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THE RELATIONSHIP BETWEEN MANAGEMENT RISK AVERSION AND CONSERVATISM

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ABSTRACT

Conservatism has a close relationship with corporate governance system, and both of them play an important role in reducing information asymmetry and agency costs in contracts. Conservatism can limit the opportunistic behavior of company manager in financial reporting that leads to the reduction of the agency costs in institutions and companies. This research aims to study the relationship between management risk aversion and conservatism. This is a descriptive-retrospective study in terms of purpose, and the Multivariate Regression Model was used through Eviews8 software in order to test the hypotheses. The research population consisted of all the companies listed in Tehran Stock Exchange during the 9-year period of 2008 to 2017. The results of the study shows that there is a positive and significant correlation between management risk aversion and accounting conservatism of companies.

Keywords: *Management Risk Aversion, CEO Overconfidence, Accounting Conservatism.*

INTRODUCTION

Conservatism has a close relationship with corporate governance system, and both play an important role in decreasing information asymmetry and agency costs in contracts. Conservatism can limit the opportunistic behavior of company manager in financial reports, and reduce the agency costs of institutions and companies. Conservatism leads to early identification of losses and reduction of the companies' bankruptcy probability and their collapse (Moradzade Fard et al., 2011). Conservatism has been used by the accountants for years as one of the limiting principles of accounting, and it has maintained its place among other accounting principles despite all the criticism directed at it. It can be said that the persistence and survival of conservatism despite all the criticism throughout all these years is a manifest of its essential theories. Also, if performed correctly, conservatism can be considered as a mechanism that leads to the solution of many agency and information asymmetry problems that are generally derived from the widening gap between the managers and financial resource securers of business units (Kordestani and Amirbeigi, 2008).

Literature review

Ramshe and Mollanazari (2016) conducted a research titled "Manager Overconfidence and Accounting Conservatism". The results show that there is a negative and significant correlation between conditional and unconditional conservatism with manager overconfidence. In addition, the results showed that external observation decreases the negative effect of overconfidence on conditional conservatism, but does not have a similar effect on unconditional conservatism.

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Shams al-Dini and Setayesh (2015) studied the impact of the effective structures on levels of accounting conservatism of companies listed in Tehran's stock exchange. The achieved results indicated the superiority of the method based on non-operational accrual items, and superiority of the method based on non-operational accrual items over the market method. On the other hand, the results showed that balance sheet items have a stronger correlation with conservatism compared to the profit or loss report items.

Moradi (2014), carried out a research titled "The Relationship of Organizational Culture with Risk Appetite of Managers in Private Insurance Companies (in the managers' opinion)". The results of this research showed that the insurance company manager believes that there is positive and significant correlation between risk-taking of managers with organizational culture in private insurance companies.

Mashayekhi and Motmaen (2013) conducted a study titled "Systematic Risk and Conditional Conservatism", the results of which indicated that there is a negative and significant relationship between systematic risk and accounting conservatism. When determinants of conservatism were checked, the persistence of correlation between systematic risk and accounting conservatism was confirmed.

Mojtahedzade and Farshi (2012) studied the relationship between accounting conservatism and investment decisions, and achieved the result that there is a negative and significant correlation between the asymmetry distinction index while measuring conservatism and future profitability. Also, there is a positive correlation between the market value index to book-value of stocks and conservatism of the studied companies; although this correlation is not statistically significant.

Meshki and Fattahi (2011) studied the relationship of accounting conservatism and stock price decrease risk using the historical data of 116 companies accepted in Tehran's stock exchange from 2006 to 2010. The results indicated a negative and significant correlation between the risk of stock price decrease and conservatism of studied companies.

Lara, Osma and Panalwa (2017) stated that in addition to the increase in financial information quality, conservatism also results in the reduction of liquidity and costs of stock exchange deals. They eventually concluded that conservatism leads to decrease of investment cost and risk-taking of the company.

Exlee (2016), in a study titled "The Effect of Accounting Conservatism on Investment Risk in International Level", achieved the results that countries with a conservative accounting approach have a much lower investment risk in comparison to other companies.

Krawt (2015) showed that accounting conservatism decreases the motivation of managers to do high-risk investments. He found out that the managers who act more conservatively, do less high-risk investments.

Taoma (2014) did his research about American companies from 1987 to 2007, the results of which show a negative correlation between organizational conservatism and the future operational state for the companies that are financially limited to the contracts. The achieved results are in accordance with the prediction of thematic literature of conservatism, according to which, conservatism can lead the managers not to accept the projects with positive but low net present value.

Key (2011) studied the relationship between systematic risk and conditional conservatism using the market model and extended model of Basu. Using the reasons mentioned above, they

predicted that systematic risk affects conservatism in two ways, and makes it decrease. They confirmed their prediction using 550, 141 year-company during 1964-2008.

