- 0.129	0.0166	0.002

The table above indicates that there is a significant linear relationship between the two variables of long-term debts to assets and profitability. The independent variable of long-term debts to assets can predict 1.66 percent of the variation in the dependent variable of firms' profitability. The significance level of 0.002 is less than the required significance level of 0.01 and this is the reason for the negative significance relationship between two variables. Therefore, the hypothesis 1.2 is confirmed and H0 is rejected. That is, the firms which have long-term finance situations are confronted with less profitability. Generally, it is expected that increasing long-term debts increases the firm's profitability. One of the main reasons can be related to the employment of long-term loans and high fees which incur much more expense for the firms. On the other hand, the funds generated by the loans are mainly spent over long-term projects and the companies are not able to repay them and are confronted with heavy fines, then it is found that the costs of long-term loans are increasing. The other reasons include the high risk of long-term loans in comparison with the short-term debts which increases the interest costs and decreases profitability. The findings of this hypothesis are consistent with the results of Fama and French [3], Lara and Mesquita and Abor.

Subsidiary Hypothesis 1.3. The ratio of total debts to assets impacts firm's profitability.

Especially characteristics of the collected data are analyzed by using Pearson correlation coefficient.

**Table 5:** Results of Correlation Test for the Relationship between Total Debts to Assets and Firms' Profitability.

Statistical Index Variable	R	R <sup>2</sup>	p.value
Total Debts to Assets Ratio and Profitability	0.204	0.0416	0.0001

The table above documents that there is a significant linear relationship between two variables of total debts to assets and firm's profitability. The independent variable of total debts to the assets can predict 4.16 percent of the variation in the dependent variable of firms' profitability. The significance level is less than 0.01, and then there is positive significant relationship between the two variables. The positive association between the borrowing based finance leads to increase in profitability. This is because the Iranian firms have short-term debts in their debt's compounds and it is also a better way to finance. Based on the free cash flows hypothesis, borrowing based finance increases the value of the firms and the findings are consistent with the conclusions of Roden and Lewellen, Hadouck and James and Abor.

#### Testing the second hypothesis:

The second main hypothesis: working capital management influences on the firm's profitability.

According to the specific characteristics of the collected data, this hypothesis is tested by using Pearson correlation coefficient. In the above hypothesis,  $\rho$  is the regression coefficient between the elements of working capital management and firm's profitability.

**Table 6:** Results of Multivariate Regression Analysis for the Firms' Profitability Using the Elements of Working Capital Management.

Statistical Index Variable	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	P. value
Profitability and the elements of working capital	0.339	0.115	0.108	0.0001

As the table above shows, there is a significant linear relationship between the firms' profitability and the elements of working capital management (the value of 0.339). The independent variable of working capital management can explain 11.50 percent of the variation in the dependent variable of the firms' profitability. The significance level is 0.0001 and this is lower than the required significance level (0.01). Therefore, there is a significant linear relationship between these variables.

**Table 7:** The Results of Regression Analysis about the Coefficients of Independent Variables of the Second Main hypothesis.

$a + CCC_4 + \beta APP_3 + \beta ITID + \beta_2 ACP = \beta_1 Profitability$				
Explanatory Variable	Coefficient	t-statistics	p-value	VIF
Residuals		22.83	0.0001	
ACP	- 0.216	- 3.95	0.0001	1.59
ITID	- 0.132	- 2.09	0.008	1.17
APP	- 0.131	- 2.14	0.032	1.97
CCC	- 0.148	- 2.12	0.034	1.59
F-statistics		15.35		
p-value		0.0001		
Durbin-Watson		1.49		

The findings of regression analysis of the hypothesis are as follows: according to the findings about VIF and Durbin-Watson statistics, it can be concluded that the assumptions of non-multicollinearity and non-autocorrelation are confirmed. The table above shows that t-statistic of the working capital management is significant at 0.05 level. The significance level is less than the required significance level for each element of the working capital management. F-statistics is 15.35 and p-value is 0.0001 which describes that this statistic is

significant at 0.01 levels. Adjusted  $R^2$  shows that the explanatory variables might explain 10.80 percent of the total variation in the firms' profitability. Therefore, the second main hypothesis is confirmed and it can be declared that there is a significant relationship between the elements of working capital management and firms' profitability. The findings of this study are consistent with the results of Rahman *et al* [12], García-Teruel and Solano [5], Gill *et al* [6] and Enqvist *et al* [2] who suggested the significant role of working capital management on increasing profitability of the firms.

