

# The Relationship between Stability Changes Unusual Free Cash Flow Remained the Persistence of Discretionary Accruals in Listed Companies the Tehran Stock Exchange

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## ABSTRACT

Investment with the aim of increasing wealth carried out. one of the factors the investment firm access to cash is enough according to agency theory can be used by management in order to personal purposes and projects with negative net present value falls risk. Financing for companies capital costs are high. The research the breakdown changes free Cash Flow to both normal and abnormal to investigate the stability changes between the positive and negative and compared with discretionary accruals during a six-year period from 2006 to 2010 among 107 Companies available from the Tehran Stock Exchange deals. as a result, four test the hypothesis in this study, abnormal persistence of negative changes Cash balance of unusual stability of the positive changes cash balance was higher stability and positive change unusual Cash balance of less than discretionary accruals is stable. Also, the stability of the negative changes unusual cash balance more stable accruals and the change in discretionary accruals changes and stock returns there is a significant relationship.

**KEYWORDS:** discretionary accruals - free cash flow - Cash management

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## INTRODUCTION

Users of financial statements need information about how to create and use cash by that entity. The need regardless of the nature of the entity's activities and considered or not considered cash product as an entity, there are because despite the differences between these units the principal activities of the revenue, they need the cash is mainly due to similar reasons. (Saghafi and Kurdistan) [1]. According to Vernon Kam accounting theory benefits as benchmark performance measurement considering the company wanted looking to increase the value of the resources. Information about cash flow could be more details offered and therefore a more meaningful assessment but if cash flow information unique Performance Index create consider gone wrong because benefit obligation cash flow from although the operation based Events and similar transactions but representatives of different variables are considered. (Dichow and Ross) [3]. many fans cash Flows Information benefit obligation not reliable because it by having powers of the calculation of benefit recipients be manipulated and therefore unreliable as and the other hand cash generated by operations very stable and reliable as it caused great exactness cash it will be counted and accountability.

### Theoretical Foundations

Free cash flow criterion for measuring the performance of companies and the money that after spending part of the for the maintenance or development of properties controls. in this study, free cash flow the two components of normal variation unusual and Review is separated. Abnormal positive changes cash balance, which is the company had more cash be given to it may conducive to investment the funds projects the net present value is negative. The anomalous negative changes cash remained causes lack of corporate cash be provided; who can participate towards investment opportunities with a positive net present value projects direct. It is expected that abnormal positive changes cash balance less durable the negative abnormal changes in cash may have. General interpretation of the accrual is that accruals born management of heroic deeds registration and identification of events generally accepted accounting principles about time and the amount of revenues and expenses recognized the company freedom is relative when managers accounting earnings to the amount of make Cash are identified, accruals are created in other definitions accruals separable optional two-component and non-elective divided. Discretionary accruals applicable comments by management. The optional component accruals as an indicator in order to discover earnings management the economic units are used but such profits, necessarily in recognition

management efforts, it does not work in this study stability of positive and negative changes abnormal cash balances are compared. The stability of these the stability discretionary accruals representative earnings management is; the comparison will.

### Background of research

Cheney et al. [5] effect of firm size, debt ratios, profitability ratios, efficiency, discretionary accruals and growths mouting the tested and came to the conclusion that smoother companies smoothly than other companies of interest larger firms are more efficient and debt ratios are higher hambers [6] showed that investors are trying testability and accruals and cash flows predicted but to be able to reflection the prices are not

Mashayekhi et al. [7] the optional items in earnings management listed companies the Tehran Stock Exchange studied and came to the conclusion that companies studied in this research earnings management is applied and directors of the company the decrease in cash results of Operations indicating that the performance is a weak entity in order to compensate for this thread to increase profits by increasing discretionary accruals has.

Dichow and Dichow [8] role of Accruals better measure company performance is measured in a time series examined. due to the accruals requires assumptions and Prediction future cash flows is thus quality of Accruals and Earnings the increase in error anticipated accrual rate decreases. they ultimately concluded that characteristics of each company as absolute value amount of accruals, operational cycle, standard deviation of sales accruals and cash flow and profits of the firm size can be used as tool for assessing the quality of earnings was used.

### Hypotheses

1. Stability changes negative abnormal cash balance sustainability of positive changes abnormal cash balance more.
2. Stability changes positive abnormal less cash balance of stabilized discretionary accruals is.
3. Stability changes negative abnormal cash balance of more than discretionary accruals is stable
4. Between changes in discretionary accruals changes and stock returns there is a significant relationship

## RESEARCH METHODOLOGY

descriptive research method and the correlation and practical purpose. the method to examine the correlation between variables, regression is.the present study methods - time series is collected. The method statistics in Science panel approach - data is known studies in Finance and accounting it is very useful.

