



**The Effect of Managers' Capabilities on the Relationship between Environmental Uncertainties and Profit Management and Stock Returns of Companies Admitted to the Tehran Stock Exchange**

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**Javad Ramezani<sup>1</sup>, Mahmood Madhoosh<sup>2\*</sup>**

- 1. Accounting Department, Islamic Azad University, Qaemshahr Branch, Mazandaran, Javad.ramezani58@gmail.com**
- 2. MA Student, Accounting Department, Islamic Azad University, Noor Branch, Mazandaran, Hamyar\_sr@yahoo.com**

**Abstract**

The goal of this research is reviewing the relationship between environmental uncertainty (calculated by sale coefficient of variation and variability of estimated earnings per share) and earning management and return on stocks. Then it will be reviewed whether management capability impacts on this relationship. For this purpose, it has been selected 119 companies from Tehran Stock Exchange listed companies from 2011 to 2015 and research hypotheses have been tested by correlation and multivariable regression statistical methods. The results showed that to face environmental uncertainty, managers try to earning management to decrease earnings fluctuations. It also showed that market understands environmental uncertainties which are created by customers (sale coefficient of variation) and reacts against these uncertainties (these types of uncertainties have informational content) but not against environmental uncertainties rise from manager's doubt about EPS. Consequently, the results showed that the capability of managers of sample companies within research interval has no significant impact on the relationship between environmental uncertainties and earning management and return on stocks.

**Keywords:** Environmental Uncertainties, Manager Capabilities, Earning Management, Return on Stocks



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**1. Introduction**

Organizations are needed to have interactions and relationships with their environment to be survived; so they always affect their environment and are affected by it. Organization environment includes all the elements which exist outside the boundary of organization and affect all or some part of organization (Richard L. Daft, 2004). In this relationship with environment, organizations always face conditions which are either unpredictable or predictable with low certainty. This situation is called uncertainty forced by environment. In corporate management world, environmental uncertainties are actually professional doubts of managers. These doubts are created when a manager feels they will be faced with a comparative situation in the future which is difficult to predict now (McMullen and Shepherd). Environmental uncertainties refer to variability or variation which forces organization operations by environmental activities such as unpredictable customers, suppliers and services, competitors and legislator groups who cause considered probabilities to have no efficiency because of ongoing variations (Child, 1972; Dess & Beard, 1984 and Drago, 1998). Generally, environmental uncertainties are defined as forced situations by environment to organization which 1) are unpredictable; 2) create opportunities and threats for company; and 3) are variables (Milliken, 1987). In this study, it is tried to review some aspects related to environmental uncertainties as well as financial reports of company and its informational content.

**2. Theoretical bases**

Managers always try to conform their organizations with forced limitations by operational environmental of business unit (Chandler, 1962; Galbraith, 1973). One of these limitations is environmental uncertainties. As it was mentioned before environmental uncertainties are defined as variability or variation rate and/or unpredictability of environment of business unit (Dess & Beard, 1984). Literatures show that whereas managers, in reacting to environment which is acting in, are flexible and make decisions, so to fight environmental uncertainties which are faced to they adopt different strategies. For example, it is possible they give bonus to personnel, and/or



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decrease or increase internal resources. It is also possible to change company's budget (Davila & Wouters, 2005). If chosen strategies by manager could not decrease the effects of forced uncertainties on organization, so financial reports shall be effected by these uncertainties. Gush & Olsen (2009) stated that managers use discretionary accruals and earning management to decrease fluctuations in reported earnings when confronted environmental uncertainties. They reported that in high uncertainties situation, the risk of assessing future earnings shall be decreased and consequently manager has the motivation of decreasing fluctuations of reported earnings by using earning management. So if manager could not balance the effects of environmental uncertainties on earnings by strategic methods, he/she will try to offset these impacts by choosing required accounting methods or delay and/or haste in identifying incomes and expenses. Discretionary accruals allow manager to decrease variability of their reported earnings; so managers are expected to use more discretionary accruals and manage earnings as increasing environmental.

