

**Research Article**

## **THE EFFECT OF RISK ON CASH ASSETS RATIO OF ACCEPTED COMPANIES IN TEHRAN STOCK MARKET**

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### **ABSTRACT**

This research aims to investigate the effect of risk on cash assets ratio of accepted companies. This research is an analytic -experimental library study and it is based on data panel. In this research, financial information of 112 accepted companies in Tehran Stock Market during 1386[2007] till 1391 [2012] was investigated (9672 companies-year). Software including Spss 20, Eviews 7, Minitab 16 were used in order to analyze obtained data from the research. Studying research results in terms of first hypothesis confirmation, we concluded that an inverse and significant relationship exists between company risk and ratio changes of cash assets.

**Keywords:** *Growth Opportunities, Ratio Changes of Cash Assets, Company Risk, Data Panel*

### **INTRODUCTION**

Managing cash assets is associated with profit and risk for companies. Furthermore, inappropriate liquidity management leads to excess investment on current assets, profit reduction of companies, and finally, risk increase (Detimar and Smith, 2007). On the other hand, weak cash-asset management and liquidity lead to imbalance in current assets and short-term debts creating financial problems and it finally endangers the company (Folkner and Wang, 2006). Appropriate level of cash and cash assets, a balance of risk and profit, can be affected by internal and external organizational factors (Kiaomlou and Terneto, 2005). At the moment, the focus of financial management is on subjects like the relationship between risk and return, maximizing yields, and investment opportunities against risk.(Houpi et al.,2010). Investment decisions, financial provisions, and taking advantage of investment opportunities are some of the most important financial decisions of companies, considered as subset of circulating -capital management specially liquidity management, since financial management is highly effective on improving and efficiency of organizations, performance improvement, profit making, and risk reduction (Bats *et al.*, 2009)

#### ***Problem Statement: The Concepts of Risk and Yields***

The field of investment is divided in to two sections including “analysis of securities “and “management of financial assets “, portfolio. The main function of securities’ analysis is to assess financial assets and the value is following risk and yield. Therefore, studying these two concepts is highly important. Expected risk-return relationship is used to analyze final analysis and making decision about securities because this relationship is the meaning of financial provision and in particular investing (Francis *et al.*, 2004).

#### ***Yield***

The investors` goal is maximizing expected yield. Meanwhile, they are trying to reduce risk while maximizing yield. Yield in investment process is an activating force creating motivation and it is considered as reward for investors. Yield from investment is highly important for investors because all investment activities are carried out along with yield. Yield assessment is the only logical way (before assessing the risk) in which investors can perform to compare alternative and different investment from each other. For better understanding of investment performance, measuring real yield (related to the past) is essential. This is because past-related yield is highly important for estimation of future predicted yield (Hou *et al.*, 2011).

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### Risk

Risk means “a danger occurred as a result of uncertainty “and the higher this uncertainty is, the higher the risk will be (Izadipanah *et al.*, 2000).

But in financial literature, risk means the probability of yield difference of real yield of an investment from expected yield. The higher the real yield changes are, the higher the risk is. It is noteworthy that investors will be willing to invest on certain securities when expected investment yield compensate its risk.

### Research Background

Lang and Zahi (2006) in a research entitled “investigation of relationship between market value ratios to book value, growth opportunities, and financial leverage ratio” studied the link between market value to book value ratio and three independent variables: financial provision costs through debts, decisions of financial provisions, and financial leverage ratio. They expected that companies with high market to book value ratio are facing less debt costs. In contrast, such companies use more debts. Although companies with low market to book value ratio try to pay their debts. Kevin and Wikki (2008) studied the relationship between profit quality and investment of capital assets during 1998-2005. Research results showed that companies with lower profit quality have smaller rate of yield on stocks and investment on their capital assets is less sensitive than entering cash currents. Furthermore, mentioned companies, in comparison with other companies, allocate their resources less to capital assets so they have lower rate of yield on assets.