Sub-hypothesis 2.1: receivables management (reducing collection period) impacts firm's profitability.

According to the specific characteristics of the collected data, this hypothesis is tested by using Pearson correlation coefficient.

**Table 8:** The Results of Correlation Tests for the Relationship between Collection Period and Firms' Profitability.

Statistical Index Variable	R	R <sup>2</sup>	p. value
Average collection period and profitability	- 0.355	0.1260	0.0001

There is a significant linear relationship between the two variables of average collection period and firms' profitability. The independent variable of average collection period can explain 12.60 percent of the variation in the dependent variable of firms' profitability. The calculated significance level is lower than the required level (0.01) and it shows that there is a significant negative relationship between these two variables. Therefore, hypothesis 2.1 is confirmed. That is, reducing the average collection period in a firm leads to an essential impact on the profitability and the managers can produce positive values for the profitability of the shareholders. This merely occurs by the correct management of accounts receivable and collections. The findings are consistent with the results of Lazaridis and Tryfonidis [10], Rahman *et al* [12], García-Teruel and Solano [5], Gill *et al* [6] and Enqvist *et al* [2].

Sub-hypothesis 2.2: Inventory management (reducing maintenance period) impacts firm's profitability. According to the specific characteristics of the collected data, this hypothesis is tested by using Pearson correlation coefficient.

**Table 9:** The Results of Correlation Test for the Relationship between Inventory Turnover and Firms' Profitability.

Statistical Index Variable	R	R <sup>2</sup>	P. value
Inventory turnover in days and profitability	- 0.117	0.0136	0.005

According to the table above, the significant linear relationship between inventory turnover and firms' profitability is confirmed. The independent variable can predict 1.36 percent of the variations related to the dependent variable of firms' profitability. The calculated significance level is lower than the required level (0.01). This is an indicator of the linear significant relationship between the two variables at 99 percent significance level. Consequently, the hypothesis 2.2 is confirmed. Consequently, it is found that there is a significant inverse relationship between the inventory turnover and profitability. This means that by increasing the inventory turnover, the earnings before interest and tax will be declined. Based on this hypothesis and its findings, it is concluded that the managers can create positive value and profitability for the shareholders. The findings of this hypothesis are consistent with the results of Deloof, Elijelly, García-Teruel and Solano [5] and Enqvist *et al* [2].

Sub-hypothesis 2.3. Payment management (increasing payment period) impacts firm's profitability. The Pearson correlation coefficient is again used in testing this hypothesis.

**Table 10:** The Results of Correlation Test for the Relationship between Payment Period and Firms' Profitability.

Statistical Index Variable	R	R <sup>2</sup>	P. value
Average Payment period and profitability	- 0.125	0.0156	0.001

The table above confirms that there is a significant linear relationship between the two examined variables. The independent variable of payment period can predict 1.56 percent of the variation in the dependent variable of a firm's profitability. The significance level is lower than 0.01 and it asserts that there is a significant negative relationship between the two variables. This relationship is significant at 99 percent. Hypothesis 2.3 is then confirmed and  $H_0$  is rejected.

The findings indicate that there is an inverse significant relationship between average payment period and the firm's profitability. In other words, reducing the average payment period significantly impacts the profitability and it is concluded that managers create value and profits for their shareholders by reducing the average payment period and this requires the favorable management of the payments and application of the credit terms. These findings are consistent with the findings of Elijelly, Padachi, Lazaridis and Tryfonidis [10], Rahman *et al* [12], García-Teruel and Solano [5], Gill *et al* [6] and Enqvist *et al* [2].