It will decrease quality of reported earnings incremental using of accruals in reported earnings of the company; and eventually as the market knows about this low quality of earning, return on stocks shall be decreased (Sloan, 1996; Chan et al., 2006). On the other hand, incremental using of discretionary accruals in earnings causes decreasing quality of accruals as facing environmental uncertainties. Agnova (2008) states that if accruals of a company are decreased, its returns on stocks shall be also decreased. So generally as the environmental uncertainties are increased, it could be expected decreasing in quality of accruals and eventually quality of earning because of more using of discretionary accruals by manager. And finally as the market is aware of low quality of reported earnings, company's returns on stocks shall be decreased. So in summary it could be stated that if manager could not extinguish the forced effects of environmental uncertainties on company by choosing a proper operational strategy, he/she will delete these effects by earning management in operational report and then this earning management will cause decreasing in returns on stocks.

Above theoretical functions are for situation which manager could not operationally delete effects of environmental uncertainties in company's activities procedure. The very opposite of this situation is that the manager has high skill and capability to direct



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and lead the company. Capable manager could have the best efficiency and productivity by using resources in his/her disposal and increase company's operational flexibility by creating varied investment opportunities such as making possible to reach different markets, possibility of producing different products, make opportunities of accessing several financial resource to finance, etc. This operational flexibility simply provides company to react against forced uncertainties from environment and don't be effected by it. For example, if there is a limit to sale company's goods in one location, manager could quickly replace new sale markets and prevent company from probable effects of this limitation. More capable managers carry out more efficient investment, improve further performance of their companies and also promote their financial reports quality (Jin & Mayer, 2006). These matters cause the companies which have more capable managers use less earning management in their reports and consequently the earning's quality shall be promoted and earnings also shall be increased. So high capability of manager before environmental uncertainties could play a significant role in passing these limitations without being effected from them and/or low capability of manager in these situations could result in decreasing earning quality. According to above mentioned matters, the present research intends to review this subject that if manager capability could affect the relationship between environmental uncertainties and earning management and return on stocks?

### **3. Research background**

There are so many researches about environmental uncertainties, manager capability, earning management and return on stocks which are mentioned as follows:

In reviewing variables related to company's operation, manager capability has been always considered as one of the most determinant factor. In this matter, Bozorg Asl and Salehzadeh (2015) reviewed the relationship between management capability and earning persistence in order of accruals and cash flows in listed companies of Tehran stock exchange. The results confirmed that there is a positive relationship between management capability and earning persistence and also between management capability and accruals and cash persistence but this relationship is stronger between management and accruals persistence than cash part. Sheikholeslami (2014) examined



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the effect of manager capability on the relationship between quality of financial reports and efficiency of investment on listed companies in Tehran stock exchange. The results showed that managers' capability significantly affects relationship between quality of financial reporting and investment efficiency. Further to researches related to manager capability, Piri et al. (2014) reviewed the effects of manager's capability on quality of financial reporting during life cycle of listed companies in Tehran stock exchange. The results showed that within growth period, manager capability has a positive significant effect on quality of financial reporting of sample companies. It also showed in maturity and decline, company's management could not result in increasing quality of financial reporting. In foreign studies, Habib (2016) stated that overinvesting of capable managers acts as a determinant factor in investment efficiency. The Evidences of this research showed that the common effect of manager capability and low quality of reporting causes increasing the risk of further crash of stock price of company. Androw et al. (2013) investigated the relationship between management capability and company's operation. The results showed that there is a positive relationship between management capability and company's performance; the more capable managers, the more efficient managing company's resources such as debts and capital expenditures. Demirjian et al. (2012) reviewed the effect of management capability on four earning quality features, i.e. number of financial statements representation, earning persistence, quality of accruals and error rate of estimates in bad debts. They resulted that there is a positive relationship between management capability with any of mentioned four features. They also resulted that management capability has a direct effect on stability of earning accruals.

In area of environmental uncertainties papers, Hejazi et al. (2011) reviewed the effect of environmental uncertainties on earning components (unmanaged earning and discretionary accruals). The results showed that environmental uncertainties affect unmanaged earnings and managers don't use earning management to reduce the effects of environmental uncertainties in company's earning. In a paper, Mohaghar et al. (2010) tested the effects of environmental uncertainties, intra-organizational facilitators and intra-organizational relationships factors on information sharing and quality of information share in topic of measures of supply chain management. The results showed



