

## To investigate relation between liquidity leverage and management of real profit

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**Abstract:** The profit is one of the most important reasons for attract investors. The leverages can be helper by perfect management at same time. The results of this research which has been performed between 50 superior companies of Tehran Stock Exchange during 2008-2013 and discuss three dependent variables of non-Ordinary operational cash currents, non-Ordinary optional costs, non- Ordinary operational production cost pertinent to real profit criteria and liquidity leverage as independent variable. The data have been extracted from database and then have been analyzed by Excel and Eviews software. Combined data have been obtained by multi variable regression analysis and showed that there is meaningful and reverse relation between liquidity leverage and criteria of real profit management.

**Key words:** Liquidity leverage; Real profit; Non-Ordinary operational cash currents; Non-ordinary optional operational costs; No- ordinary operational production cost

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### 1. Introduction

To maximize wealth of shareholders, maximize profit, to play ethical duties and social responsibilities are the aims of managers and at last, aim of our companies. One of the most important effective factors on said aims is manner of financial supply of company.

Financial management supplies fiscal resources by make decision about debts and rights of owners of shares and apply long term property and their investment by making decision about current properties. (Razaghi, 2007) thus, debt is one of the most important main parts of income structure which plays vital role in management of financial supply. In the financial structure of companies, debt can increase accounting profit because of tax advantages and in turn, increases rate of interest and in other word, because of interest costs and lacking commitments in maturity, can increase financial risk and at last reduces price of stock market and reduces efficiency of share.

Financial supply has different shapes by debts. Some of them are: payable accounts and documents, payable costs, types of loans and bonds. Some of debts are regarded as banking loan and financial drafts and some other are payable accounts, payable costs and retired debts which are made as transaction by suppliers, customers and staff and are regarded as operational debt. It is obvious that manner of financial debt can be effective on accounting profit and anticipated yield on inefficient markets.

And in another side, determination of yield of every share in risk is one of the most important

problems against investment in LLP companies. In fact, investor is looking to maximize his profits in the said market and because of it, if he/she can predicate yield or price of draft accurately, he can make decision about purchase, maintain or sale of bonds and maximize his profits.

Financial risk shows face of economical units and global economy. A successful commercial institute doesn't concentrate on profit only but pay attention to risk management. Risk and efficiency move together and are necessary in order to maximize efficiency. The leverages point to application of sources and amounts which make cost for company. More leverage for debts for company, financial risk is more. Risk due to leverage is under control of management. Now the question is here: do liquidity leverage and management of real profit communicate each other? Is scale of liquidity leverage effective on real profit of company?

### 2. Necessity of Research

It seems necessary to comprehend effects of financial supply on efficiency of shares for managers and shareholders. Because, in one side, it helps to managers in playing their responsibilities like decision on select manner of suitable financial supply and maximization of company value which the aim of non-profit organization and in other side, give knowledge to investors and shareholders in decision ( Arab, 2007).

Some of financial managers believe that myriad concept is one of the most important concepts and has special placement on capital structure. The company doesn't have debt, is capital structure completely. But we don't have this company and all companies use different rates of leverage. But the

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question is here, how much debt will be used by company in capital structure. Are there recognized rates for debt in capital structure or not (Ghalibaf Asl, 1994)?

### 3. Literature Review and Background

According to accounting standards like main reporting aims, financial statement, and risk predication are pertinent to future cash current. In other word, accounting system will help in risk predication upon future cash current. In financial literature, risk is regarded as difference of efficiency and anticipated efficiency and is two classes: first, the risks are pertinent to internal factors of company like management risk, liquidity risk, and risk of disability payment and are regarded as systematic risk.

Second cluster: The risks are not properties of some companies but they are pertinent to general terms like economic, political, social situations and are recognized as systematic subject ( $\beta$ ).

Since systematic system is non- control and cannot play role in managers decision and investment. This research is looking to find relation between one of the systematic risk (liquidity leverage) and management of real profit. Pyramid rates determine scale which is supplied by the owners and compare them by amounts which are as loan and measure their rates. (Toghyani, 2008)

Probability of disability on obtaining its required cashes is regarded as liquidity risk by toleration necessary and logical costs and liquidity management means devotion of liquidity resources for paying debts of different investments which is done by manager during time in order to maximize wealth of investors. (Gallinger, 1991). The liquidity is consumable amounts are accessible by toleration acceptable costs as sufficient (Rose, 1999), now, we consider some of researches.

Modigliani and Miller investigated capital structure for the first time at 1958, the subject was that is of debt in capital structure effective on value of company and capital cost? They concluded that use of debts had positive effects on value of companies and will be influenced on average of capital cost. Other researchers like Bradley, Jarrell and Kim, Bhandari Operand Titman Rajan and Zingales, Singh and Hodder, discussed effect of financial leverage on efficiency and value of companies and concluded that financial leverage had effect on efficiency and value of companies.

