STUDYING THE IMPACT OF CASH-FLOW UNCERTAINTY AND ENVIRONMENTAL UNCERTAINTY ON NON-CASH FLOW SHOCK RETURNS AT TEHRAN STOCK EXCHANGE

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Abstract: The aim of this paper was to investigate the impact of cash-flow uncertainty and environmental uncertainty on non-cash flow shock returns at Tehran Stock Exchange during 5 years that is from 2009 till 2013. The samples of this research consisted of 96 companies which involve 480 years number of observations. In this paper, to hypothesis and correlation coefficient, linear regression was applied. In order to analyze data and test hypotheses EVIEWS7 software was used, after designing and testing hypothesis which was done separately for each, it was concluded that cash-flow uncertainty and variability of company stock returns has significant effect on non-cash flow shock returns; however, company assets return variability has no significant effect on non-cash flow shock returns.

Keywords: non-cash flow shock returns, cash-flow uncertainty, environmental uncertainty.

1 Introduction

This study is done through presenting useful information about predicting cash-flow, giving priority to controlling cash-flow, and as well as other planning about it, and it can be said that the more non-cash flow returns be negative, the more the stocks of company will have negative earnings fluctuation and thereby the quality of accruals and stock companies reduce that it can have a significant impact on returns. As previous studies have shown, stock returns can be calculated by using the expected cash flow shocks. One of the most important factors in choosing the best investment is stock return, and investors can best allocate their assets by considering the correlation between stock returns and other accounting information. The empirical literature on macroeconomics and finance has shown a strong correlation between shock uncertainty and investment policies. Despite the changes in unconventional instability, theoretical explanations for the answers to investment have been focused on characteristics of real options. By returning costs, an increase in fluctuation, can change optimal investment timing. Moreover, after the financial crises from 2007 to 2009, as a potential mechanism that was leading to the observed association between uncertainty and investment, shortcomings in financial markets have been examined (Glover & Levine, 2015).

The achieved returns consist of three components: the expected returns, returns on cash flows, and returns of decline rate, which among all of these only the expected return reflects the company's cost of equity. Asset pricing tests that using the average stock returns are based on this assumption that, the average of realized returns and expected returns is equal. For longer periods of time, realized return cannot be equal with the expected return. Therefore, the tests that use average of realized return as a measure of their expected returns are one-sided, that this case is connected to the shock of future cash flows and changes. Ogneva (2012), has divided the total realized returns of one company stock to cash and non-cash flow shock returns. During the life of a company, the sum of cash-flow must be equal to the total revenues and as a result, a surprising earning could lead to a shock cash flow. The reaction to the stock price, by considering revised in the exploration of future cash flows can evaluate a cash flow shock. External financing for companies is very difficult consequence for uncertain cash-flow. Because these companies have higher costs for capital, such uncertainty leads to more investment risk. Generally, some companies with high levels of cash flow uncertainty will have higher expected returns and subsequently cash flow shock returns. Risky commensurate return is a key principle of financial theory. Each element of working capital can be considered as a certain element of risk-return range. Within the paradigm of additional value, if the stockholders return be more than the cost of the capital, the company can create value to them. Then, increasing the risk of working capital will cause increasing company's risk and expected returns of stockholders. In this case, the company should offer higher returns for value creation than the expected return. One of the fundamental cases in company management is the company's cash flow forecast, because the results of this forecast will affect the company's plan. Then the management is always looking for such predictions; and therefore, the aim of this paper was to examine the effect of uncertainty on cash flow and environmental uncertainty on non-cash flow returns shock. Now the main question is whether the uncertainty (cash flow and environmental) has effect on non-cash flow return or not.