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that all three factors of intra-organization relationship, environmental uncertainties and intra-organizational facilitators have positive and significant effects on information sharing. Rezvani and Saham Khadam (2010) categorized the indices of environmental uncertainties scales. In this research they resulted that the variables of customers, competition, technology and supplying organization's inputs are the indices of measuring environmental uncertainties in a commercial organization. They stated that any of these scales have measurement factors which by summation of their measurements results it could be found the level of environmental uncertainties. Naderi (2009) reviewed the chosen strategies by management as facing environmental uncertainties. The results showed that there is no strategy which is perfect for all organizations by itself and/or there is no equal flexibility level for all organizations. It was resulted that in uncertainty environment, flexibility should be applied as a key success factor to fight environmental uncertainties. Sinaei and Hashemi Ghandali (2009) stated that according to environmental uncertainties, variation in interest rate and R&D expenditures how managers apply investment powers in capital assets when they assessed capital projects. The results point on the matter that from the point of studied companies' managers view, the rate of investment expenses, risk free interest rate, environmental uncertainties and R&D expenses effect on applying investment powers. Modarres et al. (2009) investigated the motivations of earning management in petrochemical and metal listed companies in Tehran stock exchange. The results showed that in mentioned industries, company's size and debit contracts are motivation of earning management and there is no significant relationship between deviation of operational activities and earning management.

In foreign studies related to environmental uncertainties, Ejbold et al. (2010) tried to find experimental documents to show whether forced environmental uncertainties to organization effect on designing management accounting system of those organization. The results showed a powerful effect of environmental uncertainties on designing and function of management accounting systems. West & Drnevich (2010) presented a model which showed the effects of environmental uncertainties on industry indices, geographical features and macro factors. They showed that these environmental uncertainties could affect activities of small and newborn companies. Cormier et al.



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(2010) reviewed and compared the effects of accounting standards on earning usefulness in different legal structures of France and England which have been defined as one of environmental uncertainties items. The most results of their research is that in adopted principles of France and England and in their different legal structures discretionary accruals are assessed less (more) than their real amount in time of sale decreasing (increasing). By reviewing the rate of using discretionary accruals by managers in uncertainty situation, Gush and Olsen (2009) stated that managers use discretionary accruals to decrease fluctuation of reported earnings. Lonial & Raju (2001) investigated this matter whether market orientation effects on organization performance in different aspects and contents. The results showed that environmental uncertainties have a significant effect on the relationship between market orientation and company performance. To review the background of researches related to environmental uncertainties and managers' capability, it was found that there is a gap in reviewing manager capability to control or non-control environmental uncertainties. The result of controlling these uncertainties by manager is decreasing the rate of using earning management and less impressionability of earning from environmental uncertainties which is investigated in this research.

### **4. Research hypotheses**

According to mentioned theoretical bases, the research hypotheses are as follows:

**First hypothesis:** There is a significant relationship between environmental uncertainties and earning management.

**Second hypothesis:** There is a significant relationship between environmental uncertainties and returns on stock.

**Third hypothesis:** Manager capability affects the relationship between environmental uncertainties and earning management.

**Fourth hypothesis:** Manager capability affects the relationship between environmental uncertainties and returns on stock.

Whereas in this research two scales of sale coefficient of variation and variability of estimated earnings per share were used to estimate the variable of environmental uncertainties, so each hypothesis shall be tested twice with two variables.



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**5. Research method**

This is an applied research in terms of its goal and has been done by using descriptive and correlation methods. Research hypotheses also were tested by using correlation and multivariable regression methods. Dependent variable was earning management for first and third hypotheses which was calculated by calculated accruals quality in Francis et al. (2005) model. To estimate quality of accruals by using Francis et al. model, equation 1 was used:

$$1) \quad TCA_{j,t} = \emptyset_{0,j} + \emptyset_{1,j}CFO_{j,t-1} + \emptyset_{2,j}CFO_{j,t} + \emptyset_{3,j}CFO_{j,t+1} + \emptyset_{4,j}\Delta REV_{j,t} + \emptyset_{5,t}PPE_{j,t} + \varepsilon_{j,t}$$

Where,

$TCA_{j,t}$  is total current accruals of j company equipment at the end of year t which is calculated by equation 2:

$$2) \quad TCA_{j,t} = (\Delta CA_{j,t} - \Delta Cash_{j,t}) - (\Delta CL_{j,t} - \Delta STDEBT_{j,t})$$

Where,

$\Delta CA_{j,t}$  is variation in current assets;

$\Delta Cash_{j,t}$  is variation in cash;

$\Delta CL_{j,t}$  is variation in current debits;