### Test methods the first hypothesis

the first hypothesis of this study stability of negative changes cash balance the stability of the positive changes cash balances are compared.in this regard, test patterns hypothesis in both changes of companies positive and negative abnormal the cash balance is fitted to the data. In the model, stability Changes in terms of the relationship among the changes the net profit is measured. in other words, it Chen and Shin (2010) abnormal changes in cash balance how to communicate more have a net profit; Delaware more effective the variables the company's profit and the and the results are lasting.

$$INCOME_t = \beta_0 + \beta_1 ABNACASH_t + \beta_2 Size_t + \varepsilon_t$$

methods applied the regression model to test the first hypothesis this is the case first of all pooled data year - based on the amounts of positive and negative abnormal the cash balance are divided into two groups. a group consisted of all years - companies that the positive abnormal changes the other group includes all years - companies that there are no abnormal changes. Then the regression model both groups will be fitted. the values obtained the coefficient  $\beta_1$  rate of stability abnormal changes in cash balance in both groups the combination of positive and negative pooled data show by comparing these values we can about the first hypothesis of the study he commented.

### Testing the second and third methods

To test the hypothesis that the second and third by the way Mishken (1983) introduced and in 1996 by Sloan development and adjustment, it is used (Chen and Shin, 2010).

Test this hypothesis, through a regression model where net profit function of discretionary accruals and positive changes cash balance is abnormal; is done. Accordingly the total combined data (Year - Company) the positive or negative abnormal changes at the segregated funds and the test the second hypothesis the only positive data and third hypotheses the data negative the regression. The pattern is as follows.

$$INCOME_t = \beta_0 + \beta_1 ABNACASH_t + \beta_2 NACC_t + \beta_3 Size_t + \varepsilon_t$$

Regarding claims

the second hypothesis of the study, be the following statistical hypotheses be developed.

$$H_0: |\beta_1| \geq |\beta_2|$$

$$H_1: |\beta_1| < |\beta_2|$$

To test the third hypothesis ABNΔCASH negative abnormal changes cash balance was according to claims that, the following statistical assumptions were tested.

H0:  $|\beta_1| \leq |\beta_2|$

H1:  $|\beta_1| > |\beta_2|$

the fourth hypothesis testing methods to test this hypothesis through a regression model in stock as the dependent variable and function of discretionary accruals and the control variables; has been done. hypothesis test pattern is form follows.

$$RET_t = \beta_0 + \beta_1 NACC_t + \beta_2 Size_t + \beta_3 \Delta FCF_t + \varepsilon_t$$

Regarding the the claims were the fourth hypothesis of the study, can be the following statistical hypotheses be developed.

H0:  $\beta_1 \neq 0$

H1:  $\beta_1 = 0$

in other words, if the coefficient  $\beta_1$  that reflect the relationship between stock returns it is with discretionary accruals; Zero (the terms are statistically significant); can be claims the fourth hypothesis is accepted.

**RESEARCH FINDINGS**

the first hypothesis tests the first research hypothesis is expressed the unusual stability of negative changes free Cash Flow before unusual stability and positive change free cash balance there is a significant relationship. Abnormal changes in the free cash through a regression model measured

$$INCOME_t = \beta_0 + \beta_1 ABNACASH_t + \beta_2 Size_t + \varepsilon_t$$

Table 4-5: Results test the first hypothesis (Model 1: firms with negative abnormal changes the free cash balances)

Independent variables	The size coefficient	T-statistics	Significant	The linearity tests	
				Tolerance	VIF
ABNACASH	-0/174	3/3	0/001	0/99	1/01
Size	0/382	7/236	0/000	0/99	1/01
0/189R <sup>2</sup> 2/023 Watson statistic 34/329 F -Statistics 0/000 f-Significant					

The results factor model of much .0189 is it shows that the 18/9 percent the variation in the dependent variable. Through changes independent variables to be explained. Estimated value for Watson statistic between 1/5 and 2/5 is. These findings indicate that the regression errors there is no correlation. Testing time about independent variables there is regression suggests a lack of the strong linear between these variables. Because both of these test statistics close to 1. F-statistics measure decisions about significant regression. Statistical hypothesis the test this statistic is as follows.

H0:  $\beta_i = 0$  Regression model is not significant.

H1:  $\beta_i \neq 0$  Regression model is significant.

