

A study on the Relationship between Financial Flexibility and Cash Policies of Listed Companies in Tehran Stock Exchange

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ABSTRACT

Today, cash as an inevitable necessity is taken into account by all companies and institutions. In fact, cash is the best and most fluid asset of the enterprise. If it is properly managed, it will lead to great success for the company and if it is managed without skills and planning, it may provide the company bankrupt. Flexibility plays an important role in enabling managers regard to future investments. Capital market problems have made flexibility maintenance essential for companies to take advantage of profitable opportunities. Optimal achievement of resources will lead to corporates success in the market and thus they can successfully pursue market opportunities and take advantages of being active in the market. The present study aims to investigate the relationship between financial flexibility and cash policies. To achieve this goal, a sample consisted of 150 companies listed in Tehran Stock Exchange is examined for a 5-year period from 2008 to 2012. To verify the hypotheses accuracy, independent t-test (T-Test) as well as regression are used. Results of the hypotheses test demonstrate that the cash and cash holdings in flexible companies, in comparison with non-flexible companies, are more. There is a significant relationship between financial flexibility and cash holdings and cash changes of the companies. The research results show that statistically there is no significant difference between the cash volatility of flexible companies and non-flexible ones, and there is no significant relationship between financial flexibility and cash flow volatility of companies.

KEYWORDS: Financial flexibility, Financial assets, Changes in cash flow, Cash flow volatility

1. INTRODUCTION

Flexibility plays an important role in enabling managers regard to future investments. Capital market problems have made flexibility maintenance essential for companies to take advantage of profitable opportunities. Myers and Majluf [1] showed how the threats derived from corporate liabilities may preclude their use of profitable opportunities, even when the directors and shareholders are interested in use of these opportunities. Optimal achievement of resources will lead to corporates success in the market and thus they can successfully pursue market opportunities and take advantages of being active in the market.

Financial flexibility is the corporates ability to financing in order to respond appropriately to the event and other unexpected cases, to maximize the corporate value [2]. Companies that have financial flexibility are able to withstand the financial pressures and when profitable opportunities arise, they can provide necessary funds to investment with a minimum cost [3].

Despite the importance and role of this critical and influential factor in financing, previous domestic research has thus far been unable to present a proper operational definition of financial flexibility. In the most cases, just a subjective definition, such as the corporates ability to respond appropriately to the future unexpected events, is submitted. Consequently, the lack of systematic study on the financial flexibility in previous investigations does not seem strange .

One of the basic tasks of corporates financial management is working capital management and cash flow management, in particular. Companies determine their cash management strategies on the basis of two objectives: supplying and funding cash for corporate's payments by companies and minimizing the funds that remain stagnant in the company. The second objective is to reflect the thought that if some items of capital are not used properly, there will be no return for the company. Unfortunately, these two objectives may be in conflict with each other. Therefore, this study seeks to examine the relationship between financial flexibility and cash policies of companies listed on the Tehran Stock Exchange.

Today, cash as an inevitable necessity is taken into account by all companies and institutions. Cash is the same as blood for the human body; in its absence, companies are not able to continue their economic life. That is to say, cash is flowing in all economic sectors and units of companies. On the other hand, any economic activity inevitably affects cash directly or indirectly. In fact, cash is the best and most fluid asset of the enterprise. If it is properly managed, it will lead to great success for the company and if it is managed without skills and planning, it may also provide the company bankrupt. A successful and experienced financial manager is the one who provides the profitability of the company and the satisfaction of shareholders with an accurate diagnosis of profit centers and in place investment. Liquidity is a major and important issue for financial managers. Of course, some believe

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that liquidity has more importance and that if a company does not have liquidity, it remains moribund. In other words, the company cannot survive without liquidity .

Financial flexibility refers to the ability of profit unit to fund the cash shortly after receiving information about unexpected financial needs, or finding good opportunities for investment. Organizations, just like individuals, are born and pass the stages of growth and maturation and finally reach old age and die. Companies and organizations in every stage, have specific characteristics and needs. Financial flexibility is defined by a company's life cycle stages including birth, growth, and maturity. Financial flexibility is as a measure of capacity of a company that can equip its financial resources in response to reaction activities to maximize firm value. In fact, the smart choice on the type of financing is not only a solution for financial problems of the company, but also improves the position of the company among its competitors.