Ali (1996) investigated the link between systematic risk and stock yield in Tehran Stock Market. To conduct this research, 40 companies were calculated from the beginning of 1370 [March 1991] till end of 1374 [March 1996]. Obtained results revealed that non-linear relationship is better able to, in comparison with linear relationship, determine the link between systematic risk and stock yield. This means that hypothesis of linear can better determine the link between systematic risk and stock yield. The research results show that a significant relationship exists between investment opportunities and profit divisions. AliReza (2002) has conducted a research entitled “the link between investment opportunities and financial policies“. The research results show a significant relationship between investment opportunities and financial policies.

### Research Hypothesis

1. A significant relationship between company risk and change ratio on cash assets of companies.

### Research Method

The research method used in this article is correlational and it is a descriptive research. In addition, reasoning method is inductive -deductive.

### Risk and Additional Yield

In the area of financial assets, investors, like picture 2-2, can select any risk and yield. The line from RF till  $\beta$  shows the relationship between risk and yield for all investors who are willing to invest on financial assets. This relationship always follows slightly rising slope. This has something to do with the fact that vertical axis is the expected yield and logical investor does not accept high risk unless he expects that this risk will be compensated by high yield. Expected yield needs to be high enough in order to compensate excess risk; however, there is no certain guarantee to reach additional yield.

### Systematic Risk ( $\beta_{i,t}$ )

To calculate systematic risk, we have followed Mas *et al.*, (2005). Capital Asset Pricing Model, CAPM, indicates that expected yield rate of the company equals the sum of safe yield rate and risk premium as following:

$$E(R_i) = R_f + [E(R_m) - R_f] * \beta_i$$

Where  
 $\Rightarrow R_{it} = R_{ft} + (R_{mt} - R_{ft})\beta_i + e_{it}$   
 $R_{it}$  : yield rate of company I in period of t

$R_{ft}$  : Safe Risk yield rate during period of t

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$\beta_i$  : Market Beta of stock market (systematic risk) of I company

$R_{mt}$  : Rate of pertfo return during the period of t

$e_{it}$  : Distractive factors

**Descriptive Statistics of Research Variables**

Generally, the procedures which can process and summarize collected information is defined as descriptive statistics. These kinds of statistics only explain samples and its aim is to calculate sample variables of the research (Azar and Momeni, 2010). In descriptive statistics section, data analysis using central indicators such as mean, median, dispersion index of standard deviation, and Skewness and kurtosis have been done. In this regard, mean is the major central index showing data average. If the data is regularly placed on an axis, the value of the mean is precisely placed on equilibrium point or distribution gravity center. Standard deviation is subsection of dispersion indexes showing data dispersion. Skewness is also subsection of sunchronic deviation-determination parameters and it is the sunchronic indicators of data. If the samples enjoy symmetrical distribution, Skewness coefficient equals zero and if Skewness sample is toward left, then the Skewness coefficient will be negative and if Skewness sample is toward right, then the Skewness coefficient will be right. Kurtosis is also dispersion - assessment index in comparison with normal distribution (Momeni and Ghayoumi, 2011). Summary of descriptive statistics related to model variables after screening and omitting outliers is illustrated in table 4.1 using Spss 20 software.

Variable	Number of observation	Mean	Deviation	Minimum value	Maximum value	Skewness	Kurtosis
Change ratio of cash assets	672	0/2024	0/5658	-0/9936	2/9233	1/783	6/769
Growth opportunities	672	0/2671	0/3745	-1/6444	1/4191	-0/135	1/896
Company risk	672	0/3936	0/8126	-7/3859	3/4024	-0/972	12/926
Growth rate of cash	672	0/0688	0/7839	-4/8458	2/9344	-0/438	3/413
Tax effects	672	0/5029	0/5003	0/0000	1/0000	-0/012	-2/006
Financial provision	672	0/3020	0/5097	-2/9154	3/1238	1/069	9/865
circulating capital	672	0/4568	0/4985	0/0000	1/0000	0/174	-1/976
Cash conversion cycle duration	672	0/5044	0/5003	0/0000	1/0000	-0/018	-2/006
Banking debts	672	0/5505	0/2279	0/0763	2/6592	1/766	13/286
Working capital	672	0/0079	0/1458	-1/0615	0/6405	-0/959	9/231
Research and development expenses	672	0/4910	0/5002	0/0000	1/0000	0/036	-2/005
Cash assets ration	672	0/6049	0/2321	0/01	1/62	-0/480	-0/016