$\Delta STDEBT_{j,t}$  is variation in payable documents or other interest bearing short-term debits;

$\Delta REV_{j,t}$  is sale variation of j company at the end of year t to year t-1;

$PPE_{j,t}$  is gross properties, machinery and equipment of j company at the end of year t;

$\varepsilon_{j,t}$  is the remaining of equation 1 which is the scale of determining earning management;

$CFO_{j,t}$  is cash flow of j company at the end of year t which is calculated by equation 3:





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3) 
$$CFO_{j,t} = NIBE_{j,t} - TA_{j,t}$$

Where,

$NIBE_{j,t}$  is net profit before extraordinary items of j company at year t;

$TA_{j,t}$  is total accruals of j company at the end of year t which is calculated by equation 4:

4) 
$$TA_{j,t} = TCA_{j,t} - Dep_{j,t}$$

Where,

$Dep_{j,t}$  is depreciation of j company at year t.

Next dependent variable of research to test second and fourth hypotheses is return on stocks (Ret). Returns of stock of any company is calculated by using stock market price at the beginning and end of period and also benefits of shareholder ownership within this period which is shown in equation 5:

5) 
$$R_{i,t} = \frac{(1+\alpha)P_{i,t} - P_{i,t-1} - \alpha(1000) + (1+\alpha)D_{i,t}}{P_{i,t-1} + \alpha(1000)}$$

Where,

$R_{i,t}$  is the rate of returns on stock;

$P_{i,t}$  is stock price;

$D_{i,t}$  is benefits of share ownership of i company in period t (dividend per share);

$\alpha$  is percentage of bonus shares and nominal value of each share in Iran is 1,000 Rls.

Independent variable to test research hypotheses is environmental uncertainties. To estimate environmental uncertainties, different variables have been considered such as technological features (Kreiser & Marino, 2002; Simerly & Li, 2000), competition in supplying raw materials and in attracting customers (Duncan, 1972), regulations and policies of government, economic environment and industrial relationships (Gordon & Naryanan, 1984) and some other variables. In this research two scales of sale coefficient of variation and variability of estimated earnings per share are used to estimate



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environmental uncertainties. Previous researches show that there is a positive and significant relationship between environmental uncertainties and subjective perception of environmental uncertainties by managers (Bourgeois, 1985). On one hand high variability in sale creates uncertain situation which forced to company by customers; so manager shall hesitate to forecast company's share price in market because of these uncertainties (Dechow, 1994). Previous researches showed that earnings forecast dispersion is also applied as a useful scale in uncertainties of commercial unit (Barron & Stuerke, 1998), so the earnings forecast dispersion per share is applied as the second scale of environmental uncertainties. To calculate sale coefficient of variation ( $CV(Z_{i,t})$ ), equation 6 is used:

$$6) \quad UNC1 = CV(Z_{i,t}) = \frac{\sqrt{\frac{\sum_{n=t-4}^t (Z_{i,n} - \bar{Z})^2}{4}}}{\bar{Z}}$$

Also to calculate variability of estimated earnings per share, it is used earnings standard deviation of per share forecasted at the beginning of the year and its variation within the year which is calculated by equation 7:

$$7) \quad UNC2 = FD = STD(\text{earning forecast dispersion})$$

Moderating variable to test third and fourth hypotheses is management capable (MA) which has been calculated by Demerjian et al. (2012) model. In applied model by this research, at the beginning the ratio of income from sales as the output and 7 another variables as input have been calculated for each company which is equation 8:

$$8) \quad \max = \frac{\text{sales}}{\text{CoGS} + \text{SG\&A} + \text{PPE} + \text{OpeLease} + \text{R\&D} + \text{GoodWill} + \text{OtherIntan}}$$

Where,

CoGS is cost of goods sold;

SG&A is administrative and organizational costs;

PPE is properties, machineries and equipment;

OpeLease is operational lease;

R&D is cost of research and development;

Goodwill is goodwill;

And otherIntan is other intangible assets except goodwill.



