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## **The Relationship between Working Capital Strategies and Abnormal Return in listed Company in Tehran Stock Exchange (TSE)**

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### **ABSTRACT**

Working capital management is a highly sensitive area of financial management. These include decisions about the amount and composition of current assets and how these assets are financed. Working capital management effectively pursues growth opportunities for Funds to be allocated efficiently and can properly be applied to the opportunities. Working capital management process, including decisions about various aspects of the cash investment, to maintain a certain level of inventories, accounts receivable and payable management. The main hypothesis of this study attempt to investigate the relationship between abnormal returns and the business strategies of working capital in companies listed in Tehran Stock Exchange. To test the hypothesis of multivariate linear regression combination (year - the company) has been used. In this approach, all information collected in 65 companies in 9 years (from 2003 to 2011) entered into the regression equation. The results show that different working capital strategies have not any significant effect on the acquisition of abnormal returns for investors. But conservative financing strategy will result efficient accounting earnings high for Iranian listed firms. Indeed, the type of investment strategy has no relationship with corporate profitability. Also, the control variables, firm size, and the strength of corporate governance have a high significant relation to the acquisition of abnormal returns.

**Keywords:** Working capital management, financing strategies, investment strategy, corporate governance

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### **INTRODUCTION**

One of the main tools to broaden and deepen the capital market is improving the level of analysis in this market. Without extensive and comprehensive researches and analyses on the capital market, we can't expect that its position grow in national economy. A brief survey of the developments of the Tehran Stock Exchange (TSE) that is the linchpin of the capital market in Iran shows that that gap of analysis has always prevailed on this market [1-6].

Efficient management of working capital means planning and controlling current assets and liabilities in a manner that reduces the risk of inability to pay short-term obligations and avoids excessive investments in these assets [7-12]. For the survival of the company, its liquidity depends to operating cash flows generated in the company's assets.

### **RESEARCH HYPOTHESES**

1. There is a significant relationship between financing strategy and abnormal returns.
2. There is a significant relationship between financing strategy and accounting returns.
3. There is a significant relationship between the investment strategy and earning abnormal returns.
4. There is a significant relationship between the investment strategy and accounting returns.

In order to test the research hypotheses, the regression model is used.

$$\text{Model (1) } Return_t = \beta_0 + \beta_1 GIndex_t + \beta_2 Size_t + \beta_3 Growth_t + \beta_4 M/b_t + \beta_5 CD/AT_t + \varepsilon$$

$$\text{Model (2) } ROE_t = \beta_0 + \beta_1 GIndex_t + \beta_2 Size_t + \beta_3 Growth_t + \beta_4 \frac{M}{b_t} + \beta_5 \frac{CD}{AT_t} + \varepsilon$$

$$\text{Model (3) } Return_t = \beta_0 + \beta_1 GIndex_t + \beta_2 Size_t + \beta_3 Growth_t + \beta_4 M/b_t + \beta_5 CA/AT_t + \varepsilon$$

$$\text{Model (4) } ROE_t = \beta_0 + \beta_1 GIndex_t + \beta_2 Size_t + \beta_3 Growth_t + \beta_4 M/b_t + \beta_5 CA/AT_t + \varepsilon$$

**In which:**

The amount of  $CA_{it}/AT_{it}$  shows that ratio of current assets to total assets. And the amount of  $CD_{it}/AT_{it}$  shows the ratio of current liabilities to total assets.

**Size of the company (SIZE):** The natural logarithm of the average of total market value of shares of the company.

**Access to growth opportunities (M/B):** The average of market value to book value of the company or the average ratio of price to earnings (P/E) [1,2].

**Sales margin (GM):** Changes in gross profits of the current year compared to the previous year.

$$\Delta GM = \left( \frac{S_t - CGS_t}{S_t} \right) - \left( \frac{S_{t-1} - CGS_{t-1}}{S_{t-1}} \right)$$

**Research approach**

Given the importance and application of the results of this research that can provide a more suitable context for investment decisions. So in terms of objective, the present study is an applied research and in terms of nature and method, it is a descriptive-correlation research.

**Statistical population**

In this research, the studies population includes all companies listed on the Tehran Stock Exchange (TSE) from 2002 to the end of 2012.

**RESULTS AND DISCUSSION**

**Result of the first hypothesis testing**

For testing the first hypothesis, the following multivariate regression model is used.

$$Return_t = \beta_0 + \beta_1 GIndex_t + \beta_2 Size_t + \beta_3 Growth_t + \beta_4 M/b_t + \beta_5 CD/AT_t + \varepsilon$$

The results of first hypothesis testing are shown in the table (1), the significance level of F Limer statistic (Chow) is below the level of acceptable error and the fixed effects model is selected for the regression. Durbin-Watson statistic is between 1.5 and 2.5; it shows that there is no correlation between error components of the model. The significance level of F statistic (0.0000) is below the level of acceptable error (0.05) and the regression model is significant. The results of this table show that there is no significant relationship between the kind of financing strategy and earning abnormal returns by shareholders. These results show that larger companies have lower returns for their shareholders.