Literature

Gholami [4] on a study examined the effect of financial flexibility on the investment and value creation. He stated that the most important factor affecting the financing issues is maintaining financial flexibility and this financial pattern has become the dominant funding pattern. In this research to identify the financial flexibility, surplus (unused) capacity of liability is used. Investment and value creation of companies are defined operationally using capital expenditures and stock returns. Zare Teimuri [5] examined the impact of financial flexibility on capital structure. The research results indicate the lack of financial flexibility effect on the investment costs and the lack of relationship between of cash flows and investment costs in companies surveyed on Tehran Stock Exchange. Aghai et al. [6] examined the factors affecting the cash holdings in listed companies on Tehran Stock Exchange. Their research results demonstrated that the receivable, net working capital, inventory of goods and short-term liabilities, respectively, are the most important factors that have negative impact on cash holdings. On the other hand, opportunities for firm growth, dividends, cash flow volatility and net income, respectively, are the most important factors affecting the cash holdings. But there is no evidence about the negative impact of long-term liabilities and firm size on cash. Chen et al. [7] investigated the relationship between financial flexibility and cash policies. The results suggest that the reduction in cash holdings can be seen more in companies with less flexibility. Clark [8] in his study indicated that financial flexibility is considered as the most important thing in decisions related to capital structure and financial structure. The study results also showed that companies with greater financial flexibility tend to retain a portion of their liability capacity for future. Also, the companies that have high financial flexibility and have financed largely through liabilities in the current period, to maintain surplus capacity of liability in future years, do external financing through investment more. The findings of this research showed that companies have always tried to keep a low level of liabilities to use this excess capacity for the company growth in the future and if necessary. Guney et al. [9] explored the cash holding behavior in French, German, Japanese, British and American companies during the years 1996 to 2000 using data from 4069 companies. This study focused on the relationship between leverage and cash holding. The evidence of the study showed that a significant nonlinear relationship between cash holding and leverage. The results also indicate that the effect of leverage on cash holding to some extent depends on the characteristics of the countries, such as ownership concentration.

Research Objectives

The main objective of this study is to examine the relationship between financial flexibility and cash policies of companies listed on the Tehran Stock Exchange, which arises as follows:

Secondary objectives: •Evaluating the relationship between financial flexibility and cash holdings of companies; •Evaluating the relationship between financial flexibility and changes in cash of companies; • Evaluating the relationship between financial flexibility and cash instability of companies

Research hypothesis

First hypothesis: There is a significant relationship between financial flexibility and cash holdings of companies; **Second hypothesis:** There is a significant relationship between financial flexibility and changes in cash of companies; **Third hypothesis:** There is a significant relationship between financial flexibility and cash instability of companies.

2. MATERIAL AND METHODS

The research population is companies listed on Tehran Stock Exchange for the fiscal years 2008 to 2012. In order to estimate the sample size and sampling, Systematic Elimination method is used. In other words, those companies of the population that have the following conditions are selected as the sample and the others have been removed :

1. Companies must have activity continuity during the financial year .
2. The end of their fiscal year is March
3. Companies are not among investment companies and financial intermediaries .
4. Research required information of the companies must be available .

Due to these conditions, and using panel data method in this study, among the Stock Exchange companies, 150 companies during the years 2008 to 2012 are selected.

The research is a correlational research. Correlational research is applied when the researcher has two or more different kinds of information (in the form of independent variables) related to a group of two or more groups and the research goal is to study the variations rate of two or more factors because of the variations in one or more other factors. T-Test and regression analysis are a kind of correlational research that will be used in this research. On the other hand, as this research seeks to achieve a scientific goal and presents useful information about the extant facts, it is an applied research in terms of the nature .

The study is cross sectional because it examines data related to a period (2008-2012).

Variables and Research Model

Independent variable: In this study, the independent variable is financial flexibility.

Dependent variable: Cash policies, which include: (1) cash, (2) changes in cash (3) cash flow instability.

