

# The effect of financial flexibility companies listed on the stock exchange capital structure decisions

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**ABSTRACT:** Flexibility played an important role in enabling managers to invest in the future plays. The purpose of this study was to evaluate the impact of the financial flexibility of companies listed on the stock exchange is capital structure decisions. The Survey of aim, an applied research. In terms of research design to rely on historical data, the event and its method of inductive inference is correlational. The study population study the listed companies in Tehran Stock Exchange over a period of five years (1392-1388) is. Finally, with regard to the limitations of the study, data were collected on 125 companies and Then, using a Cochran formula 94 companies with a convenient random sampling (samples available) were selected.. Document the results for statistical analysis and provide the final solution, the researchers statistical methods using SPSS software has attempted to analyze the questions and hypotheses. Two hypotheses using multiple linear regression and multivariate F and t tests were analyzed. Hypothesis test results show that: All variables marginal value of cash, the value of flexibility and leverage ratios, capital structure decisions have direct and significant relationship.

**Keywords:** Financial flexibility, leverage ratio, capital structure decisions, investment, marginal value of cash.

## INTRODUCTION

Capital Structure decision with respect to each constituent company not only characters but the company has a significant impact on the results of the performance of managers. Judging about flexibility, because of ambiguities in the use of the term are usually subjective and non-formal And the level of flexibility rarely investigated and measured. Companies with financial flexibility of borrowing power storage reserves so that they can invest more in their later years of conservative politics. According to the above financial flexibility must be directly related and important effect on capital expenditure, have. The flexible companies can leverage after a period of low policy easier to apply their funds to finance their projects, and the ability to capitalize They should be less dependent on external funds. As a result, we should expect a negative relationship between investment and operating cash flows exist.

Since the recognition of fiscal policies and their relationship with the investment company can be a great help in financial planning firms make Tehran Stock Exchange. The purpose of this study was to evaluate the impact of the financial flexibility of companies listed on the stock exchange is capital structure decisions

### **Literature Review:**

Drabtz and fix 2002 study titled "Determinants of Capital Structure of evidence in Switzerland", the competition between the static trade-off theory and the pecking order theory remained without result. According to the results, firms with more investment opportunities meets every two theories were used less leverage. In accordance with the preferred theory, but unlike static trade-off theory, profitable companies and companies with high liquidity, low leverage to apply.

Pour Heydari promising 2010 study entitled The Relationship four of industry, size, profitability and financial leverage to conducted collateralized assets. Finally, the relationship between financial leverage and profitability, negative and significant in size, was a direct and significant. But the relationship between industry and the financial leverage the company's collateral assets was not found.

Gad, Johnny 2001 study entitled "Capital Structure companies in Switzerland" by Gad, Johnny was conducted. Determinants of the capital structure, the 106 companies on the Swiss Stock Exchange, in the period 2000- 1994 were investigated. Results, stated that both static trade-off theory and the pecking order in the capital structure of Swiss companies involved explain patterns.

Roya Daraie in 2013 in his study examines the relationship between financial flexibility and capital structure decisions in companies listed on the Tehran Stock Exchange. Methods descriptive study - correlation and regression models were tested using panel data. The research includes the 5-year period from 2007 to 2011 and the sample consists of 82 firms listed in the Tehran Stock Exchange is now. The results showed that the marginal value of cash in view of the negative market. Also, the final value of financial flexibility and capital structure decisions and participate in the decisions related companies no relationship to increase or reduce its debt companies do not pay attention to of the flexibility. That this can be a long-term loss of financial flexibility and loss of profitable investment opportunities for companies to lead.

**Research hypothesis:**

First hypothesis: the marginal value of cash and there is significant abnormal returns of shareholders. The second hypothesis: the ultimate value of financial flexibility and leverage ratio There is a significant relationship. The third hypothesis: the ultimate value of financial flexibility and capital structure decisions there is a significant relationship

**Research method:**

The actual basis for scientific research, explain the relationship between variables. The two main methods to determine the relationship is usually from several directions are different . One of these two methods, descriptive and includes a set of methods aimed at describing the conditions or phenomena studied . Conducting the survey to better understand the situation or merely descriptive to help is decision-making process (khaki, 2011). This research is the fundamental objective. If used by managers aspects can also be applied. This type of research has focused on the most effective action and less attention to their causes. The population of this research, food industry companies listed on the Tehran Stock Exchange during are the period 2008 -20012. In this study, to collect information required as well as the theoretical background of the research library, a study and review of the literature, theses, articles, books in Persian and English as well as information from online databases are used.

