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Explore the Relationship between Profits and Cash Flow and Accruals on Corporate Sustainability

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Abstract: The main aim of this study is to investigate the relationship between earning persistence, cash flow and accruals items of listed companies in Tehran Stock Exchange during the years 2009 to 2012.In this research, earnings persistence and accruals as independent variables, size and age firm as controllable variables are considered to examine their impact on corporate cash flows. The research statistical population consists of listed companies in Tehran Stock Exchange for the period 2009 to 2012 and the sampling method is screening and the final sample size equal to 110 companies .In this study which the multiple regression methods based on combined data panel with fixed effects was used to analyze the results of the 110 companies in 95% confidence level indicate Companies that have lower accruals have less earning persistence compared to cash flow persistence.The results show that in firms with higher accruals, there are less important relationship between profits and cash flow and in firms with lower accruals there are significant and positive relationship between profits and cash flows. Also the results indicate that the persistence of the operating profit and net profit in firms with low accruals, have no significant differences.
Keywords: Accruals, Net Income Persistence, Operating Income Persistence, Cash Flow

INTRODUCTION

Profit and cash flows are fundamental elements of financial statements which always have been focused as criteria for evaluating durability of activities, Efficiency and reviewing the structure of economic unit agents' contracts[1]. Evidence has shown that cash flows and Accounting earnings are good indicators or indexes for stock returns. Since Profit that is sustainable, from the perspective of analysts, predicts future stock returns and cash flows which provide useful information to users as well[2]. In the present study, the relationship between earnings and cash flow accruals of the accepted companies in Tehran Stock Exchange will be examined. Therefore, in this research, literature review, hypothesis, variables and their operational definitions and statistical methods are applied to test the hypotheses and finally the testing of hypotheses and interpretation of results are explained.

Literature Review

Hirshleifer et al[3]. investigated the relationship between accruals, cash flows and the size of stock returns. According to their findings, there is a positive

relationship between the size of accruals items and stock returns, while the size of the cash flows is negatively correlated with stock returns.

Mashayekhi and Mohammad Abadi [4] examined the relationship between corporate governance mechanisms and quality of earning accounting. Findings of the study indicate no significant relationship between accruals quality, as one of measures in quality corporate governance mechanisms are studied .

Research Hypothesis

First hypothesis: Companies that have lower accruals have less earning persistence compared to cash flow persistence

Second hypothesis: There are inverse and less important relationships between profits and cash flow in firms with higher accruals.

Third hypothesis: There are significant and positive relationship between profits and cash flows in firms with lower accruals.

Fourth hypothesis: the persistence of the operating profits comparing with net profit in firms with low accruals, is low

MATEREAL AND METHODS

The statistical population, sample and sampling method

Since the scope of this study is the beginning of (2009) until the end of the year (2012), therefore statistical population consisted of all listed companies in Tehran Stock Exchange for the abovementioned period and the systematic sampling elimination method by applying the following conditions:

1- The availability of required data for calculating operational variables.

2-at least until the end of 1387 and listed on the Stock Exchange must be enabled

3- The fiscal year end is March 29 .

4-it doesn't contain banks and financial institutions (investment companies, financial intermediaries, holding companies, banks and leasing s) as financial disclosure and corporate governance structures are different from theirs .

Finally, the screening procedure and after removing outlier observations the final sample of 110 participants with a

The aim of the present study is the type of applied research. Also in terms of data collection, it is descriptive (since help the existing conditions and cognitive process of decision making) and it is a kind of correlative. As it studies the dependent variable and the independent variables, this research was conducted within the framework of deductive - inductive reasoning. That is to say, there used the theoretical background of the study, research libraries, and other sites, articles in the context of deductive and inductive gathering information to confirm or reject hypotheses in the form of inductive.

Dependent variable

Cash Flows:

In this study, cash flow from operating activities as a measure of cash flow will be used.