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To control the effects of natural features of the company which they presented in a model, Demirjian et al. (2012) divided company's efficiency to two separated parts, i.e. efficiency in terms of natural features of company and management capability. They did this by controlling 5 certain features of company (company size, market share, cash flow, duration of accepting in stock exchange and foreign sale (export)). Each one of these features which are natural specification of company could help management to make better decisions or vice versa limit management capability. These 5 features have been controlled in equation 9 which is presented by Demirjian et al. (2012):

$$\begin{aligned} 9) \quad \text{Firm Efficiency}_{i,t} = & a_0 + a_1 \text{Size}_{i,t} + a_2 \text{MarketShare}_{i,t} + \\ & a_3 \text{FreeCashFlowIndicator}_{i,t} + a_4 \text{Age}_{i,t} + a_5 \text{ForeinCurrencyIndicator}_{i,t} + \\ & a_6 \text{YearIndicator}_{i,t} + e_{i,t} \end{aligned}$$

Where,

Size is the company size and equal to napierian logarithm of total assets;

Market share is company's market share and equal to the ratio of company's sale to whole industry sale;

Free cash Flow Indicator is increasing (decreasing) in operational cash flows which is 1 if cash flow is positive and 0 if not;

Age is the company's age and equal to napierian logarithm of number of company's age;

Forein currency indictor is export of j company in t year and equal to 1 if company has export and 0 if not;

The rest of pattern shows management capability.

Control variables of the company are also company's size (Size) and the ratio of market value to book value (MKBK). For variable of size of sample companies, it was used napierian logarithm of total assets of mentioned companies at the end of period. Finally, to test first to fourth hypotheses, equations 10 to 13 were used, respectively.

$$10) \quad EM_{i,t} = a_0 + a_1 \text{UNC}_{i,t} + a_2 \text{MA}_{i,t} + a_3 \text{size}_{i,t} + a_4 \text{MKBK}_{i,t} + e_{i,t}$$

$$11) \quad \text{Ret}_{i,t} = a_0 + a_1 \text{UNC}_{i,t} + a_2 \text{MA}_{i,t} + a_3 \text{size}_{i,t} + a_4 \text{MKBK}_{i,t} + e_{i,t}$$



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$$12) \quad EM_{i,t} = a_0 + a_1UNC_{i,t} + a_2MA_{i,t} + a_3UNC * MA_{i,t} + a_4size_{i,t} + a_5MKBK_{i,t} + e_{i,t}$$

$$13) \quad Ret_{i,t} = a_0 + a_1UNC_{i,t} + a_2MA_{i,t} + a_3UNC * MA_{i,t} + a_4size_{i,t} + a_5MKBK_{i,t} + e_{i,t}$$

**6. Population and statistical sample**

Population of this research is listed companies in Tehran stock exchange between 2011 to 2015. In this research, sampling is done by using systematic elimination method. The conditions of selecting sample companies within mentioned period are as follow: Mar. 20 of each year is the end of fiscal year and was not changed during research period. Their transactions have not been interrupted more than three months during 2011 to 2015. Their financial statements are totally and continuously available for the period. The company should not be an investment or broker one. It was also used some of data during 2007 to 2010 to calculate 5-year coefficient of variation. Consequently, after applying this limitations number of 119 companies were selected for mentioned period.



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Descriptive statistics

In this research, Excel and Eviews were used to categorize and calculation of data and required regression for estimating statistical models, respectively. Table 1 shows a general schema of data including number, average, median, minimum, maximum and standard deviation of calculated variables to test hypotheses.

**Table 1: Descriptive statistic of research variables**

<b>Variable</b>	<b>Average</b>	<b>Median</b>	<b>Max</b>	<b>Min</b>	<b>Standard Deviation</b>
EM	0.002339	0.001191	0.280266	-0.28715	0.096806
Ret	42.52679	13.52875	370.4452	-0.717338	79.81179
UNC1	0.330141	0.319324	1.205565	0.054421	0.151678
UNC2	525.8558	294.0088	4769.892	0.0000	608.7882
MA	-0.00111	-0.0000236	0.649103	-0.5716	0.237441
SIZE	13.93932	13.84007	18.73931	10.16654	1.426728
MKBK	3.169296	2.411242	17.52990	-7.68223	2.996463

As it is used synthetic data to estimate, it is needed to do F-Limer test to determine method and estimation manner before anything. If the test is resulted in using consolidated data, estimation model shall be done by consolidation data method and if the test is resulted in using panel data method so Hausman test shall be used to determine the effects of fixed or random method.