**Table [1]**

Variable	Symbol	Coefficient	t statistic	Prob.
Fixed amount	C	730.74	1.49	0.13
The power of corporate governance	G-Index	69.82	2.36	0.01
Size of the company	Size	-94.11	-2.24	0.02
Sales margin growth	Growth	-0.17	-0.08	0.93
Growth opportunities	M/B	6.93	0.66	0.50
Financing strategy	CD/AT	4.66	0.01	0.98
F statistic		8.549	D.W	2.05
The significance level of F (Prob.)		0.04	R <sup>2</sup>	0.066
			R <sup>2</sup> A	0.058
Serial autocorrelation test (Godfrey brush test)			1.158	0.119
Heterogeneity of variance test (White test)			3.927	0.000
Panel type	Chow test (Fixed effects)	2.532	0.007	Approval
	Hausman test (Random effects)	19.842	0.001	Rejection

**Result of the second hypothesis testing**

For testing the second hypothesis, the following multivariate regression model is used.

$$ROE_t = \beta_0 + \beta_1 GIndex_t + \beta_2 Size_t + \beta_3 Growth_t + \beta_4 M/b_t + \beta_5 CD/AT_t + \varepsilon$$

The results of second hypothesis testing are shown in the table (2), the significance level of F Limer statistic (Chow) is above the level of acceptable error and Pooled data model is selected for the regression. The significance level of F statistic (0.0000) is below the level of acceptable error (0.05) and the regression model is significant. The results of this table show that there is a negative significance between the kind of financing strategy and accounting returns. In other words, companies that have adopted a more conservative financing strategy have been able to earn higher accounting returns.

**Table 2**

Variable	Symbol	Coefficient	t statistic	Prob.
Fixed amount	C	-1.163	-3.83	0.00
The power of corporate governance	GIndex	-0.030	-1.65	0.09
Size of the company	Size	0.152	5.83	0.00
Sales margin growth	Growth	-0.007	-5.75	0.00
Growth opportunities	M/B	0.06	9.54	0.00
Financing strategy	CD/AT	-0.27	-1.79	0.07
F statistic		46.93	D.W	1.80
The significance level of F (Prob.)		0.000	R <sup>2</sup>	0.29
			R <sup>2</sup> A	0.28
Serial autocorrelation test (Godfrey brush test)		1.651		0.061
Heterogeneity of variance test (White test)		2.557		0.000
Panel type	Chow test (Fixed effects)	1.324	0.221	Rejection
	Hausman test (Random effects)	-	-	-

**Result of the third hypothesis testing**

For testing the third hypothesis, the following multivariate regression model is used.

$$Return_t = \beta_0 + \beta_1 GIndex_t + \beta_2 Size_t + \beta_3 Growth_t + \beta_4 M/b_t + \beta_5 CA/AT_t + \varepsilon$$

The results of third hypothesis testing are shown in the table (3), the significance level of F Limer statistic (Chow) is below the level of acceptable error and the fixed effects model is selected for the regression. Durbin-Watson statistic is between 1.5 and 2.5; it shows that there is no correlation between error components of the model. The significance level of F statistic (0.0000) is below the level of acceptable error (0.05) and the regression model is significant. The results of this table show that there is no significant relationship between the kind of investment strategy and earning abnormal returns by shareholders.

**Table 3**

Variable	Symbol	Coefficient	t statistic	Prob.
Fixed amount	C	635.42	1.48	0.13
The power of corporate governance	GIndex	69.16	2.36	0.01
Size of the company	Size	-89.47	-2.17	0.02
Sales margin growth	Growth	-0.18	-0.08	0.93
Growth opportunities	M/B	7.37	0.71	0.47
Financing strategy	CD/AT	88.95	0.77	0.44
F statistic		1.91	D.W	2.05
The significance level of F (Prob.)		0.06	R <sup>2</sup>	0.03
			R <sup>2</sup> A	0.04
Serial autocorrelation test (Godfrey brush test)		1.240		0.128
Heterogeneity of variance test (White test)		3.249		0.000
Panel type	Chow test (Fixed effects)	2.631	0.006	Approval
	Hausman test (Random effects)	18.452	0.001	Rejection

**Result of the fourth hypothesis testing**

For testing the fourth hypothesis, the following multivariate regression model is used.

$$ROE_t = \beta_0 + \beta_1 GIndex_t + \beta_2 Size_t + \beta_3 Growth_t + \beta_4 M/b_t + \beta_5 CA/AT_t + \varepsilon$$

The results of fourth hypothesis testing are shown in the table (4), the significance level of F Limer statistic (Chow) is above the level of acceptable error and Pooled data model is selected for the regression. Durbin-Watson statistic is between 1.5 and 2.5; it shows that there is no correlation between error components of the model. The significance level of F statistic (0.0000) is below the level of acceptable error (0.05) and the regression model is significant. The results of this table show that there is no significant relationship between the kind of investment strategy and accounting returns.