2 Theory and literature review

One of the most important uncontrollable environment conditions that affect the function and profitability of organization is environmental uncertainty, which points to the unpredictability of customers' reaction, raw material marketer, competitors and regulatory groups. The impact of these surrounding factors unconsciously modulates their correlation with the business unit. Through modulating correlations of above mentioned factors with business unit, the function and profitability of it, will be influenced and cause high fluctuation in profitability (Gosh and Olsen, 2009). Although all these factors can make high fluctuation in companies reported profits, by considering company size, nature of activity and its correlation with the other companies, the impact of these factors on the functions of companies can be different (Rut & Cynthia, 2010). Among these factors, unpredictability of customers' reaction is one of the most important case that can have the same effect on all the companies function and thus increase the comparability among them (Gosh and Olsen, 2009). Since customers are the only factor that associated with most companies and also because all of them live in the same society with the same culture, beliefs and relatively equal conditions, then their behavior will be similar with all companies (Jong-Hag et al, 2011). Eventually, high fluctuation in the external environment will cause extreme fluctuation in companies' profitability, and as a result their stock will face with lack of interest of stockholders and investors. Because, when functioning, sharing and dividing profit of each company from year to year doesn't have high and non-justification fluctuations, from the stockholders and investors attitude the risk of investment will increases in that company. So, fewer people trading their stock, and by passing the time decreased trading volume cause the stock prices of these companies reduce (Gul et al, 2003). On the other hand, in this situation, financial institutions and creditors are unwilling to lend and finance to these companies, or consider more interest rates and stricter requirements to them. In 1987, Moses realized effective way of profit fluctuation on borrowing rate and stock prices, and mentioned that the companies with high profit fluctuation, will receive more borrowing rate and so their stock price will decrease (Pourheydari & Aflatouni, 2005). On the other hand, accepted accounting principles granted authority to managers that enable them to minimize company reported profit fluctuation which is caused by environmental uncertainty and always report the same profit. Also some companies that are uncertain about cash flow because of the lack of liquidity in the future pay less profit to companies which are uncertain about future cash flow. External sources financing is clearly more costly than financing from internal sources, because these companies these companies are limited in terms of external financing company. Therefore, above mentioned companies need internal sources to finance, thus they can pay less profit to their stockholders and this will affect the value of the company and therefore its return.

Glover & Levine (2015) started to investigate about correlation between uncertainty and corporate investment that can vary over time, and they studied that whether an increase in uncertainty that signs and scope of the reaction depends on the salary and benefit, can stimulate managers to increase or decrease investment company or not? Lee & Hsu (2015) studied the impact of cash flow uncertainty and working capital on non-cash flow shock returns. The results showed that there is significant relationship between working capital and non-cash flow shock returns. In addition, there isn't any significant relationship between uncertainty of cash flows and non-cash-flow shock returns. Ogneva (2012) investigated about quality of the accruals, realized return and expected returns, and he mentioned that stocks with low (high) quality accruals is a reason to negative (positive) non-cash flow shock returns. This negative (positive) cash flow shock dampens expected high (low) returns of the companies with low (high) quality accruals. Regardless cash flow shocks, realized return is inversely with quality accruals. Mari et al., (2011) in their investigation as environmental uncertainty and intelligence environmental management showed that inherently environmental uncertainties influence in two ways on managers decisions which one of them is through identifying changes in management business environment and the other is through creating changes that managers themselves do to check environmental uncertainty in the business environment. Foroughi et al., (2014), the analysis of accruals quality on without on non-cash flow shock returns. The purpose of this paper is to investigate the impact of accruals quality on non-cash flow shock returns. The results show that stocks with high quality accruals, have less non-cash flow shock returns.In general, this study determines the importance of controlling cash flow shock on asset pricing models that use realized stock returns. Ghaemi et al., (2012), investigated the impact of environmental uncertainty on the way using discretionary accruals by managers, that their results show the positive correlation between environmental uncertainty and fluctuation in unmanaged profit. Positive correlation alsohas confirmed between environmental uncertainty and the level of discretionary accruals and Earnings Smoothing. Armat and Dastghir (2013) in an investigation as environmental uncertainties and the current stock returns studied the way of environmental uncertainty influences on companies function and profitability and also the correlation of profit and current stock returns in an uncertain condition. The findings suggest that environmental uncertainty create so much fluctuation on function and profitability of companies and managers proceed to Reported income smoothing to avoid the negative effects of it by using discretionary accruals and the Smoothed profits have significant correlation with current stock returns. Hejazi et al., (2011), investigated the impact of environmental uncertainty on profit components and also showed that it will influence unmanaged profit.

3 Research hypothesis

According to research questions, the following hypotheses have been explained:

The main hypothesis 1: Cash flow uncertainty on non-cash flow uncertainty has significant effect.

Hypothesis 1-1: The variability of stock returns has a significant effect on non-cash flow shock returns.

Hypothesis 1-2: The variability of company assets return has significant effect on non-cash flow shock return.

The main hypothesis 2: Environmental uncertainty has a significant effect on non-cash flow returns.

Hypothesis 2-1: Sales variation coefficient has significant effect on non-cash flow shock return.

Hypothesis 2-2: Capital cost of variation coefficient has a significant effect on non-cash flow shock returns.

Hypothesis 2-3: Net profit variation coefficient before tax has significant effect on non-cash flow shock return.