### **7. Test results of research hypotheses**

To estimate statistical models and test research hypotheses, at the first heteroscedasticity of statistical models was reviewed by three test of Bartlett, Levene and Brown-Forsythe which their results proved the heteroscedasticity of all models. As per the heteroscedasticity of all research models, estimated generalized least squares (EGLS) method was used to estimate research models. In table 2 the results of testing first and second hypotheses present by using equation 10 and 11 and considering two environmental uncertainties scales.



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**Table 2: Results of testing first and second hypotheses**

			Research models			
			Equation 10		Equation 11	
			UNC1	UNC2	UNC1	UNC2
Dependent variable			EM	EM	Ret	Ret
Independent variable	UNC	Coefficient value	-0.057941	0.00002	225.0433	0.012326
		t-test significance	0.0232	0.0134	0.0000	0.1344
Control variables	MA	Coefficient value	0.242530	0.201447	158.1591	197.5704
		t-test significance	0.0000	0.0000	0.0000	0.0000
	SIZE	Coefficient value	0.027025	0.009162	-21.56047	-1.936205
		t-test significance	0.0006	0.0485	0.0047	0.8204
	MKBK	Coefficient value	0.000371	-0.000460	1.350928	0.956792
		t-test significance	0.4590	0.2540	0.0115	0.0297
F-test		Value	9.163459	8.194741	2.980273	2.368598
		Significance level	0.0000	0.0000	0.0000	0.0000
Generalized coefficient of determination			0.626401	0.596401	0.338968	0.261663
Durbin-Watson test			1.913937	1.852045	2.414256	2.422914

As per the significance level of F-test for all models which are presented in table 2 it can be said that all above models are significant and at least one of regression model coefficients is not null. Also according to Durbin-Watson statistics in table 2, it could be



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found that there is no correlation of first kind in all presented model (statistic value is between 1.5 and 2.5). And finally estimated generalized coefficient of determination for regression model of equation 10 shows that about 60% of dependent variable of earning management behavior is explained by independent and control variables; this matter shows the high level relationship between independent and control variables with dependent one. As well as estimated generalized coefficient of determination for regression model of equation 11 shows that about 30% of dependent variable of earning management behavior is explained by independent and control variables; this matter shows the low level relationship between independent and control variables with dependent one.

In table 3 the results of testing third and fourth hypotheses present by using equation 12 and 13 and considering both environmental uncertainties scales.

**Table 3: Results of testing third and fourth hypotheses**

			Research models			
			Equation 13		Equation 14	
			UNC1	UNC2	UNC1	UNC2
Dependent variable			EM	EM	Ret	Ret
Independent variable	UNC	Coefficient value	-0.064030	0.000117	107.7619	0.029987
		t-test significance	0.0228	0.4793	0.0031	0.1082
Generalized variable	UNC*MA	Coefficient value	0.009157	0.00000824	-2.879639	0.027488
		t-test significance	0.5728	0.5485	0.9426	0.1861
Control variables	MA	Coefficient value	0.236584	0.198743	73.02938	94.86525
		t-test significance	0.0000	0.0000	0.0177	0.0009





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	<b>SIZE</b>	<b>Coefficient value</b>	0.026422	0.008552	-1.129994	-1.028347
		<b>t-test significance</b>	0.0008	0.1002	0.7353	0.7634
	<b>MKBK</b>	<b>Coefficient value</b>	-0.000368	-0.000416	0.443890	0.447503
		<b>t-test significance</b>	0.4656	0.3666	0.3774	0.3790
<b>F-test</b>		<b>Value</b>	9.162426	8.612341	6.512834	4.556399
		<b>Significance level</b>	0.0000	0.0000	0.000007	0.000438
<b>Generalized coefficient of determination</b>			0.628280	0.611845	0.044346	0.029066
Durbin-Watson test			1.916226	1.857628	2.160591	0.330785

As per the significance level of F-test for all models which are presented in table 3 it can be said that all above models are significant and at least one of regression model coefficients is not null. Also according to Durbin-Watson statistics in table 3, it could be found that there is no correlation of first kind in all presented model. And finally estimated generalized coefficient of determination for regression model of equation 12 shows that about 61% of dependent variable of earning management behavior is explained by independent and control variables; this matter shows the high level relationship between independent and control variables with dependent one. As well as estimated generalized coefficient of determination for regression model of equation 11 shows that about 3% of dependent variable of earning management behavior is explained by independent and control variables; this matter shows the too much low



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level relationship between independent and control variables with dependent one.