Control variables: Company Growth; Size; Dividend; Cash Flow; Financial Leverage

Model 1:

$$\text{Cash Holding (cash)} = \alpha_0 + \beta_1 \text{ Financial Flexibility}_{i,t} + \beta_2 \text{Size}_{i,t} + \beta_3 \text{Growth}_{i,t} + \beta_4 \text{Divdummy}_{i,t} + \beta_5 \text{Levi}_{i,t} + \beta_6 \text{CF}_{i,t} + \epsilon_{i,t}$$

Financial Flexibility: To determine firms with financial flexibility, those firms whose leverage ratio in three successive years is less than in the median of the population is classified as firms with financial flexibility [10].

Cash Holding: Cash + marketable securities / total assets

Firm Size: It is the natural logarithm of total assets

Firm Growth: To calculate the firm growth, growth rate of sales is used. It is equal to changes in sales / sales of previous year

Dividend dummy variable (Divdummy): It is a set of ineffective variables. If the company pay dividend for the year, number one will be given to it, otherwise number zero will be given to it .

Financial Leverage (Lev): It is the ratio of total assets to total liabilities of the company

Cash Flow (CF): The sum of operating income + amortization of intangible fixed assets / total assets.

Model 2:

$$\Delta \text{Cash} = \alpha_0 + \beta_1 \text{ Financial Flexibility}_{i,t} + \beta_2 \text{Size}_{i,t} + \beta_3 \text{Growth}_{i,t} + \beta_4 \text{Divdummy}_{i,t} + \beta_5 \text{Levi}_{i,t} + \beta_6 \text{CF}_{i,t} + \epsilon_{i,t}$$

Changes in Cash (Δ Cash): Changes in cash / total assets

Model 3:

$$\text{Cash Flow Volatility} = \alpha_0 + \beta_1 \text{ Financial Flexibility}_{i,t} + \beta_2 \text{Size}_{i,t} + \beta_3 \text{Growth}_{i,t} + \beta_4 \text{Divdummy}_{i,t} + \beta_5 \text{Levi}_{i,t} + \beta_6 \text{CF}_{i,t} + \epsilon_{i,t}$$

Cash Flow Instability (volatility): Standard deviation of cash flow

3. RESULTS

This section introduces the features of studied variables among the sample firms. Descriptive statistics of variables are shown in Table 1.

The mean of variables of cash holding, changes in cash and cash instabilities are equal to 0.046, 0.007 and 288799.87, respectively. Among the control variables, the mean of financial leverage variable (as financial flexibility is built according to it) is obtained 0.66.

Table 1. Descriptive statistics of research variables

Item	Cash Holding	Changes in Cash	Cash Flow Volatility	Firm Size	Firm Growth	Dividend dummy variable	Financial Leverage	Cash Flow
Mean	.0463	.0066	288799.868	13.2184	5.9332	.9800	0.6612	0.1238
Std. Deviation	.03368	.01210	905444.326	1.77226	18.44962	0.14047	0.22997	0.09037
Skewness	0.963	1.214	5.399	-.538	-1.887	-6.927	1.099	1.010
Kurtosis	0.225	1.308	34.043	2.706	5.012	46.599	3.304	1.831
Min.	.00	-.02	23.78	6.32	-79.92	.00	.18	-.07
Max.	0.15	0.04	7596616.45	18.31	40.60	1.00	1.56	0.48

Evaluation of hypotheses test

The first hypothesis

H₀: There is no significant relationship between financial flexibility and cash holdings of companies.

H₁: There is a significant relationship between financial flexibility and cash holdings of companies.

T-test results show that there is a significant difference between cash holdings of flexible companies and non-flexible companies at error level of 5% ($0.005 = \text{sig}$). Therefore, by 95 percent, confidence the H_0 assumption is rejected and H_1 assumption is accepted. That is to say, the claim that the mean of cash holdings in companies with financial flexibility is different from non- flexible companies is accepted. This shows that cash holding of flexible companies is more than cash holding of non-flexible companies.

Table 3 shows the results of testing the first hypothesis. As can be seen, the determination coefficient of regression model in the first hypothesis is obtained 0.053. The results show that financial flexibility can explain 5.3 percent of changes in cash holdings. Survey on the significance of regression model showed that significance level of F value (8.28) at 5% error level is less than 5% and is significant. This means there is a significant relationship between flexibility and cash holdings of companies at 5% error level. Hence, the hypothesis H_0 is rejected and hypothesis H_1 is confirmed. That is to say, there is a significant relationship between financial flexibility and cash holdings of companies.