Sub-hypothesis 2.4: Cash conversion cycle management impacts firm's profitability. This sub-hypothesis has been also tested by using Pearson correlation coefficient.

**Table 11:** The Results of Correlation Test for the Relationship between Cash Conversion Cycle and Firms' Profitability.

Statistical Index Variable	R	R <sup>2</sup>	P. value
Cash Conversion Cycle and profitability	- 0.201	0.0404	0.0001

The significant linear relationship between the two variables of cash conversion cycle and firms' profitability is confirmed. The independent variable can also predict 4.04 percent of the changes in the dependent variable of the firms' profitability. The significance level is 0.0001 which is absolutely lower than 0.01 and shows that there is a negative inverse relationship between the two variables. It is then declared that increasing cash conversion cycle decreases the earnings before interest and tax. The managers are suggested to reduce cash conversion cycle and create positive values and profitability of the shareholders. The results are similar to the findings of Elijelly, Padachi, Rahman *et al* [12], García-Teruel and Solano [5], Gill *et al* [6] and Enqvist *et al* [2].

The Third Main Hypothesis: working capital management and capital structure impact the profitability of the firm.

This hypothesis is tested by using the Pearson correlation coefficient.

In the above hypothesis,  $\rho$  is the regression coefficient between the elements of working capital management and capital structure with the firms' profitability.

**Table 12:** The Results of Multivariate Regression Analyses for Predicting the firms' Profitability through the Elements of Working Capital Management and Capital Structure.

Statistical Index Variable	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	p. value
Profitability and the elements of working capital management and capital structure	0.424	0.180	0.167	0.0001

Using multivariate regression coefficient, the significant linear relationship between the firms' profitability and the elements of working capital management and capital structure is confirmed at the level of 0.424. The independent variables can predict 18 percent of the variation in the firms' profitability. The significance level is lower than 0.01 and it shows that the two variables are significantly related as 99 percent.

**Table 13:** The Results of Testing the Regression Analysis of the Coefficients for each Independent Variable of the Third Main Hypothesis.

a + CCC + $\beta_8$ APP + $\beta_7$ ITID + $\beta_6$ ACP + $\beta_5$ DR <sub>3</sub> + $\beta$ LDR + $\beta_2$ SDR = $\beta_1$ profitability				
Explanatory variable	Variable coefficient	t-statistics	p-value	VIF
Residuals		19.51	0.0001	
ACP	- 0.210	- 3.88	0.0001	1.06
ITID	- 0.232	- 2.59	0.034	1.12
APP	- 0.121	- 2.06	0.040	1.15
CCC	- 0.110	- 2.62	0.045	1.91
SDR	0.392	2.69	0.007	1.95
LDR	- 0.322	- 4.46	0.0001	1.84
DR	0.267	1.82	0.046	1.78
F-statistics		14.67		
p-value		0.0001		
Durbin-Watson		1.30		

The findings of regression analysis for the research hypothesis are as follows:

The non-multicollinearity and non-autocorrelation assumptions are confirmed according to the results of VIF and Durbin-Watson statistics. As shown in the table above, t-statistic of the research variable is significant at the level of 0.05. F-statistic is equal to 14.67 and p-value is 0.0001 which describes that this statistic is significant at the level of 0.01. The coefficient of R<sup>2</sup> shows that the explanatory variables can explain 16.70 percent of the variation in the firms' profitability. Therefore, the third main hypothesis is confirmed and shows that there is a significant relationship between working capital management and capital structure on the firms' profitability. This is the result consistent with the findings of Zubayeri.