Independent variable

Accrual: in this study, statistical sample firms were divided into two groups of lower and higher accruals in which the criteria used for classification was the variance ratio. To calculate this ratio, first via using the following model, accrual obtained is divided by the result of the variance of profit. Most researches related to accruals items for calculating emphasize Jones model modified (1991). Jones model has the potential to identify earnings management[5]. The model is also used in the current study, total accruals calculations are calculated as follows:

Acc_{it} = OI – CFO

Acc= total accruals calculations،

OI = operational interest،

CFO = cash flow from operation.

Variance ratio = accruals variance /variance interest

Interest stability: To assess the stability of profits, a univariate regression model was used within which the current period earnings are expressed as a function of prior period earnings. In other words, the earnings persistence model is an agent of the interest of stability. This model was designed and presented in 2002 by Dchv and Dychv.

$EARN_{i,t} = \alpha_0 + \alpha_1 EARN_{i,t-1} + \varepsilon_{i,t}$

Then:

$EARN_{i,t}$ **: current interest period before unexpected items**

$EARN_{i,t-1}$ **: previous interest period before unexpected items**

$\varepsilon_{i,t}$ **:rest of regression model**.

The test data for all years of the study period the sample companies and runs through α1 coefficient (independent variable) degree of earnings stability over the study period.

Controllable variables

Firm size: firm size in this study is the natural logarithm of total assets;

Company Life: to calculate corporate life, founded on the natural logarithm of the interval to be used for years[6].

This general model is as follows:

$$Y_t = \alpha + \beta_1 x_1 + \beta_1 x_2 + \beta_1 x_3 + \beta_1 C_1 + \beta_1 C_2 + €$$

Y_1= cash flows

X_1 = profit persistence

X_2 =accruals

C_1 =firm size

C_2= firm life

€ =unexpected error

RESULTS

Descriptive Statistics

Table 2: The descriptive statistics of research's variables including; mean, median, standard deviation, coefficient of skewness and coefficient of elongation show separate firms with high and low accruals items.

Table 1. Descriptive statistics of the study (Companies with high accruals)

Parameter		Average	Median	Standard deviation	Skew coefficient	Coefficient of
Cash from Operating	CFO	68.108	25,861	726,016	6.80	125.49
Net profit	ERAN	72,883	22,677	223,423	3.90	33.38
Operating		52,549	16,350	161,088	3.90	33.19
accruals	ACC	-57,721	-8,648	675,147	-7.48	147.31
Firm size	SIZE	4.71	4.59	2.58	1.03	1.45
Firm life	AGE	22.32	24.11	7.56	-0.23	-0.37

Descriptive statistics given R (companies with high accruals)

As an example, from Table 2 it can be inferred, mean, median, standard deviation, coefficient of skewness and coefficient of elongation cash from operating activities in companies with high accruals, is equal to 68,108, 25,861, 726,106, is 6.8 and 125.49, respectively. Since the median cash from operating activities is less than that of the average distribution of cash from operating activities in the sample rarely skew to the right.

Table 2. Descriptive statistics given (companies with low accruals)

parameter		Average	m	SD	Coefficient of Skewness	Coefficient of elongation
Cash from	CFO	110.269	15,973	448.421	4.200	77.509
Net income	ERAN	45.016	14,007	137.997	2.410	20.618
Operating profit	OI	32.456	10,099	99,495	2.410	20.499
accural	ACC	-35,651	-5.342	417.002	-4.620	90.987
Firm size	SIZE	2.91	2.83	1.59	0.64	0.89
Firm life	AGE	13.79	14.89	4.67	-0.14	-0.23

In companies with low accruals, mean, median, standard deviation, coefficient of skewness and coefficient of elongation cash from operating activities in companies with low accruals, are 110,269, 15,973, 448,421, 4.2, and 77.509 respectively.