**Variables:**

Variable financial flexibility as the independent variable and capital structure decisions are taken as dependent variable. In this study, we will use the model to test hypotheses.

$$r_{i,t} = \beta_0 + \beta_1 \frac{\Delta C_{i,t}}{M_{i,t-1}} + \beta_2 \frac{C_{i,t-1}}{M_{i,t-1}} * \frac{\Delta C_{i,t}}{M_{i,t-1}} + \beta_3 \frac{\Delta C_{i,t}}{M_{i,t-1}} + \beta_4 L_{i,t} * \frac{\Delta E_{i,t}}{M_{i,t-1}} + \beta_5 \frac{\Delta NA_{i,t}}{M_{i,t-1}} + \beta_6 \frac{\Delta RD_{i,t}}{M_{i,t-1}} + \beta_7 \frac{\Delta I_{i,t}}{M_{i,t-1}} + \beta_8 \frac{\Delta D_{i,t}}{M_{i,t-1}} + \beta_9 \frac{C_{i,t-1}}{M_{i,t-1}} + \beta_{10} L_{i,t} + \beta_{11} \frac{NF_{i,t}}{M_{i,t-1}} + \varepsilon_{i,t}$$

In which:

R represents a cumulative abnormal returns Company

L = leverage ratio of total debt to total assets ratio is obtained

C = change in cash and short-term investments compared to last year

M = market value at the beginning of the period by multiplying the number of shares obtained in prices at the beginning of the period - Change in earnings before interest and corporate tax is actually the difference between profit before taxes and interest this year and last year achieved a profit before tax.

NA = change in total assets excluding cash and investments

RD = Change in cost of research and development if it is not reported in the financial statements is considered zero

I = change in interest costs is

D = the total change in the Company dividend

NF = total co-financing is that the total change in debt as well as changes in capital Kay In order to calculate the final value flexibility will use the following formula:

$$MVOC_{FW} = \beta_1 + \beta_2 \frac{C_{i,t-1}}{M_{i,t-1}} + \beta_3 L_{i,t}$$

Finally, regression model for the relationship between the value of flexibility and capital structure decisions were as follows:

$$\hat{L}_{i,t} = \alpha_0 + \alpha_1 \frac{CF_{i,t}}{TA_{i,t}} + \alpha_2 MB_{i,t} + \alpha_3 \frac{Dep_{i,t}}{TA_{i,t}} + \alpha_4 Size_{i,t} + \alpha_5 \frac{FA_{i,t}}{TA_{i,t}} + \alpha_6 \frac{RD_{i,t}}{TA_{i,t}} + \alpha_7 MVOC_{i,t} + \varepsilon_{i,t} \quad \text{In which}$$

CF = Cash Flow is

TA = total assets of the company

Dep = depreciation expense Company

Size = size of the company can be obtained from the logarithm of the total assets of the company.

FA = total fixed assets of Company

RD = cost of research and development for the current year

**Research findings:**

In this section analyzing data using inferential statistics will be discussed. In this section analyzing the data is done using panels. Then, using the Chow test panel test that should be used with effects Or without effects, and to test the method, and that method panel fixed effects or random effects test will be Hausman test.

**The first hypothesis test**

1.Relationship between the final value of cash and abnormal stock returns The first hypothesis of a link between abnormal returns marginal value of cash and stock to consider the following regression function.

$$r_{i,t} = \beta_0 + \beta_1 \frac{\Delta C_{i,t}}{M_{i,t-1}} + \beta_2 \frac{C_{i,t-1}}{M_{i,t-1}} * \frac{\Delta C_{i,t}}{M_{i,t-1}} + \beta_3 \frac{\Delta C_{i,t}}{M_{i,t-1}} + \beta_4 L_{i,t} * \frac{\Delta E_{i,t}}{M_{i,t-1}} + \beta_5 \frac{\Delta NA_{i,t}}{M_{i,t-1}} + \beta_6 \frac{\Delta RD_{i,t}}{M_{i,t-1}} + \beta_7 \frac{\Delta I_{i,t}}{M_{i,t-1}} + \beta_8 \frac{\Delta D_{i,t}}{M_{i,t-1}} + \beta_9 \frac{C_{i,t-1}}{M_{i,t-1}} + \beta_{10} L_{i,t} + \beta_{11} \frac{NF_{i,t}}{M_{i,t-1}} + \varepsilon_{i,t}$$

F Chow test (significant)	(0/000) 19/40
Hausman test (significant)	(0/066) 16/04
Assessment Type	Panel data with random effects
F Fisher statistic (significant)	(0/000) 49/49
Adjusted coefficient of determination	0.325
Durbin-Watson statistic	1.58

**Lateral test summary**

Jarque-Bera test	Pagan cutting test	Ramsey test
0.26	0.3896	0.7621

Variances same phenomenon means that the variance of the error is fixed. If variances are non-linear unbiased estimator and the least variance will not be. Pagan cutting test to check the homogeneity of variance was used. Due to the significance level (0.3896) The results show that the null hypothesis that there is no dissimilar variance is rejected. That model does not suffer from the problem the variance anisotropy.