4 Methods

According to objective of this paper, it is a kind of applied research. As well as based on the method and nature of research it is correlation research. The aim of this study is to determine the correlation of variables. The way of data collection for this study is library study and the population of it consisted of all companies listed on the Stock Exchange of Tehran and96 companies was selected during 5 years that is from 2009 till 2013, which in 2014 because of the need for the research variables in coming year data, it was not entered to research courses and its data is used to calculate some variables. In order to analyze data, EVIEWS7 software was used and through t statistical tests the calculated probability of judging and evaluating on each of the research hypotheses were discussed.

5. Research Model and Calculated variables

The regression model was used to investigate about the impact of environmental and cash flow uncertainty on non-cash flow shock returns and to separate hypothesis as follow that the main statistical hypothesis 1 is presented in equation (1):

$$r^{NCF}_{it}= \alpha + \beta_1 ROAVOL_{it} + \beta_2 SRVOL_{it} + \beta_3 SIZE_{it} + \beta_4 BMRATIO_{it} + \beta_5 NWC_{it} + \varepsilon_{it} \quad (1)$$

r^{NCF}_{it}: non-cash flow shock returns, $ROAVOL_{it}$: Variable Change of return on assets (cash flow uncertainty character), $SRVOL_{it}$: variability of company stock return (cash flow uncertainty character), $SIZE_{it}$: company size, $BMRATIO_{it}$: the ratio of company on stock, NWC_{it}: Net working capital

Hypotheses Statistical 1-1:

$$r^{NCF}_{it}= \alpha + \beta_1 SRVOL_{it} + \beta_2 SIZE_{it} + \beta_3 BMRATIO_{it} + \beta_4 NWC_{it} + \varepsilon_{it} \quad (2)$$

Hypotheses Statistical 1-2:

$$r^{NCF}_{it}= \alpha + \beta_1 ROAVOL_{it} + \beta_2 SIZE_{it} + \beta_3 BMRATIO_{it} + \beta_4 NWC_{it} + \varepsilon_{it} \quad (3)$$

The main hypotheses (2): environmental uncertainty has significant impact on non-cash flow shock returns.

$$r^{NCF}_{it}= \alpha + \beta_3 CVS_{it} + \beta_4 CVCC_{it} + \beta_5 CVP_{it} + \beta_6 SIZE_{it} + \beta_7 BMRATIO_{it} + \beta_8 NWC_{it} + \varepsilon_{it} \quad (4)$$

r^{NCF}_{it}: non-cash flow uncertainty, CVS_{it}: sales variation coefficient (cash flow uncertainty character), $CVCC_{it}$: capital coefficient variation (cash flow uncertainty character), CVP_{it}: net profit variation coefficient before tax (cash flow uncertainty character)

Hypotheses Statistical 1-2:

$$r^{NCF}_{it}= \alpha + \beta_1 CVS_{it} + \beta_2 SIZE_{it} + \beta_3 BMRATIO_{it} + \beta_4 NWC_{it} + \varepsilon_{it} \quad (5)$$

Hypotheses Statistical 2-2:

$$r^{NCF}_{it}= \alpha + \beta_1 CVCC_{it} + \beta_2 SIZE_{it} + \beta_3 BMRATIO_{it} + \beta_4 NWC_{it} + \varepsilon_{it} \quad (6)$$

Hypotheses Statistical 2-3:

$$r^{NCF}_{it}= \alpha + \beta_1 CVP_{it} + \beta_2 SIZE_{it} + \beta_3 BMRATIO_{it} + \beta_4 NWC_{it} + \varepsilon_{it} \quad (7)$$

Measurement Method

Dependent variable:

Non-cash flow shock returns: the total returns divided to two components which are cash flow shock returns and non-cash flow shock returns. According to Cremendi&Laip research (1987), the total realized returns are analyzed to three components as equation (8):

$$r_{it+1} = E(r_{it+1}) + r^{CF}_{it+1} + \varepsilon_{it+1} r^{CF}_{it+1} = \sum_{s=0}^{\infty} \beta^s \frac{\Delta E(X_{t+1+s}|UX_{t+1})}{P_t} \quad (8)$$

r_{it+1}: the realized stock returns i in t+1, $E(r_{it+1})$: the expected stock returns i in t+1, r^{CF}_{it+1}: cash flow shock stock i in t+1, $€_{It+1}$: abnormal stock returns I in t+1 that doesn't have significant correlation with profit fluctuation. X_{t+1}: profit, U X_{t+1}: profit fluctuation, $\Delta E(X_{t+1+s}|UX_{t+1})$: The revision in expected profit calculation over t and t+1 period. β: The interest rate factor that is equal to: (r+1)/1, P_t: The market value of the company's equity in t.