#### Conclusion:

Generally, decision making about different levels of working capital is frequent and time consuming. Firms mainly seek to maximize their profits in the long run; however, maintaining liquidity is another significant topic. The issue is that achieving earnings is equal to losing liquidity which might bring serious problems for a company. Therefore, there should be a balance between these two aims and they should be neutral. Due to the significance of these goals, ignoring profitability by a firm might not continue for a long time and it could cause

essential problems for the firms in terms of bankruptcy and insolvency. On one hand, profitable firms are more capable of financing investment projects through internal resources. According to information asymmetry and pecking order theory, firms mainly prefer internal finance because of the information transparency and the dissatisfaction of the managers from the income distribution. It can be then concluded that the financial leverage is negatively associated with the profitability. In addition, more profitable firms have higher solvency and might attract the attentions of the creditors in granting long-term loans. Based on the essentiality of this study, the impact of working capital management and capital structure on the profitability of the listed firms of the Tehran Stock Exchange during a period covering the years from 2001 to 2010. Sixty firms have been qualified as the sample. To analyze the collected data, multivariate regression model has been employed. The impact of working capital management and capital structure on the profitability has been examined in terms of three main hypotheses and seven subsidiary hypotheses. The findings revealed that the cash conversion cycle, average collection period, inventory turnover in days and average payment period are significantly and inversely associated with the profitability. As a consequence, the managers can reasonably increase the profitability. In addition, it was found that there is a positive significant association between short-term debts and total debts with the profitability; this relationship, however, is positive for the long-term debts and profitability.

#### REFERENCES

- [1] Chowdhury, A., S.P. Chowdhury, 2010. Impact of capital structure on firm's value: Evidence from Bangladesh. Peer-reviewed and open access journal, 3: 111-122.
- [2] Enqvist, J., G. Michael, J. Nikkinen, 2011. The impact of working capital management on firm profitability in difference business cycles: Evidence of Finland. www.ssrn.com.
- [3] Fama, E.F. and K.R. French, 1998. Taxes, Financing Decision and Firm Value, *Journal of Finance*, 53: 819-43.
- [4] Frank, M.Z. and V.K. Goyal, 2009. Profits and Capital Structure, www.ssrn.com.
- [5] García-Teruel, P.J. and P. Martínez-Solano, 2007. Effects of Working Capital Management on SME Profitability. *International Journal of Managerial Finance*, 3(2): 164-177.
- [6] Gill, A., N. Bigger, N. Mathur, 2010. The Relationship Between Working Capital Management And Profitability: Evidence From The United States, *Business and Economics Journal*, Volume 2010: BEJ-10.
- [7] Izadi Niya, N. and A. Taaki, 2010. The Effect of Working Capital Management on profitability of listed companies in Tehran Stock Exchange. *Journal of Financial Accounting*, Second Year, 5: 120-139.
- [8] Jamal Zubairi, H., 2010. Impact of working capital management and capital structure on profitability of firms listed on Tehran stock exchange, *Institute of Business Management Last Revised*.
- [9] Jiang, F., Y. Qu, Z. Lu and Y. Li, 2010. Product Market Competition and Dynamic Adjustment in Capital Structure". *Frontiers of Business Research in China*, 4(1): 101-129.
- [10] Lazaridis, I., D. Tryfonidis, 2006. Relationship Between Working Capital Management and Profitability of Listed Companies in the Athens Stock Exchange. *Journal of Financial Management and Analysis*, 19.
- [11] Nobanee, H., M. Al-Hajjar, 2010. A Note on Working Capital Management and Corporate Profitability of Japanese Firms, Abu Dhabi University and The Hashemite University Date Posted: July 15.
- [12] Raheman, Abdul, Afza, Talat, Qayyum, Abdul, Ahmed Bodla, Mahmood, 2010. Working Capital Management and Corporate Performance of Manufacturing Sector in Pakistan, *International Research Journal of Finance and Economics*, 47: 151-163.
- [13] Samiloglu, F., K. Demirnes, 2008. The Effect Of Working Capital Management On Firm Profitability: Evidence From Turkey, *The International Journal of Applied Economics and Finance*.