To test the assumptions of normality of residuals as one of the classic regression test Jarkva to use the results of this test indicate the level of importance of the test is (0.26). And not reject the null hypothesis of normality of the residuals and residuals are normally distributed.

**The second hypothesis test**

2. the final value of financial flexibility and leverage ratio There is a significant relationship. The second hypothesis of a link between the ultimate value of financial flexibility and leverage ratio as a function of the regression consider.

$$r_{i,t} = \beta_0 + \beta_1 \frac{\Delta C_{i,t}}{M_{i,t-1}} + \beta_2 \frac{C_{i,t-1}}{M_{i,t-1}} * \frac{\Delta C_{i,t}}{M_{i,t-1}} + \beta_3 \frac{\Delta C_{i,t}}{M_{i,t-1}} + \beta_4 L_{i,t} * \frac{\Delta E_{i,t}}{M_{i,t-1}} + \beta_5 \frac{\Delta NA_{i,t}}{M_{i,t-1}} + \beta_6 \frac{\Delta RD_{i,t}}{M_{i,t-1}} + \beta_7 \frac{\Delta I_{i,t}}{M_{i,t-1}} + \beta_8 \frac{\Delta D_{i,t}}{M_{i,t-1}} + \beta_9 \frac{C_{i,t-1}}{M_{i,t-1}} + \beta_{10} L_{i,t} + \beta_{11} \frac{NF_{i,t}}{M_{i,t-1}} + \varepsilon_{i,t}$$

F Chow test (significant)	(0/000) 19/43
Hausman test (significant)	(0/067) 15/99
Assessment Type	Panel data with random effects
F Fisher statistic (significant)	(0/000) 49/43
Adjusted coefficient of determination	0.347
Durbin-Watson statistic	1.61

**Lateral test summary**

Jarque-Bera test	Pagan cutting test	Ramsey test
0.72	0.8643	0.2770

Variances same phenomenon means that the variance of the error is fixed. If variances are non-linear unbiased estimator and the least variance will not be. Pagan cutting test to check the homogeneity of variance was used. Due to the significance level (0.8643) The results show that the null hypothesis that there is no dissimilar variance is rejected. That model does not suffer from the problem the variance anisotropy.

To test the assumptions of normality of residuals as one of the classic regression to test Jarque-Bera been used. Results indicated that the level of significance of the test (0.72) and the null hypothesis is not rejected based on the normality of residuals and residuals are normally distributed.

**The third hypothesis test**

3. the final value of financial flexibility and capital structure decisions there is a significant relationship. . The third hypothesis of a link between the ultimate value of financial flexibility and capital structure decisions will consider the following regression function.

$$\hat{L}_{i,t} = \alpha_0 + \alpha_1 \frac{CF_{i,t}}{TA_{i,t}} + \alpha_2 MB_{i,t} + \alpha_3 \frac{Dep_{i,t}}{TA_{i,t}} + \alpha_4 Size_{i,t} + \alpha_5 \frac{FA_{i,t}}{TA_{i,t}} + \alpha_6 \frac{RD_{i,t}}{TA_{i,t}} + \alpha_7 MVOC_{i,t} + \varepsilon_{i,t}$$

F Chow test (significant)	(0/000) 17/187
Hausman test (significant)	(0/059) 16/25
Assessment Type	Panel data with random effects
F Fisher statistic (significant)	(0/000) 45/21
Adjusted coefficient of determination	0.23
Durbin-Watson statistic	1.545

**Lateral test summary**

Jarque-Bera test	Pagan cutting test	Ramsey test
0.17	0.4539	0.0808

Variances same phenomenon means that the variance of the error is fixed. If variances are non-linear unbiased estimator and the least variance will not be. Pagan cutting test to check the homogeneity of variance was used. Due to the significance level (0.4539) The results show that the null hypothesis that there is no dissimilar variance is rejected. That model does not suffer from the problem the variance anisotropy.

To test the assumptions of normality of residuals as one of the classic regression test Jarkva to use the results of this test indicate the level of importance of the test (0.17) and not reject the null hypothesis of normality of the residuals and residuals are normally distributed.