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### The Results of Research-hypothesis Test

The aim of hypothesis test is to find out whether or not a significant relationship between company risk and change ratio in cash assets of company exists or not? The statistical hypothesis is as following:

$H_0$  = A significant relationship between company risk and change ratio in cash assets of companies does not exist.

$H_1$  = A significant relationship between company risk and change ratio in cash assets of companies exists.

This hypothesis is estimated by model (1) using data panel and if the  $\beta_2$  coefficient is significant at 95%, then the hypothesis is confirmed.

$$\begin{cases} H_0 : \beta_2 = 0 \\ H_1 : \beta_2 \neq 0 \end{cases}$$

While investigating significance of coefficients by considering the results listed in table 4.1, since datum probability of t for variable coefficient of company risk is less than 0.05 (0.0410), the significant relationship between company risk and change ratio of cash assets is confirmed at 95 % reliability. Therefore, the second hypothesis of the research is accepted and it can be concluded that, by 95% reliability, a significant relationship exists between company risk and change ratio of cash assets. Negative coefficient (-0.0326) reveals an inverse relationship between company risk and change ratio of cash assets showing the fact that change ratio of cash assets reduces by 0.0326 unit when company risk increases by one unit. Thus, considering the analysis done in terms of relationship for confirmation of the second hypothesis, it can be concluded that an inverse and significant relationship exists between company risk and change ratio of cash assets

### Conclusion

Having presented hypotheses, the research was started. After editing hypotheses, some variables for testing hypotheses were determined using theoretical principles of accountancy and previously conducted researches in order to operate and determine for the tests. These variables were concluded in the form of some models for assessing hypotheses.

After determining variables, the effort to find suitable method for implementing the research continued and multivariate- regression method was applied using relevant models. When research method was fixed, necessary data for hypothesis test was collected, classified, analyzed and finally the hypothesis was tested using appropriate tools. The results of the statistical hypothesis tests are presented in the 4<sup>th</sup> chapter.

In the current chapter, general conclusion along with some possible reasons are presented after presenting obtained results from hypothesis tests and comparing them with other similar researches. We hope that the current research has been able to help investors and other players of investment market. While investigating significance coefficients according to results in table 4.7, since probability of datum t for risk variable of the company is less than 0.05 (0.0210), the existence of significant relationship between company risk and change ratio of cash assets is confirmed at reliable level of 95%.

Therefore, the first hypothesis of the research is accepted and, by 95% certainty, it can be concluded that a significant relationship exists between company risk and change ratio of cash assets. Positive coefficient of this variable shows a direct relationship between company risk and change ratio of cash assets in that change ratio of cash assets reduces by 0.0326 unit when company risk increases by one unit. Thus, according to the analysis in terms of the confirmation of the first hypothesis, it can be concluded that a direct and significant relationship exists between company risk and change ratio of cash assets.

### Research Recommendations Obtained from Hypotheses

1. Securities and Exchange Organization can publish more comprehensive information for stock holders considering the results of this research and similar researches.

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2. Advice of authorities in terms of editing accountancy standards on publishing comprehensive information about amount and level of growth opportunities, company risk, and change ratio of cash assets.
3. Since increased amount and level of growth opportunities, company risk, and change ratio of cash assets of companies can have important impacts on investors' decision, presenting comprehensive and transparent information from management in terms of growth opportunities, company risk, and change ratio of cash assets of companies will be helpful.

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