Since the median cash from operating activities is less than that of the average, distribution of cash from operating activities in the sample skew to the right.low accrual , the average cash from operating companies have lower accruals than firms with high accruals is higher , which implies stability is less interest in these companies.

Determination the type of testing data

Based on the results of the F test for regression models in this study, the data used for the model is of panel data (panel). The results of the Hausman test for the first two models in Table 5 are shown as well. The results show that the Hausman test statistic is significant at the 99% confidence level, suggesting that the hypothesis is verified, therefore, according to Amon Hausman regression model first and second study using a panel data model with fixed effects method will suitable.

Table 3. F-test for regression model

regression model	F	probability	Test result
Companies with high accruals	154.23	0.000	Panel data
Companies with high accruals between	23.56	0.047	Panel data

Table 4. Hunsman Test

Test result	probability	statistic χ^2	Regression model
fixed-effects panel	0	65.459	**Companies with high accrual items**
fixed-effects panel	0	51.932	**Companies with low accrual items**

*Significant at 99% level

The results of the regression model and test hypotheses

In this study, the following regression model was used to test hypotheses :

$$\mathbf{Y_t = \alpha + \beta_1 x_1 + \beta_1 x_2 + \beta_1 x_3 + \beta_1 C_1 + \beta_1 C_2 + €}$$

In this study, first, firms that are members of statistical sample divided into two categories: a firm with high and low accruals level and then regression model is separately fitted for each of the companies. After testing the regression data and relations, the result from the above-mentioned regression equation fitting are presented for tables 6 and 7 .the statistic amount F represents that the whole regression models are significant.

Table 5. The results of the fit of the regression equation in companies with high accruals

Variable	Coefficients Variable	The coefficients	t	sig
Constant	β_0	5.507	4.321	0
interest	β_1	-0.134	-2.241	0.003
accural	β_2	-1.212	-2.151	0.032
Firm size	β_3	2.736	2.847	0.014
Firm life	β_4	2.311	2.601	0.0037
R Square	0.542	statistic F		12.962
Adjusted R Square	0.476	) *P-Value*(**Sig.**		0.000
		Durbin-Watson		2.311

Table 6. The result from regression equation's fitting in firms with low accruals items

Variable name	Coefficients Variable	The coefficients	t	Sig.
Constant	β_0	987/3	561/2	0.310
Earning	β_1	4.562	3.678	0.011
Accruals	β_2	2.275	1.975	0.041
Firm size	β_3	3.327	4.549	0.003
Firm life	β_4	2.654	2.965	0.021
R Square	0.651	F		14.781
Adjusted R Square	0.598	(*P-Value*) **Sig.**		0.000
		Durbin-Watson		2.311

Table 7. The Comparison of the stability and sustainability of cash profit companies with low accruals

description	number (firm-year)	average	SD
Cash stability	210	1.312	0.972
Interest durability		0.824	0.612
statistic t: 4.756	(significant)P-Value0/000 :		

Table 8. Comparison of the stability and sustainability of operating profit to net profit companies with low accruals

description	number (company-year)	average	SD
operating profit stability	210	0.709	0.543
Net interest		0.824	0.876
statistic t :1.034	Significant)P-Value 0.121		

CONCLUSION

Evaluation of components of sustainable corporate profits in various industries that are expected due to the nature of firms in different industries, different results are obtained.

The effect of other variables such as the structure of corporate governance, audit quality, ownership structure and Stability of earnings components.

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The effect of other variables such as the structure of corporate governance, audit quality, ownership structure and Stability of earnings components.

Assessing the sustainability of profit components participate in the different stages of the life cycle (growth, maturity, wane) and also at different stages of the business cycle the economy (recession or boom)

- Companies that have lower accruals have less earning persistence compared to cash flow persistence

- There are inverse and less important relationships between profits and cash flow in firms with higher accruals.

- There are significant and positive relationship between profits and cash flows in firms with lower accruals.

- There is no significant difference between the persistence of the operating interests and net profit in firms with low accruals items.

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