**Discussion and conclusion:**

**The results of the first hypothesis:**

Investors reaction positively to the changes in cash and cash investors at 2.75 rials than 1 real increase corporate value increase Which states that cash to investors that the company's flexibility is one of the criteria for special attention The company has more cash is that it can be expected to be more flexible. Therefore, investors understand this by increasing or decreasing cash, its value will be adjusted according to the rate of increase or

decrease According to the first hypothesis, which stated that the marginal value of cash and abnormal returns of shareholders there is significant Is confirmed.

**The results of the second hypothesis:**

The results of the second hypothesis indicates that there is a negative relationship between financial flexibility and debt ratio and the higher the debt ratio will be less financial flexibility In fact, this relationship suggests that increasing the financial flexibility of the company (cash and short-term investments) the supply of firm resources and will be less debt facility location. This relationship indicates that a 1% increase in the amount of 1.86% of the company's flexibility, the company reduced debt ratio. In fact, it can be concluded from this relationship, companies have to pay more attention to internal financing Whatever Cash greater financial resources required from the company's attempt to provide a theoretical preference or hierarchies that correspond. The results of this study with the results of the Falklands and Wang, 2006 and Clarke, 2010 correspond perfectly.

**The results of the third hypothesis:**

The results of the third hypothesis indicates that the marginal value of financial flexibility and capital structure decisions is to establish a positive relationship and The greater financial flexibility and capital structure decisions will be greater.

**Research suggestions:**

At this stage, according to the findings of the research, recommendations will be presented in two separate parts as follows:

**A) suggestions based on the results**

1. Considering to the fact that in today's economy, companies must use every investment opportunities and make profit companies with more flexibility so they will be able to increase profitability in the future. Therefore, analysts institutions Recommended companies ranked in terms of flexibility should be added to both the transparency of the market and capital market investors can make better decisions based on them.
2. is suggested for managers who rely on results for their companies calculate the marginal value of cash.
3. Considering the the flexibility of the company and the potential for greater financial flexibility in dealing with financial crises Baantaf companies and investment opportunities, is suggested Directors of the company decided its capital structure and financial flexibility with regard to maintaining or increasing the flexibility companies adopt

**B) other suggestions**

1. Requirements company to provide information in addition to the usual information, for example the section entitled based on the amount of cash and power management analyzes the company's liquidity and flexibility.
2. Encourage and prepare the ground for the arrival of financial analysts, financial intermediaries to assess financial flexibility in order to increase the transparency of financial information and more accurate decisions in Tehran Stock Exchange.
3. provide necessary training on the Stock Exchange to shareholders, investors and stock analysts and other interested in general fitness and familiarity with measures to increase financial flexibility.
4. The importance of cash on firms' profitability is obvious, therefore, provide separate data and predictive input and output based on the amount of cash it Can be anticipated liquidity, flexibility and corporate debt is very useful.

**REFERENCES**

Adedeji, Abimbola (2002) "A Cross-Sectional Test of Pecking Order Hypothesis against Static Trade-off Theory on UK data". *University of Birmingham, Working Paper Series*.

Byoun, Soku, 2009, How and when do firms adjust their capital structures toward targets?, forthcoming *Journal of Finance*.

Chen, Yinghong & Hammes, Klaus (2004). "Capital Structure, Theories and empirical results - a panel data analysis ". *Gothenburg University, Working Paper Series*.

DeAngelo, Harry and Linda DeAngelo, 2007, Capital structure, payout policy, and financial flexibility, Working paper, University of Southern California, SSRN abstract no. 916093.

Frank, M. Z & V. K. Goyal (2003). Testing the Pecking Order Theory of Capital Structure. *Journal of Financial Economics*, 67 (2), pp: 217–248.

Gamba, Andrea and Alexander J. Triantis, 2008, The value of financial flexibility, *Journal of Finance*, 63(5), 2263-2296.

Gaud, Ph & Jany, E & Hoesli, M & Bender, A. (2003). "The Capital Structure of Swiss Companies: an empirical analysis, using dynamic panel data". *University of Geneva - Hautes Etudes Commerciales, Working Paper Series*.

- Hong, Z & Z. X, Jason (2006).The Financing Behavior of Listed Chinese Firms.The British Accounting Review, 38, pp: 239-258.
- Jensen, Michael C., and Meckling, William H., 1976, Theory of the firm: Managerial behavior, agency costs and ownership structure, Journal of Financial Economics 3, 305-360.
- Salimi Sofla, Amin.(2004)." The Effect of Industry and Size on Capital Structure of Iranian Companies". *University of Mazandaran, Dissertation.*