2. Donaldson performed research about financial supply of great companies and observed that management support internal financial sources as source and rejects external sources (Donaldson, 1961)

3. In this research, effect of the first financial supply is discussed by borrowing in companies that supplied financial at past by increasing capital. The main result showed that financial supply is negative by debt on price of shares. Thus, this hypothesis is

enhanced that debt reduces growth opportunity of company. (Dashpande, 1985)

4 Richardson and Sloan in research named relation of external financial supply to future efficiency of share, investigated all external financial supply and found that net changes of financial supply has negative relation to anticipated efficiency. At last, they found that predication of future efficiency depends on capital structure relatively. (Richardson and Scott, 2003)

5 Nissim and Penman analyzed leverage and discussed leverage debt due to operation and total leverage on proficiency and rate of P/B and concluded that debt leverage due to operation had positive effects on proficiency and rate of P/B/ (Nissim and Penman, 2003)

6 Hamid Dehghani Firouzabadi considered effect of financial supply on value of stock exchange companies. In this research, two hypothesizes are cited in order to test financial supply (equity, long term debt) in Iran's market: first hypothesis, financial supply reduces price of shares by increasing capital. The results showed that price of share don't reduce after increasing positive capital. Second hypothesis, financial supply increases price of share by obtaining loan. The results derived from second hypothesis showed that price of share don't increase after financial supply. Lacking non-banking financial institutes, obtain loan and financial facilities from banks and some of special institutes and easiness of equity and other factors are probable results of this research in Iran's market to capital markets of European and American countries. (Dehghani Firouzabadi, 1998)

7. Seyed Javad Delavari investigated methods of financial supply on rate of efficiency of the owners of the companies in Tehran Stock Exchange. In this research, the companies that participated during 5 years and increased financial supply by loan, have been selected and were tested by data inserted in financial statement by obtain loan and increase capital. The results showed that although rate of properties has significant difference to rate of efficiency for companies that borrowed loan but rate of efficiency of the owners don't have significant difference to other companies which participated in Tehran Stock Exchange. (Delavari, 1998)

8 Mir Karim Ebadi dolatabadi investigated effect of financial supply (external resources) to efficiency and shares of companies accepted during 1996-2000. In this research, firstly, effect of capital and long term loan on price share has been investigated. Then, annually efficiency of companies compared which used two external resources. The results showed that effect of equity to long term loan is more. Also, capital increment has more effects on efficiency of share compared borrowing (Ebadi dolatabadi, 2002).

### 4. Research Aims

Discussion relation between liquidity leverage and non- Ordinary operational cash currents

Discussion relation between liquidity leverage and non-Ordinary operational production cost

Discussion relation between liquidity leverage and optional non-Ordinary operational costs

**5. Hypothesizes**

There is significant relation between liquidity and non-Ordinary operational cash

There is significant relation between liquidity relation and non-Ordinary operational production costs

There is significant relation between liquidity leverage and non-Ordinary optional operational production costs.

**6. Research Model**

Liquidity Leverage non Ordinary operational cost

production cost Non Ordinary operational

production cost Non Ordinary Optional

**7. Research Domain**

- a- Subjective domain of Research: discussion relation between liquidity leverage and management of real profit in 50 superior companies of Tehran Stock Exchange
- b- Time domain of Research: as for time limitations and access to financial data of companies, all capability companies have been discussed during fiscal years 2008-2013 for confirmation and rejection of all hypothesizes.
- c- Spatial domain of Research: the spatial domain is 50 superior companies that are on Tehran Stock Exchange.

**8. Statistical society and sample**

The statistical society consists of 50 companies in Tehran Stock Exchange during 2008-2013 and their data is available.

**9. Method for collecting data**

The data required has been renewed by referral to financial auditory statements of companies accepted in Tehran Stock Exchange and Rahavard software. The tools for collecting data consist of observation, statistical test, database www.tse.ir and www.codal.ir, Excel and Eviews software. The information pertinent to theoretical base is as librarian and has been collected by books and Persian and English sources.

**10. Methodology**

This research is descriptive and applied from methodology point of view. In order to compile text

and literature, librarian study has been performed. Also, research is semi experimental and is performed by past approach (post event). Post event strategy predicates on discussion of researcher after events and collecting data as if they exist naturally or is obtained without direct intervention of researcher as if it is not possible to manipulate independent variables.