Table 2. Independent t-test results of the companies cash holdings

Variable	Flexibility	No.	Mean	Standard deviation	T statistic value	Significance level	Confidence interval		Test result
							Min	Max	
Cash holdings of companies	Is not	75	0.039	0.029	-2.878	0.005	-0.026	-0.005	Are different (rejection of H_0)
	Is	75	0.054	0.036					

Table 3. The first hypothesis test of cash holdings

Variable	Correlation coefficient	Determination coefficient	F	B	Significance level	Acceptance or rejection of the hypothesis(regression significance)	Durbin-Watson
Flexibility	-0.23	0.053	8.28	-0.015	0.005	Acceptance	1.654

The second hypothesis

H₀: There is no significant relationship between financial flexibility and changes in cash of companies.

H₁: There is a significant relationship between financial flexibility and changes in cash of companies.

As can be seen in Table 4, the second hypothesis t-test results show that there is a significant difference between cash of flexible companies and non-flexible companies at error level of 5% ($0.047 = \text{sig}$). Therefore, by 95 percent, confidence the H_0 assumption is rejected and H_1 assumption is accepted. That is to say, the claim that the mean of cash in companies with financial flexibility is different from non- flexible companies is accepted. This shows that cash of flexible companies is more than cash of non-flexible companies.

The second hypothesis results using the regression model show that the determination coefficient of financial flexibility in the fitted model is equal to 2.6 percent. Given the fact that the significance level of F statistic (4.01) is less than 0.05 ($0.047 = \text{sig}$), so the H_0 assumption can be rejected by more than 95 percent confidence, as the H_0 assumption states that there is no significant relationship between financial flexibility and changes in cash of companies. The H_1 assumption that states there is a significant relationship between financial flexibility and changes in cash of companies is accepted.

Table 4. Independent t-test results of the companies changes in cash

Variable	Flexibility	No.	Mean	Standard deviation	T statistic value	Significance level	Confidence interval		Test result
							Min	Max	
Cash of companies	Is not	75	0.005	0.011	-2.003	0.047	-0.008	-0.0001	Are different (rejection of H_0)
	Is	75	0.009	0.013					

Table 5. The second hypothesis test of cash

Variable	Correlation coefficient	Determination coefficient	F	B	Significance level	Acceptance or rejection of the hypothesis (regression significance)	Durbin-Watson
Flexibility	-0.162	0.026	4.01	-0.004	0.47	Acceptance	1.847

The third hypothesis

H₀: There is no significant relationship between financial flexibility and cash instability of companies.

H₁: There is a significant relationship between financial flexibility and cash instability of companies.

Results of t-test table show that as the significance level of t value (-1.039) is greater than 5 percent ($\text{sig} = 0.301$), the hypothesis H_0 is confirmed and hypothesis H_1 is rejected. That is to say, the H_0 assumption based upon mean equity of cash instability of companies with financial flexibility and non-flexible companies is accepted and the opposite assumption is rejected. However, given the fact that the maximum of the sample is positive and the minimum of the sample is negative, the mean difference between two samples is not significant.

Therefore, the mean equity assumption of two samples, i.e. H₀ assumption, will be accepted. Hence, statistically there is no significant difference between cash instability of flexible and non-flexible firms.

Table 7 shows the results of the third hypothesis. As can be seen the determination coefficient of financial flexibility in the third hypothesis fitted model is equal to 0.007. This means that flexibility can explain only 0.7% of cash instability of companies. In addition, survey on the significance of regression model showed that significance level of F value (8.28) at 95% confidence level is higher than 5% and is not significant. That is to say, there is no significant relationship between financial flexibility and cash instability of companies. Hence, the hypothesis H₀ is rejected and hypothesis H₁ is confirmed. Hence, there is no significant difference between financial flexibility and cash flow instability of companies.