The results show that significant f statistic is less than experimental error ( $\alpha = .05$ ) is and hence the H0 hypothesis is rejected and model estimates the significant relationships between variables ,is linear. based on these findings it can be concluded that basic assumptions the regression model test the first hypothesis (Model 1), is established and so the pattern fitted of an equation optimal regression has attained and can be used coefficients obtained commenting as a template.

(Firms with positive abnormal changes in cash balance)

Independent variables	The size coefficient	t-statistics	Significant	The linearity tests	
				Tolerance	VIF
ABNACASH	-0/005	-0/06	0/935	0/99	1/01
Size	0/495	5/886	0/000	0/99	1/01

Coefficient of model 2 much 245/0, which is model 1 is the much improved. Estimated value for Watson statistic between 5/1 and 5/2 is. These findings indicate that there is no correlation between the regression errors. Statistics are close to 1 in linear time. So between the independent variables there is a great line. F statistic criterion for deciding about the significance of the regression. Statistical hypothesis the test this statistic is as follows.

H0:  $\beta_i = 0$  Regression model is not significant.

H1:  $\beta_i \neq 0$  Regression model is significant.

the results show that significant F statistic less than experimental error ( $\alpha:0.05$ ) is and hence the  $H_0$  hypothesis is rejected and model estimates call significant relationships between variables, The estimated coefficient for variable  $ABN\Delta CASH$  much  $0.005/0-$  with a significance level of  $0.935/0$ , which is higher than the experimental error. These findings suggest that the variable regression model was not significant. So it cannot be sustained confirmed during the investigation. statistical analysis of results size control for differential in either model, the suggest a direct relationship significantly between firm size they are pure profit. Comparing the results presented in Tables 4-5 and 4-6 indicate lack of stability been unusually positive changes free cash. As a result, the first research hypothesis 95% confidence level accepted.

**The second hypothesis test**

1) The second hypothesis investigated observer meaningful comparison related to the unusual stability of the positive changes free Cash Flow DA's stability . Hypothesis test pattern is as follows.

$$INCOME_t = \beta_0 + \beta_1 ABN\Delta CASH_t + \beta_2 NACC_t + \beta_3 Size_t + \varepsilon_t$$

Table 3 Results of the hypothesis test (Compared with sustained changes positive abnormal the stability of discretionary accruals)

Independent variables	The size coefficient	t-statistics	Significant	The linearity tests	
				Tolerance	VIF
<i>ABNACASH</i>	-0/007	-0/079	0/937	0/999	1/001
<i>NACC</i>	-0/077	-0/908	0/366	0/994	1/006
<i>Size</i>	0/489	5/801	0/000	0/995	1/005
0/25 $R^2$ 2/089 Watson statistic 11/806 f-statistics 0/000 f-Significant					

The results show that determining the regression coefficients to 0.25 this pattern has been 25% change in the dependent variable to explain. Estimated value for Watson statistic between 1.5 and 2.5 is. Therefore, the regression error there is no correlation. linear time statistics for all independent variables are close to 1 between these variables there is a strong correlation. F statistic significance level is lower than the experimental error. Consequently, the regression model fitted terms are statistically significant. These findings indicate that the basic assumption of regression in this model was established and can explain the obtained coefficients for independent variables. The estimated coefficient for variable  $ABN\Delta CASH$  much  $-0.007$  with a significance level of  $0.937$ , which is higher than the experimental error. the size factor variable is discretionary accruals ( $NACC$ )-  $0.077$  the significance level this range is well above the experimental error .these findings suggest this is the second hypothesis of the study not acceptable this hypothesis at 95% confidence level be rejected.

**The third hypothesis test**

The third hypothesis of the study to compare the stability negative abnormal changes cash balance discretionary accruals is stable. Hypothesis test pattern is as follows.

$$INCOME_t = \beta_0 + \beta_1 ABN\Delta CASH_t + \beta_2 NACC_t + \beta_3 Size_t + \varepsilon_t$$

Table 4 Results the third hypothesis tests (comparison of stability changes negative abnormal the stability of discretionary accruals)

Independent variables	The size coefficient	t-statistics	Significant	The linearity tests	
				Tolerance	VIF
<i>ABNACASH</i>	-0/174	-3/293	0/001	0/990	1/010
<i>NACC</i>	0/011	2/017	0/028	0/999	1/001
<i>Size</i>	0/382	7/218	0/000	0/990	1/010
0/25 $R^2$ 2/021 Watson statistic 22/827 f-statistics 0/000 f-Significant					