**Table (4)**

Variable	Symbol	Coefficient	t statistic	Prob.
Fixed amount	C	-1.42	-5.31	0.00
The power of corporate governance	GIndex	-0.03	-1.92	0.05
Size of the company	Size	0.16	6.32	0.00
Sales margin growth	Growth	-0.01	-5.68	0.00
Growth opportunities	M/B	0.06	9.32	0.00
Financing strategy	CD/AT	-0.03	-0.47	0.68
F statistic		47.01	D.W	1.91
The significance level of F (Prob.)		0.00	R <sup>2</sup>	0.28
			R <sup>2</sup> A	0.28
Serial autocorrelation test (Godfrey brush test)		1.758		0.057
Heterogeneity of variance test (White test)		2.823		0.000
Panel type	Chow test (Fixed effects)	1.425	0.325	Rejection
	Hausman test (Random effects)	-	-	-

#### The results of the first hypothesis testing

The results of the 1<sup>st</sup> hypothesis testing show that there is no significant relationship between the kind of financing strategy and earning abnormal returns by shareholders. This results show that larger companies have lower returns for their shareholders. Also companies with stronger corporate governance have higher returns for their shareholders. These analyses indicate that the model (1) explains approximately 6% of shareholders' returns.

#### The results of the second hypothesis testing

The results of the 2<sup>nd</sup> hypothesis testing show that there is a negative significance between the kind of financing strategy and accounting returns. In other words, companies that have adopted a more conservative financing strategy have been able to earn higher accounting returns. Also there is a significant relationship between all control variables including the size of the company, the power of corporate governance, sales growth, access to growth opportunities and accounting returns. These results show that larger companies have earned higher accounting returns. Also companies that had access to higher growth opportunities were able to earn higher returns. These analyses show that the model (2) explains approximately 28% of shareholders returns.

#### The results of the third hypothesis testing

The results of the 3<sup>rd</sup> hypothesis testing show that there is no significant relationship between the kind of investment strategy and earning abnormal returns by shareholders. However, among control variables, the size of the company and the power of corporate governance have significant relationship with earning abnormal returns. These results show that larger companies have lower returns for their shareholders. Also companies with stronger corporate governance have higher returns for their shareholders. These analyses indicate that the model (3) explains approximately 3% of shareholders returns.

#### The results of the fourth hypothesis testing

The results of the 4<sup>th</sup> hypothesis testing show that there is no significant relationship between the kind of investment strategy and accounting returns. Also there is a significant relationship between all control variables including the size of the company, the power of corporate governance, sales growth, access to growth opportunities and earning accounting returns. These results show that larger companies have earned higher accounting returns. Also companies that had access to higher growth opportunities were able to earn higher returns. These analyses indicate that the model (4) explains approximately 27% of shareholders returns.

## REFERENCES

1. Ball, R. (1978), "Anomalies in Relationships between Securities' Yields and Yield-Surrogates", *Journal of Financial Economics*, Vol 6, pp. 103-126.
2. Abdul Raheman and Mohamed Nasr(2007), Working Capital Management and Profitability – Case of Pakistani Firms, *International Review of Business Research Papers*, Vol.3 (2), pp.275–296.
3. Abel Maxim(2008), The Impact of Working Capital Management on Cash Holding Mid Sweden University, Department Of Social Science.
4. Ali Uyar(2009), The Relationship of Cash Conversion Cycle with Firm Size and Profitability: An Empirical Investigation in Turkey, *International Research Journal of Finance and Economics*, Issue 24.
5. Bodie Z. and R. C. Merton, *Finance*, International Edition, Prentice-Hall, New Jersey, 2000
6. Banz Rolf. W., (1981), "The Relation between Return and Market Value of Common Stock", *Journal of Financial Economics*, Vol 9, pp.3-18.
7. Bagherzadeh, Saeed, (2003), "The Cross-section of Expected Stock Returns in Iranian Stock Market: Some Empirical Evidence", *The Iranian Journal of Financial Research*, Vol 15, pp. 141-160.
8. Berk, J. (1995), 'A Critique of Size Related Anomalies,' *Review of Financial Studies*, Vol. 8, pp. 275–86.
9. Biddle, G. and A. Hunt (1999), 'An Equity Cash Flow Perspective on the Book to Market Equity Ratio's Ability to Predict Stock Returns,' *Working Paper* (University of Washington).
10. Breeden, Douglas, (1979), "An Inter temporal Asset Pricing Model with Stochastic Consumption and Investment Opportunities," *Journal of Financial Economics*, Vol. 7, pp. 265-296.
11. Breeden, Douglas, Michael Gibbons, and Robert Litzenberger, (1989), "Empirical Tests of the Consumption-Oriented CAPM," *Journal of Finance*, Vol. 44, pp. 231-262.
12. Clubb, C., Andreou, A. Chariton, A., (2000), "The value Relevance of Earnings and Cash flow: Empirical Evidence for Japan". *Journal of International Financial Management and Accounting*, Vol 22, pp. 1