According to Collins & Kothari research (1989), the cash flow shock returns in (8) equation was measured by using future period fluctuation in equation (9):

$$P_{it} / U X_{t+1} = £ r^{CF}_{it+1} \quad (9)$$

£: profit response coefficient, U X_{t+1}: i company's profit fluctuation in t+1, P_{it}: The market value of the i company's equity in t

In this paper by following Ogneva research (2012), and also by using (9) and (10) equations, the returns divided into two parts which are cash flow shock returns and non-cash flow shock returns that is analyzed by cross-sectional regression equation (10):

$$R_{it+1} = E(R_{it+1}) + £ U X_{t+1}/P_t + €_{it+1} \quad (10)$$

R_{it+1}: realized returns, $U X_{t+1}/P_t$: cash flow shock returns, $E(R_{it+1}) + €_{it+1}$: Total intercept and the regression error of the i non-cash flow shock returns stock (Froughi & et al., 2013)

£ is variation coefficient of U Xt+1/Pt in cross-sectional regression model of equation (11) for each consonant stock. The cross-sectional regression of equation (11) was estimated during 2009 till 2012. In order to calculate non-cash flow shock returns in future by using regression based on profit fluctuation, first the cash profit fluctuationof future year calculated in equation (12) which in this case the profits will divided to equity of company value in the beginning of t year.

$$U X_{t+1} = EARN_{it+1} - E(EARN_{it+1}) \quad (11)$$

$U X_{t+1}$: company profit fluctuation, $EARN_{it+1}$: the profit before extraordinary items, $E(EARN_{it+1})$: the expected profit of company,

Through using calculated coefficient, expected profit will be estimated as equation (12):

$$E_t(EARN_{it+1}) = \beta_0 + \beta_1 EARN_{it} \quad (12)$$

In order to calculate expected profit, first the coefficient of β0 ، β1 will be calculated as equation (13) through the profit in t-1:

$$EARN_{it} = \beta_0 + \beta_1 EARN_{it-1} - €_{it} \quad (13)$$

The cross-sectional regression equation (13) was estimated through 2009 till 2012.

Independent Variables:

1) Cash-flow uncertainty: According to Brav et al (2005), in this situation two variables of company asset returns changeability (ROAVOL) and company stock returns changeability (SRVOL) are used.

A) Company returns assets changeability (ROAVOL): Brav et al (2005), used changeability of returns on assets variable to calculate cash flow uncertainty which is equal to standard deviationof company asset returns rate during the last 4 years, they conclude that non-cash flow shock returns lead to instability of company asset returns (ROA), thus assets returns changeability was used as representation for calculating cash flow uncertainty (Brav et al, 2005) that is as follow:

$$ROAVOL_{it} = STD(ROA) \quad (14)$$

$ROAVOL_{it}$: assets returns rate variability, STD (ROA): 4 years ago ROA company's standard deviation.

The company's assets returns will be calculated in equation (15):

$$ROA = \frac{Income}{Total\ Assets} \quad (15)$$

B) The variability of stock returns (SRVOL): According to Chay&Suh (2009), when cash flow associate with uncertainty, stock price and returns become more volatile, so using variability of company stock returns variable SRVOL is exact as a way to evaluate cash flow uncertainty, SRVOL is the monthly standard deviation company stock returns during a year (Chay&Suh2009) which is as equation (16):

$$SRVOL_{it} = STD(R_{it}) \quad (16)$$

R_{it}: Monthly stock returns of the Company, is to calculate the monthly stock returns as equation (17):

$$R_{it} = \frac{P_{it}(1+\alpha+\beta) + D_{it} - P_{it-1}C\alpha}{P_{it-1} + C\alpha} \quad (17)$$

R_{it}: actual stock returns i in t course, P_{it}: i stock price in t end course, P_{it-1}: i stock price in t-1 end course, D_{it}: i cash profit stock in t course, α: The percentage of capital increase from and cash profit from stockholders, β: The percentage of increasing capital through savings, C: investor paid face value for capital increase (1000 Rials).

2) Environmental uncertainty: internal environmental variability is measured through using three parameters:

1- Sales coefficient variation (market) which the sales variability is gained in equation (18):

Sales variation= current year sales- last year sales (18)

2- Calculated cost of variation coefficient which the calculation of capital cost is as equation (19):

$$WACC = (WS \times KS) + (WD \times KD) \quad (19)$$

The weight of normal stock equity (Ws) is as following equation (20):

$$Ws = \frac{\text{Book Value Equity}}{\text{Book Value interest bearing debt} + \text{Book Value Equity}} \quad (20)$$

The weight of interest-bearing debt (Wd) is as follow equation (21):

$$Wd = \frac{\text{Book Value interest bearing debt}}{\text{Book Value interest bearing debt} + \text{Book Value Equity}} \quad (21)$$