**11. Analyzing data**

In this research, multi variable regression method has been used. Independent variables are non-Ordinary operational cash, non-Ordinary production cost and optional production cost and liquidity leverage has been selected as independent variable. And size of company has been used as control variable. Also, combinational data has been used in order to test of hypothesizes. In order to determine and estimate models, F Limer test and Housman test have been used. And the analysis of the results was done as F,t test. Following model is used in order to test hypothesizes:

$$RE\ it = \alpha + \beta\ 1\ Leverage\ it + \beta\ 2\ Size\ it + \epsilon\ it$$

RE it: criteria of real profit management for company I in end of fiscal year t

Leverage it: liquidity leverage of company I in end of fiscal year t

Size it: size of company i in end of fiscal year t

Eit: Remaining

Evaluate Non Ordinary operational cost: In this research, model 1 of research 2010 has been used for measuring non Ordinary operational cost

$$\frac{CFO_t}{TA_{it-1}} = \alpha_0 \frac{1}{TA_{it-1}} + \alpha_1 \frac{Sales_t}{TA_{it-1}} + \alpha_2 \frac{\Delta Sales_t}{TA_{it-1}} + \epsilon_{it}$$

CFO it: operational cost of company I in end of fiscal year t

TAit-1: total properties of company I in end of fiscal years t

Sales it: sale of company I during year t

ΔSalesit: sale changes of company I in end of year t

Eit: remaining

Measure non ordinary production cost:

$$\frac{PROD_t}{TA_{it-1}} = \alpha_0 \frac{1}{TA_{it-1}} + \alpha_1 \frac{Sales_t}{TA_{it-1}} + \alpha_2 \frac{\Delta Sales_{it-1}}{TA_{it-1}} + \delta_{it}$$

PRODit: production cost or final cost of sold commodity+ changes on inventory

ΔSalesit-1: sale changes

Δit: remaining

Non ordinary optional costs:

$$\frac{DISEXP_{it}}{TA_{it-1}} = \alpha_0 \frac{1}{TA_{it-1}} + \alpha_1 \frac{Sales_{it}}{TA_{it-1}} + \lambda_{it}$$

DISEXPit: optional cost or sale and administrative cost

Δit: remaining

Measure variable of liquidity leverage:

We can obtain changes percent of company liquidity by using percent changes in net profit of company.

**12. Analysis data**

**12.1. Results of hypothesis 1**

Based on hypothesis 1, liquidity leverage has significant relation to non-ordinary operational costs. For test of model, regression test has been used which used F Limer test

**Table 1: F Limer test**

F Limer Test	p-value
<b>4.56</b>	<b>0.00</b>

**Table 2: Housman test**

Housman Test	p-value
<b>65.28</b>	<b>0.00</b>

As for p-value obtained which equals to zero from Housman test, zero suppose of Housamn test is rejected and method for effects are accepted. P-value  $\leq 0.05$

**Table 3: Results of hypothesis 1**  
 $RE\ it = \alpha + \beta 1\ Leverage\ it + \beta 2\ Size\ it + \epsilon\ it$

Size	Leverage	A	Variables
-0/0867	-0/0423	0/333	Estimation coefficient
0/000	0/000	0/000	Significant level
-2/989	-2/102	5/805	Statistical T
11/001	Statistics F	2/075	Watson dorbin
0/000	Statistics probable t	0/041	Mediated determination coefficient

Significant level of liquidity leverage is 0/000 and smaller than 0/05. Then, from statistical point of view, it is significant and first hypothesis is not rejected. In other word, there is meaningful relation between management of real profit by manipulation of operational cash currents and liquidity leverage. In order to determine self-correlation in results, dorbin Watson test equal to 2/075. And since this value is between crisis value 1/5 and 2/5, there is not difficulty between self-correlation and remaining. F Fisher test is lower than 0/05, thus total model estimated is significant from statistical point of view. And determination coefficient shows independent variables can explain 005 of variable changes.

According to hypothesis 1, liquidity leverage has significant relation to non-ordinary operational cost. In order to test, regression model has been used which is used F Limer test and the results are as following:

**Table 4: F Limer test**

F Limer Test	p-value
<b>11.23</b>	<b>0.00</b>

**Table 5: Housman test**

housman Test	p-value
<b>4532</b>	<b>0.00</b>

As for p-value which is obtained from Housman test and equals to zero, zero test of Housman test is rejected p-value<0.05 and fixed effects are accepted.

**12.2. Results of hypothesis 2**

**Table 6: Results of hypothesis 2**  
 $RE\ it = \alpha + \beta 1\ Leverage\ it + \beta 2\ Size\ it + \epsilon\ it$

Size	Leverage	$\alpha$	Variable
-0/0879	-0/0676	0/399	Estimated level
0/000	0/000	0/000	Significant level
-4/009	-2/957	6/4001	T statistics
12/337	F statistics	1/506	Dorbin Watson
0/000	F probable statistics	0/046	Mediated determination coefficient

Significant level of liquidity leverage is 0/000 and lower than 0/05, then from statistical point of view, there is significant relation between management of real profit by manipulation of operational cash and liquidity leverage. In order to determine self-correlation in results, dorbin Watson equals to 1/506. And since this value is between 1/5 and 2/5 and there is no difficulty between residuals. F Fisher statistics is lower than 0/05. Thus, total estimated value is significant from statistical point of view and determination coefficient show that independent variables can explain 0/05 of variable changes.