Lee (2010) studied the role of accounting conservatism in financial decisions of companies. He showed that the companies with higher accounting conservatism show less flexibility in liquidity management and decisions related to issuance of shares. Generally, the results of his research show that while companies benefit from the decrease of costs related to debt deals using the conservative financial reporting, their flexibility in capital access decreases, and this affects the financial decisions.

Chi et al. (2009) studied the relationship between conservatism and governance system. The result of their research shows that companies with weak governance systems tend to be more conservative. These results are in accordance with this approach that conservatism can be an effective mechanism in governance system.

The findings of Ding and Wermez (2004) show that risk appetite is not directly effective on the companies' functions, and there is a strong regression between risk appetite and other variables such as work experience, etc. In fact, the strong regression between risk appetite and other variables is one of the factors that leads to effectiveness of management risk appetite on the function of companies.

Patilo and Sadrbam (2000) also studied the effect of risk aversion of production companies' managers on the function and level of profitability of production companies. In this research, the two ratios of profit to sell and profit to salary of the shareholders have been used. The research results showed that there is a negative correlation between the level of managers' risk aversion and profitability of the companies.

RESEARCH METHODOLOGY

Regarding the fact that the relationship studied in this research is of regressive type, multivariate regression analysis will be used to determine the effect of independent variables on the dependent variable. The research method is essentially regressive and its purpose is practical. The research is done in the framework of deductive-inductive logics. This means that in the current research, the model develops the hypothesis, concepts and indexes by using logical reasoning so that they can be confirmed by the observed data, meaning that we test them with real data. In other words, this method moves from the components to the whole. In order to collect the data needed for calculation of research's variables, Rah Avard Novin data bank will be used. In cases where the data existing in these data bank are deficient, the manual archives existing in library of Stock Exchange Organization and online website of Research, Development and Islamic Studies- Stock Exchange Organization (www.rdis.ir) will be looked up. The data are collected in library method. The research population of current research consists of all the production companies accepted in the Stock Exchange of Tehran in 2007-2016. Because there is a great number of the accepted companies in Stock Exchange of Tehran, systematic elimination method will be used for sampling. The current research is descriptive and correlational. The data needed for research will be analyzed using Multivariate Linear Regression Analysis. Also, in order to check the normality of response variable, the Kolmogorov-Smirnov (K-S) will be used. In order to calculate the studied variables in this

research, the spreadsheet software Excel, and in order to statistically analyze the research data, SPSS 16 will be used.

Research Hypothesis

There is a significant correlation between manager risk aversion and accounting conservatism.

Testing the First Hypothesis

$$CONSERVATISM_{i,t} = \beta 0+\beta 1RISK_{i,t} + \beta 1LIFE\_CYCLE_{i,t} + \beta 8ACC_{i,t} + \beta 1MTB_{i,t} + \beta 1LEV_{i,t} + \beta 1SIZE_{i,t} + \varepsilon_{i,t}$$

Dependent Variable

$CONSERVATISM_{i,t}$= conservatism level of company *i* during period *t*.

Independent Variables

$RISK_{i,t}$= risk aversion of company *i* management in period *t* calculated through standard deviation of company's daily efficiency during the selected year.

Control Variables

$LIFE\_CYCLE_{i,t}$ t= it is a virtual variable. If the company is in the maturity stage of company's life cycle, number 1 is considered, and if not, 0 is considered.

Descriptive Statistics

The summary of descriptive statistic of this research is shown in Table 1, which consists of the parameters mean, median, maximum, minimum, and standard deviation.

Table 1: Descriptive statistics of research's quantitative variables

Parameter/variable	symbol	mean	median	max	min	SD
Accounting conservatism	CONSERVATISM	-0.037914	-0.021532	0.721747	-0.658474	0.144483
Managers' risk aversion	RISK	3.521189	3.630494	8.829341	0.018158	2.567174
Life cycle	LIFE CYCLE	0.485340	0.000000	1.000000	0.000000	0.499978
Accruals	ACC	0.000518	-0.005431	0.84617	-0.581976	0.127539
Market value to book-value	MTB	1.000238	0.790832	5.248297	0.080317	0.769333
Financial leverage	LEV	0.566763	0.582229	0.996719	0.012733	0.180141
Company size	SIZE	6.067714	5.987183	8.316723	4.356504	0.697672

Stationary Test

Before estimating the regression models of research, it is necessary to test all the variables stationary used in the estimations. Instability of variables, whether in temporal period or the panel data can lead to wrong statistical deductions and pseudo-regression. This variable is stationary when the mean, variance and self-regression indexes stay fixed throughout the time. In stationary test, what matters is the power of unit root tests. In order to study the unit root,

the Augmented Dicky-Fuller test is used, and the results of unit root test of research's variables are presented in Table 2.