So, calculating the WACC rate need not only borrowing cost and returns rate but also will need weight of each of these elements in entity's capital structure. It should be noted that in this paper the debt cost rate (Kd) is equal to average of government bonds release rate which is equal to 17% and because the cost of the profit is a part of acceptable costs of tax, thus, according to 22.5% tax rate we have:

Rate cost of debt= 17 %*(%100- %22.5) =%13.175

Ws*Ks: this represents normal stock cost weighted rate, and to calculate the cost of new normal stock cost, the Gordon model is used. This is as follow (22):

$$K_s = \frac{D(1+g)}{P} + g \quad (22)$$

D= cash profit of each stock, P=market price of per stock, g= the growth rate of stocks profit, which its calculation is as equation (23):

$$\text{The Ratio of profit accumulation} = \frac{\text{Undivided cash profit}}{\text{Current year net profit}} \quad (23)$$

g= ROE × Accumulated profit

3- Variation coefficient of net profit before tax (profit):

Net profit changes before tax= Net profit before current year tax- Net profit before last year tax (24)

In order to calculate coefficient variation of each characters of environmental uncertainty the equation (25) will be used:

$$CV(Z_k) = \frac{\sqrt{\sum_{t=1}^{5} \frac{(Z_{kt} - aZ_k)^2}{5}}}{aZ_k} \quad (25)$$

CV (Zkt) =uncertainty variation coefficient K, aZk= the average variability of uncertainty information K during 5 years, Zkt=uncertainty of K in t, 1, 2, 3, 4, 5 =T: from 2009 till 2012, Zk,t=(Xkt-Xkt-1), 1, 2, 3 =K: to information uncertainty of 1) market 2) technology 3) profit.

So, by calculating environmental uncertainty, equation (26) can be used:

$$EU = \log\left(\sum \sum_{k=1}^{3} CV(Z_K)\right) \quad (26)$$

Control variable are:

Company Size: Through the natural logarithm the market value of equity can be obtained.

The ratio of book value to market value: the division of each book value to each market value of per stock is calculated.

Net working capital: Subtracting current liabilities of company is gained from current company assets.

6 The analysis of research hypotheses

6.1 Descriptive Statistics

Table 1 results

	RNCF	ROAVOL	SRVOL	CVS	CVCC	CVP	SIZE	BMRATIO	NWC
Mean	0.43574	0.05680	0.70450	-1.76346	-0.016716	-1.218635	13.551	0.652383	0.13413
Median	0.37548	0.04056	0.44637	1.16009	-0.009485	1.390835	13.520	0.541615	0.14164
Maximum	2.17173	0.40232	7.72401	46.7917	0.342360	52.25012	18.862	2.979850	0.81914
Minimum	-1.63436	0.00156	0.02297	-204.905	-1.242640	-174.3173	9.9441	-0.680440	-0.48889
Std. Dev.	0.62434	0.05446	0.93154	23.0490	0.093740	21.60306	1.4943	0.461286	0.21014
Skewness	0.06069	2.83147	4.50148	-7.28524	-4.909428	-5.465428	0.5681	1.312135	0.13148
Kurtosis	2.86217	13.7071	28.6211	63.8107	65.16782	44.71858	3.8723	5.463372	3.34463
Jarque-Bera	0.67457	2934.24	14749.9	78204.8	79224.95	37198.47	41.042	259.0999	3.75842
Probability	0.71370	0.00000	0.00000	0.00000	0.000000	0.000000	0.0000	0.000000	0.15271
Observations	480	480	480	480	480	480	480	480	480

Source: researcher findings

According to the results of Table 1, the average representing balance point and center of distribution exertion and also is a good indicator to show the centrality of data that for non-cash flow shock returns variable its equal to 0/43574. Median indicates that half of the data show less than this amount and half are greater than it and also equality of mean and median value shows normality of this variable which is 0/62434 for this variable. Jack-bera test is more than %5 for non-cash flow shock returns variable, it means that this variable consist of normal distribution.

