

The Role of Financial Risk Management in Improving the Financial Performance of The Economic Institution

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Article Info	Abstract
<p>Article History</p> <p>Received: August 18,2020</p> <p>Accepted: October 16,2020</p> <p>Publication: November 09, 2020</p> <hr/> <p>Keywords Risk Management, Funds,Financial Performance,Economic Institutions</p> <p>DOI: 10.5281/zenodo.4426684</p>	<p><i>Financial risk management refers to the process of gradual improvement and permanent acceptable financial value in any organization. are being used, Financial tools are usually used to help the management team in order to manage risk disclosure. Especially credit risk and market risk. The purpose of this study was to investigate the role of financial risk management in improving the financial performance of economic institutions. For this purpose necessary information was extracted from investment funds and banks listed on the Tehran Stock Exchange in a period of 5 years and the period 1392 - 1397. The findings show that there is a significant relationship between risk and financial performance of institutions. But there is no meaningful and reciprocal relationship between financial constraints and risk with the financial performance of investment companies and banks.</i></p>

1. Introduction

Global competition and technological advances have led to more complex business environments [1]. Companies for a reason faced with environmental uncertainty with a wide variety of risks. Chaotic business environment with intense publicity during the bankruptcy of the company, focuses on effective risk management to policymakers and corporate executives and so risk management has become one of the processes affecting the financial performance of investment companies [2]. Risk management means trying to minimize the negative effects of risk factors which can affect system performance [3]. One of the most important dimensions of performance and risk in firms, there is financial performance and financial risk. Given that the financial crisis has become the focus of attention, risk management strategies in financial institutions, they have a lot to learn from this crisis, banks and investment institutions. The financial crisis has created a huge and widespread shock. In the financial services market, the assurance of a boom is gone and the old business models have been destroyed. One of the main shortcomings, before the drop in business, it was that asset valuation was on the rise apart from the irrational fundamental risk. It is very important today operational risks in financial institutions. This has happened for various reasons such as the phenomenon of electronic banking. Given the importance of risk and the cause of financial constraints is quite evident doing research is absolutely essential to examine the impact of risk-taking and financial constraints of investment companies and banks on financial performance.

Methodology

The practical purpose of this study was, expansion of theoretical literature of research variables including: financial pressure, risk taking and financial performance and provide practical suggestions for investment managers and stock exchange administrators as the main groups using the research results. We collected data to collect by viewing the financial statements and other reports of companies and stock exchange organizations and with an extensive study of the research background in this field. The statistical population was research

Including investment and banking companies listed on the Tehran Stock Exchange. In the present study, to determine the statistical sample, no special relationship has been used to estimate the sample size and sampling, but a systematic elimination method has been used. In other words, in order to eliminate or modify the effect of uncontrollable phenomena also, in order to examine more closely the information of the companies listed on the Tehran Stock Exchange, all companies are classified in 25 industries and because it was not accidental and the ability to rely more on selected samples, the following conditions have been applied by the researcher. The

statistical sample was identified with the following limitations for the statistical population and its adjustment. The selected sample of this research includes companies that have the following conditions:

- 1) The main companies under review are investment companies and banks listed on the Tehran Stock Exchange.
- 2) The financial information of the company is available for the period of research, ie the years 1392 to 1397.
- 3) Companies that have been accepted up to 1/3/1392 in the stock exchange
- 4) Have not changed the financial period in the period under review.

Applying the mentioned conditions, 25 companies have been selected to estimate the model and test the research hypotheses. In this research, it is tried to examine

The impact of financial constraints and the degree of risk-taking of investment companies and the reciprocal effects of financial constraints on risk-taking on the financial performance of companies. For this purpose, after reviewing the descriptive statistics of research variables, using the following multivariate regression model, the research hypotheses are tested (Boehrmans, 2012).

$$FP_{i,t} = a_0 + a_1 WW_{i,t} + a_2 Risk_{i,t} + a_3 WW_{i,t} \times Risk_{i,t} + a_4 Size_{it} + a_5 Mom_{it-1} + a_6 Beta_{it} + a_7 LEV_{i,t} + a_8 Profit_{i,t} + \varepsilon_{it}$$

$FP_{i,t}$: represents the financial performance of Company i during period t. To measure this variable, two variables of equity return rate (ROE) and company stock rate of return were used.