Based on hypothesis 1, liquidity leverage has significant relation to non-ordinary operational cost. In order to test, regression model has been used and F Limer test is used and the results are as following:

**Table 7: F limer test**

F limer test	p-value
<b>6.03</b>	<b>0.00</b>

**Table 8: Housman test**

Housman test	p-value
<b>55.34</b>	<b>0.00</b>

**12.3. Results of hypothesis 3**

As for p-value which is obtained from Housman test and equals to zero, Housman test is rejected (p-

value  $\leq 0.05$ ) and effects method is accepted.

**Table 9:** Results of hypothesis 3

RE it = $\alpha + \beta_1$ Leverage it + $\beta_2$ Size it + $\epsilon$ it			
Size	Leverage	A	Variable
-0/0921	-0/021	0/404	Estimated coefficient
0/000	0/000	0/000	Significant level
-3/089	-2/004	5/382	T statistics
14/367	F statistics	1/875	Dorbin Watson
0/000	f probable statistics	0/044	Mediated determination coefficient

Significant level of liquidity leverage is 0/000 and lower than 0/05, then it is significant from statistical point of view and first hypothesis is not rejected. In other word, there is significant relation between management of real profit by manipulation and liquidity leverage. In order to determine self-correlation in results, dorbin Watson equals to 1/875 and since this value is between crisis value 1/5 and 2/5, there is not difficulty on self-correlation. F fisher test is lower than 0/05, thus total estimated model is significant from statistical point of view. And determination coefficient shows that independent variables can explain 0/05 of changes.

**13. Conclusion**

The results of research were performed between 50 superior companies of Tehran Stock Exchange during 2008-2013 which considered by discussion three dependent variables like non ordinary operational cost, optional costs, and non-ordinary operational cost pertinent to real profit and liquidity leverage as independent variable. Data has been extracted from database and then analyzed by Excel and Eviews software. By multi variable regression, the result is that there is significant and reverse relation between liquidity leverage and criterion of profit.

**References**

Arab A. 2007, Relation between financial supply of inter organizational and operational performance of companies, Master Degree Thesis, Islamic Azad University, Neyshabour Branch

Dashpande, (1985), "Capital structure chang: An Analysis of Investment and Financing Effects", (Debt issue, All – Equity, Event study, Leverages). Thesis of PHD. The Pensylvania University.

Dehghani Firouzabadi H. 1998, Effect of methods for financial supply upon value of shares of companies in Tehran Stock Exchange, Imam Sadegh University, Islamic Thought and Management Faculty

Donaldson, F., Elvin. Peahlk Johon, (1961), "Corporation Finance Policy and management".

Ebadi dolatabadi M, 2002, Discussion effects of methods for financial supply (external resources)

upon efficiency and price of companies acceted in Tehran Stock Exchange, Master Thesis of Mazandaran University, Human and Social Faculty

Gallinger, George, P.Basil Healey,(1991),"Liquidity Analysis And Management", Second Edition, McGraw-Hill International Editions.

Ghalibaf asl H. 1994, Discussion effect of capital structure ( financial leverage) upon systematic risk of ordinary companies in Tehran Stock Exchange, Master Degree thesis, Tehran University, Faculty of Management

Khaki G R, 2002, Methodology in Management, center of scientific publication of Islamic Azad University, second edition

Modigliani., F and Miller, M.,(1958), "the Cost of Capital, Corporation Finance and the Theory of Investment", American Economic Review, Pp. 261-297.

Nissim, D., and Penman, S.,(2003), "Financial Statement Analysis of Leverage and How It Inform About Profitability and Price-to-Book Ratios", Review of Accounting Studies 8. Pp. 531– 560.

Peyno R. Translate by Ali Jahankhani, Ali Parsian 2007, Financial Management, second volume, study organization and compilation of human books (samt), Tehran, eleventh edition

Raee, R. Ahmad Talangi, 2004, management of advanced investment, Samt Press

Razaghee M. 2007, Discussion of methods for financial supply of industry companies in Tehran Stock Exchange, Doctorate Thesis

Richardson, Scott a., Sloan, (2003),"External Financing and Financing and Future Stock Returns", the Rodeneyl, White Center for Financial Research, from: www.ssrn.com/abstract=285008

Rose, P., (1999), "Commercial Bank Management", Fourth edition, McGraw-Hill International Editions.