6.2 Stationary test variables

Stationary variables can be investigated in 3 forms of “level”, “through the first difference” and “through the second difference”. The unit root test results for variables in level and the first difference is listed in Table 2:

Table 2: The unit root test results for variables in level and the first difference

Variable	Statistic	Prob	The difference between first order
			Prob
RNCF	261.187	0.0007	
ROAVOL	240.889	0.0096	
SRVOL	319.034	0.0000	
CVS	27.6389	0.0000	
CVCC	400.162	0.0000	
CVP	11.7756	0.0672	0.0005
SIZE	153.102	0.9771	0.0000
BMRATIO	242.524	0.0079	
NWC	228.341	0.0373	

Dickey fuller test of co-integration			
Estimating the regression which has been done	RESID $_{i,t}$	Statistic	Prob
		311.109	0.0000

Source: researcher findings

According to the results of table (2), the significant level of unit root test and also the size of company in unit root test is less than %5 in all variables except in net profit variation coefficient before tax and it shows that they are at zero order and static level, and variation coefficient variables of net profit became dynamic before tax and differencing once, these variables will be full of first level, and in order to avoid faise regression, first we should change all variables to dynamic variables and then get the considered model. In this research, the test result along with collective pattern which generalize by Dickey Fuller test was done to ensure that it is not faise regression. As you can see the unit root test in disturbing regression is less than %5 which is zero and at the static level. So, there isn't any problem for estimating regression and it can be estimated with primary models.

6.3 F Limer and Hausman test

Table 3. The results of the mentioned tests

p-value	Statistic	test	hypothesis
0.0000	2.121812	Redundant Fixed Effects	The main hypothesis 1
0.0000	49.975058	Hausman	
0.0000	2.077249	Redundant Fixed Effects	Hypothesis 1-1
0.0000	47.520381	Hausman	
0.0000	1.932968	Redundant Fixed Effects	Hypothesis 1-2
0.0000	41.057799	Hausman	
0.0000	2.293048	Redundant Fixed Effects	The main hypothesis 2
0.0000	54.368745	Hausman	
0.0000	2.039569	Redundant Fixed Effects	Hypothesis 2-1
0.0000	49.210781	Hausman	
0.0000	2.113142	Redundant Fixed Effects	Hypothesis 2-2
0.0000	42.436239	Hausman	
0.0000	2.055366	Redundant Fixed Effects	Hypothesis2-3
0.0000	49.876844	Hausman	

Source: researcher findings

As the table (3) indicates, the possibility of Limer test is less than %5 in all primary and secondary hypotheses So, H0 will be rejected, and we should use clear methods. The next step is to determine the fixed effect model across random tests of Hausman test. According to primary and secondary hypotheses, the probability of Hausman test is less than %5 which is done based on Chi-square test. So, H0 will be rejected and this case mentions that there is a correlation between the estimated regression error and independent variables. According to the Hausman and F Limer test results, for parameter estimation and primary and secondary hypothesis testing, fixed effects have been used.

6.4 The summary of each analysis

6.4.1 Analysis hypothesis 1-1

"The variability of stock returns has a significant effect on non-cash flow shock returns."

Table (4), the results of hypothesis 1-1

Variable	Coefficient	Std. Error	t-Statistic	Prob.
β_0	-0.196679	0.591750	-0.332369	0.7398
ROAVOL	-1.539435	0.774590	-1.987418	0.0476
SRVOL	-0.262876	0.059498	-4.418249	0.0000
SIZE	0.111369	0.042824	2.600640	0.0097
BMRATIO	-0.960845	0.084973	-11.30760	0.0000
NWC	0.331005	0.249055	1.329045	0.1846
R-squared	0.467370	F-statistic		3.325632

Adjusted R-squared	0.326834	Prob(F-statistic)	0.000000
Durbin-Watson stat		2.333936	

Source: researcher findings

According to the results of table (4), possibility of t-statistic for variation coefficient of stock returns variable and the ratio of book value in non-cash flow shock returns is less than %5, so estimated coefficient of the mentioned variables is statistically significant and the estimated stock returns variable is 0/247945 on non-cash flow shock returns. According to t-statistic and p-Value, the significance of these variables in error level is %5. These findings indicate that variation coefficient of stock returns variable has significant impact on non-cash flow shock returns. And t-statistic variable of net working capital is more than %5 on non-cash flow shock returns. Therefore, the above mentioned estimated coefficients variables are not significant statistically, and then %95 of variables are not significant in the mentioned model. Adjusted determined coefficient shows the explanatory power of the independent variables which can explain %32 of dependent variable. At the same time, by observing values of Durbin-Watson we can get that there isn't correlation among disturbing elements, because the values are about 1.5 to 2.5. F statistic likely indicates that the model is statistically significant and according to variation coefficient of stock returns variable and the ratio of book value on market value are significant in non-cash flow shock returns. So H0 hypothesis will be rejected, in other words it can be said that variation coefficient of stock returns variable has significant and invese impact on non-cash flow shock returns.

6.4.2 Analysis of the hypothesis 1-2

"The variability of company assets return has significant effect on non-cash flow shock return."