Table 6. Independent t-test results of the companies cash instability

Variable	Flexibility	No	Mean	Standard deviation	T statistic value	Significance level	Confidence interval		Test result
							Min	Max	
Cash instability of companies	Is not	75	167622.79	522381.51	-1.039	0.301	-0.899	0.279	Are not different (Acceptance of H ₀)
	Is	75	409976.94	1161073.02					

Table 7. The third hypothesis test of cash instability

Variable	Correlation coefficient	Determination coefficient	F	B	Significance level	Acceptance or rejection of the hypothesis (regression significance)	Durbin-Watson
Flexibility	-0.085	0.007	1.079	-0.310	0.301	Rejection	1.652

4. CONCLUSION

This study examines the relationship between financial flexibility and cash policies of listed companies in Tehran Stock Exchange. Assumptions about the significant relationship between financial flexibility and cash holdings as well as the relationship between financial flexibility and changes in cash are confirmed in multivariate regression. However, the hypothesis of significant relationship between financial flexibility and cash flow instability is rejected. This means that based on the empirical evidence and findings, in a general conclusion, it can be said that there is no significant difference between the presence or lack of financial flexibility and cash flow instability. Therefore, to evaluate the cash flow instability, the criteria and other variables other than financial flexibility should be examined.

The result of testing hypothesis about the relationship between financial flexibility and cash holdings is consistent with the results of Chen et al. [7] that "the reduction in cash holdings can be seen more in companies with less flexibility".

The result of testing hypothesis about the relationship between financial flexibility and cash changes is consistent with the research results of Arslan et al. [11] that "companies can achieve financial flexibility through conservative leverage policies and typically by holding the cash".

The result of testing hypothesis about the relationship between financial flexibility and cash flow instability is consistent with the results of Zare Timuri [5] that "the lack of financial flexibility effect on the investment costs and the lack of relationship between of cash flows and investment costs".

With regard to the results of the research hypotheses, the following recommendations can be given:

- Managers and financial policy makers of the companies should notice the financial policy of the company and they should direct their policies towards less change in cash to have more flexibility, so that in unexpected problems they can respond appropriately. Investors also should influence cash fiscal policy to their decisions to obtain better returns with less risk.
- Officials and planners of the companies should consider financial leverage as a factor that have a significant impact on the cash holdings by the corporates and can indicate the amount of enterprise demand for cash holdings.
- The company's management in their planning for cash policy, and in order to achieve liquidity objective, in addition to the liquidity of the beginning of the period, should pay attention to leverage ratio.

REFERENCES

1. Myers, S.C., Majluf, N.S. 1984. Corporate Financing and Investment Decisions When Firms Have Information those Investors Do Not Have, *Journal of Financial Economics*, 13:187-221.
2. Byoun, S. 2008. Financial flexibility and capital structure decision, *SSRN Working Paper*.
3. Gamba, A. and Triantis, A. 2008. The value of financial flexibility. *The Journal of Finance*, 63(5): 263-296.
4. Gholami Gakieh, F. 2011. "The effect of financial flexibility on investment and value creation of companies", MS Thesis, Tehran University.

5. Zare Timuri, M. 2010. "The effect of financial flexibility on investment decisions", Journal of Portfolio Management and Financial Engineering, 1(3): 155-159.
6. Aghai, M. A., Nezafat, A. R., Nazemi Ardekani, M., and Javan A. A. 2009."A study on the factors affecting the cash holdings in Listed Companies in Tehran Stock Exchange", the Financial Accounting Research, 1(2): 53-70.
7. Chen, T., Harford, J., and Lin,C. 2013. Financial Flexibility and Corporate Cash Policy", Available at: papers.ssrn.com/sol3/papers.cfm?abstract_id=2298628.
8. Clark, B. 2010. The impact of financial flexibility on capital structure decisions: Some empirical evidence, SSRN Working Paper.
9. Guney, Y., Ozkan, A., and Ozkan N. 2007. International evidence on the non-linear impact of leverage on corporate cash holdings", Journal of Multinational Financial Management, 17(1): 45-60.
10. Marchica, M., Mura, R. 2007. Financial flexibility and investment decisions, SSRN.
11. Arslan, O., Chris, F., Aydin O. 2011. Financial Flexibility 'Corporate Investment and Performance: Evidence from Financial Crises. University of Illinois at Chicago, USA.