**8.1. Results of testing first hypothesis**

The first hypothesis of research states that there is a significant relationship between environmental uncertainties and earning management. As per results presented in table 2, first hypothesis is accepted; i.e. there is a significant relationship between calculated environmental uncertainties by using sale coefficient of variation and variability of estimated earnings per share and earning management, so that the probable value of calculated t-test for variables UNC1 and UNC2 are 0.0232 and 0.0134, respectively which are significant in level of significant of 95%.

**8.2. Results of testing second hypothesis**

The second hypothesis of research states that there is a significant relationship between environmental uncertainties and returns on stock. As per results presented in table 2, second hypothesis is accepted if using sale coefficient of variation as a scale of environmental uncertainties; i.e. there is a significant relationship between calculated environmental uncertainties by using sale coefficient of variation and returns on stock, so that the probable value of calculated t-test for variables UNC1 is 0.0000 which is significant in level of significant of 95% and second hypothesis is accepted. But if the variability of estimated earnings per share is used as environmental uncertainty, the second hypothesis is not accepted and there is no significant relationship between calculated environmental uncertainties by using variability of estimated earnings per share and returns on stock, so that the probable value of calculated t-test for variables UNC2 is 0.1344 which is not significant in level of significant of 95% and the hypothesis is rejected.

**8.3. Results of testing third hypothesis**

The third hypothesis of research states that manager capability significantly affects the relationship between environmental uncertainties and earning management. As per results presented in table 3, third hypothesis is rejected; i.e. there is no significant



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relationship between calculated generalized environmental uncertainties (calculated by using sale coefficient of variation and variability of estimated earnings per share) by using manager capability and earning management, so that the probable value of calculated t-test for variables  $UNC1*MA$  and  $UNC2*MA$  are 0.5485 and 0.5728, respectively which are not significant in level of significant of 95%.

### 8.4. Results of testing fourth hypothesis

The fourth hypothesis of research states that manager capability significantly affects the relationship between environmental uncertainties and returns on stock. As per results presented in table 3, fourth hypothesis is rejected; i.e. there is no significant relationship between calculated generalized environmental uncertainties (calculated by using sale coefficient of variation and variability of estimated earnings per share) by using manager capability and returns on stock, so that the probable value of calculated t-test for variables  $UNC1*MA$  and  $UNC2*MA$  are 0.9428 and 0.1861, respectively which are not significant in level of significant of 95%.

A summary of results from testing research hypotheses are presented in table 4.

**Table 4: Results of testing hypotheses**

Hypothesis	Title	Environmental Uncertainties scale	Result
First	There is a significant relationship between environmental uncertainties and earning management.	sale coefficient of variation	Accepted
		Variability of estimated EPS	Accepted
Second	There is a significant relationship between environmental uncertainties and returns on stock.	sale coefficient of variation	Accepted
		Variability of estimated EPS	Rejected
Third	Manager capability significantly affects the relationship between	sale coefficient of variation	Rejected



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	environmental uncertainties and earning management.	Variability of estimated EPS	Rejected
Fourth	Manager capability significantly affects the relationship between environmental uncertainties and returns on stock.	sale coefficient of variation	Rejected
		Variability of estimated EPS	Rejected

## 8. Conclusion

Companies are always effected by forced environmental uncertainties. These uncertainties could have both effects on company's activities and financial reporting, so managers always try to adopt their business units with these limitations and eventually business unit will be less under action of these environmental uncertainties.

This research has investigated the effects of environmental uncertainties on earning management and returns on stocks. The results show that in Tehran stock exchange during 2011 to 2015, managers took due actions of earning management as facing environmental uncertainties and use these strategies as a shelter to decrease fluctuations in company's earning. It is also showed that market understands the environmental uncertainties forced by customers (sale coefficient of variation) and reacts against these uncertainties (these types of uncertainties have informational content) but not against environmental uncertainties rise from manager's doubt about EPS.

Consequently, the results show that the capability of managers of sample companies within research interval has no significant impact on the relationship between environmental uncertainties and earning management and return on stocks.

Main limitation of this research is lack of theoretical basics related to environmental uncertainties which is because of being new of this domain.

By virtue of research results, it is recommended to investors to review procedure of stock prices and their earnings, environmental uncertainties created by customer to don't make mistake in making decisions on trading stocks.



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