Table (5), the results of hypothesis 1-2

Variable	Coefficient	Std. Error	t-Statistic	Prob.
β_0	-0.295080	0.605569	-0.487277	0.6263
ROAVOL	-1.107305	0.786893	-1.407185	0.1602
SIZE	0.103634	0.043818	2.365098	0.0185
BMRATIO	-0.935484	0.086821	-10.77489	0.0000
NWC	0.158976	0.251916	0.631069	0.5284
R-squared	0.439936	F-statistic		3.015090
Adjusted R-squared	0.294025	Prob(F-statistic)		0.000000
Durbin-Watson stat		2.343373		

Source: researcher findings

According to the results of table (5), possibility of t-statistic for variation coefficient, the size of company and the ratio of book value in non-cash flow shock returns is less than %5, so estimated coefficient of the mentioned variables is statistically significant and t-statistic variable of net working capital is more than %5 on non-cash flow shock returns. Therefore, the above mentioned estimated coefficients variables are not significant statistically, and then %95 of variables are not significant in the mentioned model. Adjusted determined coefficient shows the explanatory power of the independent variables which can explain %29 of dependent variable. At the same time, by observing values of Durbin-Watson we can get that there isn't correlation among disturbing elements. F statistic likely indicates that the model is statistically significant. So H0 hypothesis will reject, in other words it can be said that has variability of company assets return significant impact on non-cash flow shock returns.

6.4.2 main hypothesis of the second analysis

"Environmental uncertainty has significant impact on non-cash flow shock returns." Sales variation coefficient has significant Non-cash flow shock return."

Table (6), the results of hypothesis 2-1

Variable	Coefficient	Std. Error	t-Statistic	Prob.
β_0	63.36983	18.20579	3.480751	0.0006
CVS	14.20577	5.461797	2.600933	0.0097
CVCC	-1.579512	0.260497	-6.063449	0.0000
CVP	31.86209	11.79596	2.701101	0.0072
SIZE	0.109349	0.041475	2.636499	0.0087
BMRATIO	-0.850454	0.082787	-10.27277	0.0000
NWC	0.103093	0.237863	0.433414	0.6650
R-squared	0.501940	F-statistic		3.771723
Adjusted R-squared	0.368860	Prob(F-statistic)		0.000000
Durbin-Watson stat		2.335168		

Source: researcher findings

According to the results of table (6), possibility of t-statistic for constant variation and sales variation coefficient of capital cost variable, the size of company and the ratio of book value in non-cash flow shock returns is less than %5, so estimated coefficient of the mentioned variables is statistically significant and the estimated coefficient of constant variation and sales variation coefficient of capital cost variable, is 11.96944 on non-cash flow shock returns. According to t-statistic and p-Value, the significance of these variables in error level is %5. These findings indicate that constant variation and sales variation coefficient of capital cost variable has significant impact on non-cash flow shock returns. And t-statistic variable of net working capital is more than %5 on non-cash flow shock returns. Therefore, the above mentioned estimated coefficients variables are not significant statistically, and then %95 of variables are not significant in the mentioned model. Adjusted determined

coefficient shows the explanatory power of the independent variables which can explain %30 of dependent variable. At the same time, by observing values of Durbin-Watson we can get that there isn't correlation among disturbing elements, because the values are about 1.5 to 2.5. F statistic likely indicates that the model is statistically significant and according to sales variation coefficient of variable, the size of company and the ratio of book value on market value are significant in non-cash flow shock returns. So H0 hypothesis will reject, in other words it can be said that sales variation coefficient of variable has significant impact on non-cash flow shock returns.

6.4.2.2 Analysis of the hypothesis 2-2

"Variation coefficient of capital cost has significant correlation on non-cash flow shock returns."

Table (7), the results of hypothesis 2-2

Variable	Coefficient	Std. Error	t-Statistic	Prob.
β_0	20.74118	10.10801	2.051955	0.0409
CVS	11.96944	5.720847	2.092251	0.0371
SIZE	0.103034	0.043683	2.358690	0.0188
BMRATIO	-0.923254	0.086521	-10.67089	0.0000
NWC	0.223855	0.249900	0.895777	0.3709
R-squared	0.443429	F-statistic		3.058103
Adjusted R-squared	0.298428	Prob(F-statistic)		0.000000
Durbin-Watson stat		2.307130		