$WW_{i,t}$: indicates the amount of financial pressure with which the company is involved.

$Risk_{i,t}$: is the degree of risk-taking of the investment firm and the banks, which was measured using the two standard deviations of the annual monthly stock return and the beta coefficient of the purchased shares.

$Size_{it}$: it logarithm of company market value

Mom_{it-1} : stock return shocks (To control the effects of sharp and cross-sectional fluctuations, the return of the same period last year is used as a control variable)

$Beta_{it}$: it represents the beta coefficient and represents the company's risk. This variable represents the risk related to the company itself

$LEV_{i,t}$: Debt to total assets ratio

In the above model, coefficient a_2 indicates the effects of firm risk-taking on the company's financial performance (test of the first research hypothesis) and coefficient a_3 also indicates the interaction of financial pressure and firm risk-taking on financial performance (test of the second research hypothesis).

In this study, due to the nature of the subject, which seeks to examine the relationship between two or more quantitative variables and that if there is a relationship, what is the relationship and its ability to make predictions? Therefore, the present study used correlation methodology. It should be noted that the present study is not in search of a cause-and-effect relationship, but only in search of a possible relationship. In this research, using a research method, the data were analyzed and the hypothesis was tested and finally a final conclusion was made for the report. The collected data is calculated using Excel software and analyzed with Spss and Eviews software. In the first stage of the study, descriptive statistics of variables were performed (Medium, average, standard deviation, elongation and minimum and maximum parameters), Then it was done using correlation coefficient. Investigating the relationship between independent variables and research dependent variables. Then, using multivariate regression models, the research hypotheses were examined and tested.

Results

• Model selection type test results

Using F-Limer test, the presence of heterogeneity between sections can be determined. Hypothesis zero of F-statistic is based on the homogeneity of sections (polishing data of statistical data)

Table1:Limer F test

H ₀	Model	Statistics F	Degrees of freedom	The significance level	Test result	Selected model
The width from the origin of all sections is the same	The original model	2.701013	(23,40)	0.0029	Reject H ₀	Panel data

Examination of the results of F-Limer test shows that at the error level of 2%, the zero hypotheses and there is heterogeneity between sections. Therefore, according to the obtained results, it can be said that the panel data method is suitable for testing the hypotheses.

Table2: Housman test

H ₀	Model	Chi-square statistics	Degrees of freedom	The significance level	Test result	Selected model
There is no difference in systematic	The original model	14.281772	8	0.0747	Acceptance H ₀	Random effects

coefficients						
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As shown in Table 2, the results of Hausman test show that the significance level of chi-square statistic for the model under investigation at the error level of 2% is not greater than 2% and is not significant, so we can express the null hypothesis in the case models. The acceptance study and stochastic effects are appropriate for estimating the model.

• Test hypotheses

Table 3 Test results of the first main hypothesis of the financial performance research of investment companies and banks

Variables	Regression coefficient	standard error	Statistics t	The significance level
Width of origin	-77.70233	70.14878	- 1.107679	0.2722
Financial pressure	-1.253181	17.88015	-0.070088	0.9443
Risk taking	2.072018	0.836588	2.476749	0.0160
Risk-taking * Financial pressure	0.294390	9.004655	0.032693	0.9740
The market value of the company	6.575196	5.408887	1.215628	0.2287
Stock returns	0.257378	0.117354	2.193170	0.0320
Beta coefficient	-16.01210	6.575178	-2.435235	0.0177
Debt to total assets ratio	-36.91144	23.80077	-1.550851	0.1259
Profit	-0.000005	0.000004	-1.332037	0.1876
The coefficient of determination	0.401	Statistics F	(5.279)	(0.000)
Adjusted coefficient of determination	0.325	durbin-watson-test	2.48	

After determining the appropriate method for estimating the parameters, Results of corporate model estimation will be examined. The results of the main research hypothesis in Table 3 Presented. Examining the coefficient of determination of the estimated model shows that 40.1% of the dependent variable, ie changes in the financial performance of companies, is explained by the variables of the main model. That is, 40.1% of the changes in financial performance of companies are justified by the fitted model and the rest of the changes are under factors outside the model (59.9%).