Based on the above results, determining the regression coefficients sort  $0.189$  determining factor than the previous some show decreases. However, the f statistic has increased. Estimated value for Watson statistic between 1.5 and 2.5 is. Thus, the regression errors there is no correlation. Linear time statistics for all independent variables are close to 1 between these variables there is a strong correlation. Statistic significance level is lower than the experimental error. Consequently, the regression model fitted terms are statistically significant. these findings

indicate that the basic assumptions of regression in this model been established and can be explain the obtained coefficients for independent variables the estimated coefficient for variable ABNΔCASH much -0.174 with a significance level of 0/001 is less than the test error.as well as differential discretionary accruals (NACC) 0.110 is this variable is significant and 0.28 it is also less than the experimental error. These findings suggest significant correlation between the variables.net incomes (the dependent variable) is. Results for the coefficients independent variables shows that compelling evidence to accept the hypothesis  $H_0: |\beta_1| \leq |\beta_2|$  there is no.in the third study hypothesis95% confidence level be accepted.

**The fourth hypothesis tests**

The fourth research hypothesis it is anticipated that between the change in accruals the companies are stock returns and changes a significant relationship exists. Hypothesis test pattern is as follows.

$$RET_t = \beta_0 + \beta_1NACC_t + \beta_2Size_t + \beta_3\Delta FCF_t + \varepsilon_t$$

Table 5 Results of test the hypothesis the forth

Independent variables	The size coefficient	t-statistics	Significant	The linearity tests	
				Tolerance	VIF
NACC	0/054	2/262	0/017	0/999	1/001
Size	0/106	2/451	0/015	0/999	1/001
ΔFCF	0/04	0/936	0/350	0/999	1/001
0/21 $R^2$ 2/191 Watson statistic 12/823 f-statistics 0/008 -fSignificant					

Based on the above results, determining the regression coefficients of 0.21 and that fitted model, 21% of the variation stock returns of the sample firms has explained. Statistic significance level under surface experimental error (0.50) is. And that fitted regression, there was general and the relationship between variables is linear. Estimated value for Watson statistic between 5/1 and 5/2 is. Thus, the regression errors there is no correlation. Linear time statistics for all independent variables are close to 1between these variables there is a strong correlation. As a result, regression model call fitted statistical is significant. These findings indicate that the basic assumptions of regression this model was established and can explain the obtained coefficients for independent variables. The estimated coefficient for variable NACC much 54/0 with a significance level of 0/017 is which is less than the experimental error. In the fourth study hypothesis 95% confidence level be accepted

**Conclusions**

Research shows that factors such as growth opportunities, debt, financial leverage and company size in determining retention extra Cash have been of interest to researchers.it has been proven that excess cash balances undeniable impact the companies and their investment style behavior and management is responsible for the funds.

**Interpretation of the results of the test the first hypothesis:** the results in companies positive abnormal changes had a cash balance; between the change in net income, significant relationship there was no statistical terms and other words stability Changes positive abnormal the company is zero. however, the companies negative changes in cash balance, the relationship between these changes the net profit was significant which suggest stable changes unusually negative. The Results compatible with research theoretical and predictions the first research hypothesis is

**Interpretation of the results of the test the second hypothesis:** Pearson discretionary accruals, larger than the coefficient of variation abnormal positive cash balance is however, the coefficients statistical terms not significant. The Results the results obtained model 2 test the first hypothesis is consistent and show that in general, abnormal positive changes the cash balance the impact on net profit companies. Sample during the study period no. it can be concluded that sample firms during the study period extra Cash have been provided; it may in connection with these funds two forms: have acted.

1) The funds the company has maintained and their use should be avoided. 2) Managers' sample cash surplus in cases where consumers have reaction net profit is not followed.

of the two possibilities, the second the results of the first and second hypotheses more consistency. the managers' with anomalous positive changes the cash balance, in an attempt to reporting untrue handling or accrual not done and the manipulation of the negligible was a trivial.

**Interpretation of results test the third hypothesis:** the third hypothesis that is concerned; counterpoint the second hypothesis is in stability discretionary accruals the unusual stability of negative changes the cash balance is compared. The first hypothesis of this study was to prove that negative abnormal changes stability models may

follow. in other words, these changes correlated have a net profit. stability Changes negative abnormal the cash balance of more than discretionary accruals is stable

**Interpretation of results the fourth hypothesis tests** the discretionary accruals is higher; stock returns are greater. The findings the results Ohlson (1995) and Quiros and Timmermann (2007) is consistent. it seems capital market in Iran due to the asymmetry of information among domestic firms (such as directors and major shareholders) and people outside the company (such as minority shareholders) investors, financial statements published by the company, great reliance and the need for information and lack of access to other sources of information, causes the them the procedures for financial reporting and the likelihood of earnings management not significant.

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