Source: researcher findings

According to the results of table (7), possibility of t-statistic for variation coefficient of capital cost variable, the size of company and the ratio of book value in non-cash flow shock returns on market is less than %5, so estimated coefficient of the mentioned variables is statistically significant and the estimated coefficient of capital cost variation is 1/576414 on non-cash flow shock returns. According to t-statistic and p-Value, the significance of these variables in error level is %5. These findings indicate that variation coefficient of capital cost variable has significant impact on non-cash flow shock returns. And t-statistic variable of working capital is more than %5 on non-cash flow shock returns. Therefore, the above mentioned estimated coefficients variables are not significant statistically, and then %95 of variables are not significant in the mentioned model. Adjusted determined coefficient shows the explanatory power of the independent variables which can explain %35 of dependent variable. At the same time, by observing values of durbin-Watson we can get that there isn't correlation among disturbing elements, because the values are about 1.5 to 2.5. F statistic likely indicates that the model is statistically significant and according to variation coefficient of capital cost variable, the size of company and the ratio of book value on market value are significant in non-cash flow shock returns. So H0 hypothesis will reject, in other words it can be said that variation coefficient of capital cost variable has significant impact on non-cash flow shock returns.

6.4.2.3 Analysis of the hypothesis 2-3

"Net profit variation coefficient before tax has significant impact on non-cash flow shock returns."

Table (8), the results of hypothesis 2-3

Variable	Coefficient	Std. Error	t-Statistic	Prob.
β_0	-0.550854	0.579088	-0.951245	0.3421
CVCC	-1.576414	0.264064	-5.969816	0.0000
SIZE	0.113157	0.042035	2.691970	0.0074
BMRATIO	-0.869441	0.083762	-10.37989	0.0000
NWC	0.117089	0.240410	0.487039	0.6265
R-squared	0.485290	F-statistic		3.618990
Adjusted R-squared	0.351195	Prob(F-statistic)		0.000000
Durbin-Watson stat		2.363094		

Source: researcher findings

According to the results of table (8), possibility of t-statistic for constant coefficient and net profit variation coefficient of coefficients variables before tax, the size of company and the ratio of book value in non-cash flow shock returns on market is less than %5, so estimated coefficient of the mentioned variables is statistically significant and the estimated coefficient of net profit variation coefficient before tax is 29/26524 on non-cash flow shock returns. According to t-statistic and p-Value, the significance of these variables in error level is %5. These findings indicate that net profit variation coefficient of changes before tax has significant impact on non-cash flow shock returns. And t-statistic variable of working capital is more than %5 on non-cash flow shock returns. Therefore, the above mentioned estimated coefficients variables are not significant statistically, and then %95 of variables are not significant in the mentioned model. Adjusted determined coefficient shows the explanatory power of the independent variables which can explain %30 of dependent variable. At the same time, by observing values of Watson we can get that there isn't correlation among disturbing elements, because the values are about 1.5 to 2.5. F statistic likely indicates that the model is statistically significant and according to hypothesis net profit variation coefficient of variables before tax, the size of company and the ratio of book value on market value is significant in non-cash flow shock returns. So H0 hypothesis will reject, in other words it can be said that net profit variation coefficient of variables before tax has significant impact on non-cash flow shock returns.

7 Conclusion

The aim of this paper was to investigate the impact of cash-flow uncertainty and environmental uncertainty on non-cash flow shock returns at Tehran Stock Exchange from 2009 till 2013. After designing and testing hypothesis which was done separately for each, it was concluded that cash-flow uncertainty and variability of company stock returns has significant effect on non-cash flow shock returns; however, company assets return variability has no significant effect on non-cash flow shock

returns. Also sales variation coefficient and net profit variation coefficient before tax has significant effect on non-cash flow shock returns, rather this influence on capital cost of variation coefficient variables and stock returns variability is reverse and significant. As the results of hypothesis test indicated, there were significant correlation between environmental uncertainty and cash flow uncertainty along with non-cash flow shock returns, this shows that investors have been aware about importance of environmental uncertainty and cash-flow uncertainty in determining non-cash flow shock returns. Therefore based on the role of these variables on non-cash flow shock returns, it is recommended to investors, analysts of capital market and other users of financial statements that consider environmental and cash flow uncertainty level in investment and also decision making models to minimize their investing risk. It is also suggested to investors that pay attention to above mentioned points. Providing necessary training from Tehran Stock Exchange to stockholders, investors and other interested people in order to improve awareness about environmental uncertainty and cash flow uncertainty based on the determining of companies returns is essential. Researchers in their future investigation can study about environmental uncertainty and board of directors monitoring on firm function and also profit management of them so that they can be helpful in advancing science in this field. The results of this study based on Armat & Dastghir (2013), has accordance with correlation of environmental uncertainty and returns. The results of their study shows that environmental uncertainty makes a lot of fluctuation in profitability and function of company and managers using discretionary accruals to avoid the negative effects start to reported profit and also profits has significant correlation with returns.

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