Results Shows the significance of the fitted regression model Considering that the value of F statistic (5.279) is less than 1% and significant ($\text{sig} \leq 0.01$) at the level of significance of 1%, therefore, the hypothesis of H0 can be rejected and assumed with confidence above 99%. H1 accepted the research. That is, there is a significant relationship between financial constraints and the degree of risk-taking of investment companies and the financial performance of the companies under review.

On the other hand, in order to test the regression coefficients, if the absolute value of t calculated is greater than t in the table, the null hypothesis is rejected and the desired coefficient will be significant, otherwise the null hypothesis cannot be rejected. Significance level also indicates the minimum probability of confirmation of the null hypothesis that the desired coefficient is zero. If this probability is greater than 5%, the null hypothesis cannot be rejected; otherwise, the desired coefficient is significant.

In the above model, coefficient α_2 indicates the effects of firm risk-taking on firm financial performance (test of the first research hypothesis) and coefficient α_3 also indicates the interaction of financial pressure and firm risk-taking on financial performance (test of second hypothesis of research).

• According to the first hypothesis of the research, the coefficient shows the effects of firm risk-taking on the financial performance of investment companies and banks. Examination of risk regression coefficient α_2 (2.072) shows that at a significant error level of 2% has a positive and significant effect on the financial performance of investment companies and banks. Therefore, we can reject hypothesis H0 and hypothesis H1. The first accepted

that companies' risk-taking on the financial performance of investment companies and banks has a significant and positive effect on the level of confidence above 95%.

• According to the second hypothesis of the research, the α_3 coefficient indicates the interaction effect of financial pressure and firm risk-taking on the financial performance of investment companies and banks. As seen in the coefficient estimation table. Regression coefficient (0.294) the interaction effect of financial pressure and companies' risk-taking at a significant level of 2% does not have a significant effect on the financial performance of investment companies and banks. He accepted the second hypothesis that there was no significant relationship and rejected the second hypothesis of H1.

Examination of the results of regression coefficients of other fitted model variables shows that the coefficients of stock return momentum variables (0.257) and beta coefficient (-16.016) at the error level of 5%, respectively, have a significant positive and negative impact on financial performance of companies. They have investments and banks.

Durbin-Watson-test

One of the assumptions considered in the regression is the lack of autocorrelation between the error statements (the difference between the actual values and the values predicted by the regression model) from each other. Regression cannot be used if the hypothesis of error independence is rejected and the errors are correlated with each other. The Watson Camera Test can be used to achieve this. If the statistic of this test is between 1.5 to 2.5, it means no self-correlation. Examining the results of the Watson camera test, the research hypothesis shows that the value is 2.48. Therefore, it can be concluded that the errors are independent of each other and a regression model can be used to test the hypotheses.

Table4 . Results of testing research hypotheses

Research Hypotheses	Results of hypothesis testing
The level of risk-taking of investment companies and banks has a positive and significant effect on the company's financial performance (rate of return on assets and return on stocks).	The risk-taking of investment companies and banks has a positive and significant effect on the financial performance of the company (rate of return on assets and return on stock), ie the hypothesis is confirmed.
The interaction of financial constraints and risk-taking affects the financial performance of companies	There is no significant correlation between financial constraints and risk-taking on companies' financial performance