Table 2: Stationary test of research's variables

Augmented Dicky-Fuller			
Parameter/variable	symbol	Test statistics	Probability level
Accounting conservatism	CONSERVATISM	-19.95098	0.0000
Managers' risk aversion	RISK	-7.015484	0.0000
Life cycle	LIFE CYCLE	-15.53676	0.0000
Accrual items	ACC	-29.00300	0.0000
Market value to book-value	MTB	-9.019757	0.0000
Financial leverage	LEV	13.14772	0.0000
Company size	SIZE	-9.234350	0.0000

Regression Models

In this section, the regression model at the beginning of research was studied. In order to choose between panel data and combinational data, Limmer test statistics have been used. Regarding the F value reported in Table 3, the null hypothesis is rejected at confidence level of 95% based on selection of combinational data method and its priority over the panel data method. Also, significance level obtained for Hausman test is lower than 5%, by which the null hypothesis is rejected and the data are investigated through fixed effects method. Hence, the panel data method (fixed effects) has been used to investigate the first model:

Table 3: The results of Chow (F Limmer) and Haussmann tests

Test	Statistics	Degree of Freedom	Significance Level	Result
Chow (F Limmer)	6.506518	(143,1146)	0.0000	Panel data
Hausman	68.10856	6	0.0000	Fixed effect

With regards to the results of Chow (F Limmer) test, the regression model of research was estimated by using panel data (fixed effects), and the estimation results of Durbin-Watson in order to confirm the independency of error components is a manifest of this statistic being placed between 1.5 to 2.5. Since this value is close to the experimental value 2, the independence of error components hypothesis can be accepted. The VIF that is calculated to examine the non-collinearity between independent variables of research, was obtained beneath the critical point of 10, which indicates no severe collinearity among the independent variables of research. Hence, it can be accepted that precision factors of independent variables had not been affected by the internal relationships among the independent variables. The results obtained for significance level of Breusch-Pagan test which has been analyzed in order to investigate the non-existence of variance heterogeneity is above 0.05, which indicates that the null hypothesis is not rejected, based on the homogeneity of variance among the error components of model. Hence, it can be accepted that the preliminary assumptions of regression are met, and the results of model are documentable. Eventually, based on the goodness index of fit of model, it is observed that the significance level of variance analysis of F statistic is obtained less than 0.05 of case 1 error, and indicates the significance of estimated regression model. Also, the revised coefficient of determination shows that more than 80% of changes

existing in accounting conservatism of sample companies in the study period is justified by the independent and control variables of these models.

Table 4: The statistical results of test of regression model

$MTB_{i,t}+_4ACC_{i,t} + \beta_3 LIFE\_CYCLE_{i,t} + \beta_2 CONSERVATISM_{i,t} = \beta_0 + \beta_1 RISK_{i,t} + \beta SIZE_{i,t} + \varepsilon_{i,t6} LEV_{i,t} + \beta_5 \beta$				
variable	coefficient	T statistic	Significance	Collinearity
C	0.035538	4.518454	0.0000	-
Risk	0.001581	4.945832	0.0000	1.045878
Life cycle	-0.018551	-11.26207	0.0000	1.052926
ACC	-0.957990	-145.1677	0.0000	1.099629
MTB	-0.003878	-3.176744	0.0015	1.368906
Lev	-0.111438	-21.39675	0.0000	1.366384
Size	-0.000409	-0.346719	0.7288	1.053079
Modified coefficient of determination	0.801564	Durbin-Watson	1.910517	
F statistic	36.10767	Significance	0.000000	
Breusch-Pagan	9.877564	significance	0.1299	

As stated in Table 4, regarding that the significance level obtained for the independent variable of company's risk aversion (RISK) has a value lower than 5% error, it can be accepted that this variable has a significant correlation with accounting conservatism of companies. Mostly, the fact that the coefficient obtained for risk aversion of stock companies is positive. This shows that management's risk aversion has a direct correlation with the accounting conservatism level of companies (affirmation of hypothesis).

The obtained results for the control variables also show that there is a significant and negative correlation between the company's life cycle, accrual items, market value to book-value ratio and accounting conservatism of companies, while there was no relationship observed between the company's size and accounting conservatism level of companies.

DISCUSSION AND CONCLUSION

In the research hypothesis, the correlation between the management's risk aversion and accounting conservatism level of companies accepted in Tehran's stock exchange was studied. The results obtained for the first hypothesis of research shows that there is a positive and significant correlation between risk aversion of management and accounting conservatism level of companies. In other words, with increase of risk aversion of managers, their accounting conservatism also increases. In this regard, it should be pointed out that in order to measure the risk aversion variable, the standard deviation of daily efficiency of company during the year has been used. Thus, it is expected that when the fluctuations of efficiency of company's stocks increases, the managers show more conservative behavior. This shows that the company managers benefit from the stock efficiency fluctuations as an index to make decisions and presentation of financial reports. When the company's stock efficiency fluctuation is high, in the opinion of managers and even the stock market activists, this can be a sign of problems existing in the company and can be considered as a negative property for the company. Thus, the company managers try to influence the financial reporting by

identifying the bad news and postponing of good news. These findings are in accordance with research results of Exlee (2016) and Mashayekhi & Motmaen (2013).

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