Discussion

Financial risk management refers to the process of gradual and continuous improvement of acceptable financial value in any organization. Financial instruments are used, usually to help the management team in order to manage risk disclosure, especially credit risk and market risk. Other risks include: Stock risk, Supplier risk, Customer risk, Partner risk, financial risk, Liquidity risk and interest rate risks, Exchange rates and conversions and commodity prices. The financial risk management algorithm is similar to general risk management [4]. The financial risk management process is generally divided into three stages: Identify sources of risk, evaluate it and develop relevant plans. Both quantitative and qualitative approaches are feasible and feasible in financial risk management. The use of each of these methods depends, the type of risk that the management team faces. The purpose of financial risk management is as a special branch of risk management, Help prioritize financial instruments and use them to manage costly risks. The interdependence between risks makes them more dangerous and the company or the amount invested, they are more vulnerable [5]. Financial risk management is designed and implemented, using efficient financial instruments, to protect the company from various financial risks. Due to the high demand in this field, financial risk management is taught now as a separate string and its courses include [6]. Managing the relationship between the internal aspects of financial institutions and external factors that affect investment. Also included are modern financial markets. Financial risk management, provides good understanding to establish modern risk management techniques [7]. In the financial literature, individuals' response to risk has been introduced in three main groups: Risk-averse people, Risky and Risk-neutral people. In this research, the risk dimension of companies is discussed and its impact on the financial performance of investment companies and banks. The first hypothesis: The level of risk-taking of investment companies and banks has a positive and significant effect on the financial performance of the company (rate of return on assets and return on shares).

Based on statistical analysis, and according to the regression coefficient, it was determined that Risk taking has a positive and significant effect on the financial performance of investment companies and banks. At a significant error level of 5%. That is, the level of risk-taking of investment companies and banks has a positive and significant effect on the financial performance of the company (rate of return on assets and return on stocks). In this regard, it should be stated, Risk-taking and the use of management policies can lead to a positive and significant impact on the financial performance of companies and banks. In other words, these policies can

create growth and profitability for these companies. The result of this hypothesis with the research of researchers such as

Epure and Lafuente (2012), which state that risk has a negative impact on the financial performance of banks is not consistent [8]. Also inconsistent with Chen and Pan's (2012) study, which stated, there is a weak correlation between credit risk and performance [9]. But it was consistent with Kargi (2019) research, which states Risk affects the financial performance of investment companies and banks [10].

Hypothesis 2: The interaction of financial constraints and risk-taking affects the financial performance of companies. Based on the statistical result of this hypothesis showed, a coefficient that reflects the interaction between financial pressure and company risk on the financial performance of investment companies and banks, the regression coefficient is (0.294). Which expresses the financial pressure and risk-taking of companies at the significance level, 5% has no significant effect on the financial performance of investment companies and banks that is, the interaction of financial constraints and risk-taking, does not affect the financial performance of companies. In general, it is one of the most important issues for investment companies Access to the required financial resources at the desired time (The shortest time possible) to invest in new stocks. So it is very important not to be in a situation of financial pressure. Existence of free cash flows that arise Due to information asymmetry between managers and shareholders, Leads to over-investment, but in the other hand Restrictions on financing lead to low investment. It should be noted that the lack of attention of major suppliers of corporate financial resources Especially state-owned banks, To the financial information of companies and as a result Failure to include these items in the guaranteed interest rate of the financial facility, it can plunge companies into bankruptcy and lack of access to cash flow.

The result of this hypothesis did not agree with Carreira & Silva (2013) which stated, Financial constraints require companies to invest purposefully and forces companies to reduce productivity and growth, and in this way they are looking for ways to survive. But it was consistent with Kithinji (2018) research, in this research it was stated that The bulk of bank interest is not affected by the amount of credit and loans, this means that there is no significant relationship between financial performance and funding [11].

conclusion

In general, it should be stated, Investment companies to keep their shareholders satisfied as well as the benefits and rewards of owners, require risk-taking activities, so take risks and invest in new situations it forms an integral part from the activities of investment companies. By recognizing the conditions under which liquidity causes instability and financial constraints are created, the situation of banks can be helped in critical situations. Customer loans require high liquidity and financing for them reduces sustainability. In times of crisis in the financial markets, the bank is having trouble financing loans and this, among other things, leads to a lack of liquidity and limited financial resources in the bank and increases the risk of financial incapacity. The bank should, in addition to trying to prevent such situations, have strategies to overcome them. The central bank must also increase its oversight on the banking system and create stronger settings.

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