

Effect of earnings management through discretionary accruals on future profitability of listed companies in Tehran Stock Exchange

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Abstract: This study examines the impact of earnings management through discretionary accruals on future profitability of the companies listed in Tehran stock exchange deals. To review, non-discretionary and discretionary accruals, cash flow from operations was evaluated. In this study, using data from 91 financial companies listed in Tehran Stock Exchange in the period 2007-2011, the relationship between accruals and future profitability of the company, based on multivariate regression models were evaluated. The results show that 95% of earnings management in Tehran Stock Exchange has a tendency to be efficient.

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1. Introduction

One of the prominent features of human civilization and the emergence of organizations and social institutions are increasing their potentials that over time the competitive environment and the separation of management from ownership and specialization of corporate governance, the need for professional and knowledgeable managers and financial issues of the day, more than before. Administrators with the proper management of resources and expenditure were investigated, in order to achieve the main goals of our company as well. However, because of a conflict of interest, the directors are not necessarily "always in the pursuit of maximizing corporate profits and wealth are not the owners as the main target. One of the main activities of the managers of the preparation of financial reports to meet the owners and other interested institutions and principles of income statement represents the profits that the company has a special place.

The ultimate benefit as a result of economic activities and accounting processes, the impact of different policies imposed by corporate executives and corporate executives try different reasons through the application of different accounting methods, financial benefits to meet their own policies and objectives [4]. Financial analysts due to different accounting methods applied and the possibility of manipulating earnings and earnings management by executives, reported net profits are distinguished from real profits. In fact, earnings management as an umbrella for activities that impact on accounting earnings report or interpretation of accounting decisions begins economic benefit lies

partly due to the accounting treatment chosen and the size of commitments financial reporting and end time specified in activities that affect the interpretation of the reporting period [9].

2. Literature Review

Park & Shin (2004) in Canada combined effect on earnings management board examined and the following results were obtained:

- Management accruals for earnings management purposes, they proved during the investigation.
- Evidence of the relationship between the manipulation of accruals and of members of the board was found outside, thus, in their view; it seems that managers must show a non-profit management companies are not very useful.
- Representatives of institutional investor's active management to a greater extent reduce profits.

Siregar et al. in 2008 in Indonesia as well as the effect of the interest paid on future profitability. They investigate the relationship between discretionary accruals and future profitability, the effect of discretionary accruals on three variables future operating cash flows, net income, non-discretionary accruals and future changes in future income-examined. Their research test the ability of discretionary accruals on future profitability, opportunistic or effectiveness of revenue management tested. Their studies showed that Indonesian companies, management tend profit performance.

Mohammad Nural (2009) in Bangladesh to investigate the relationship between corporate

governance and earnings quality among the 684 companies in the years 2006 through 2000 is discussed. He concluded that a significant and positive impact on the quality of corporate governance and corporate profits. However, he believes that it may not result in other countries such as Bangladesh and other economies are significant differences between the markets.

Noorvash and MirHosseini (2009) examined the relationship between corporate disclosure quality (including reliability and timeliness) and earnings management in 51 companies listed in the Tehran Stock Exchange began in the years 2002-2007. The study aims to measure the quality of disclosure of the criteria used timeliness and reliability of corporate earnings management using modified Jones model is estimated. The findings show that the quality of corporate disclosure and management benefits significantly negative correlation exists. The results showed a significant negative correlation between a firm and timely disclosure of the earnings management [1].

Bahar Moghadam et al. (2010) evaluate the type of earnings management in 63 companies listed in Tehran Stock Exchange during the years 2003-2008. The study of accruals as a measure of earnings management and the different patterns used to measure earnings management and finally to the conclusion that earnings management in Tehran Stock Exchange tends to performance [2].

Mashayekhi et al. (2006) examined the relationship between discretionary accruals and cash flow from operations during the period 1997-2003 in the Tehran Stock Exchange. The results of this study suggest that the companies' earnings management is applied. The management of these companies, which represents a decrease in cash flow from operations, has been the poor performance of the business unit, in order to compensate for this is to increase profits by increasing the discretionary accruals [5].

The results Noorvash et al. study (2005) showed that a high level of benefit accruals accruals quality is reduced. Accruals increase in cash creates more difficulties in scheduling and matching items [6].

Hasas Yeganeh et al (2006) in their study of the mechanisms related to corporate governance, debt

ratio and the size of the company with earnings management are studied. It used to calculate adjusted profit model. They then review concluded that the mechanisms of corporate governance, including the number of board members, and sufficient number of outside directors, separation of duties of the chairman, managing director or a member of his board of directors, ownership structure and internal audit There is a significant relationship with earnings management. Also, the ratio of debt and the size of the company, there is no significant relationship with earnings management. [7].

3 Hypothesis

This basic question is "whether earnings management through discretionary accruals on future profitability of the companies listed in Tehran Stock Exchange influence?" Thus, according to this hypothesis, the research question would be as follows:

- There is a significant relationship between discretionary accruals and future profitability.

4 Research

4-1) variable

This research is based on three independent variables and the dependent variable was founded.

4.1.1) independent variables

Through which variables are dependent variables predicted. Table 1 shows the independent variables are:

4.1.2) dependent variables

Variables that are observed or measured to determine their impact on the independent variables are considered.

4-2) population

It's the theoretical basis and theoretical research, a library with books and articles in Persian and Latin collected. Research data and financial information needed, including software from different sources result of new CDs published by the Stock Exchange for the acquisition of the financial statements and accompanying notes, extracted from exchange site, the site of Institute of Information and Documentation site management, research and development and Islamic studies and etc.

Table 1. shows the independent variables are:

Independent variables	
Measuring Criteria	Type of variable
The cash flow from operations	Cash flow from operations
Obtained using modified Jones	Accruals involuntary
The difference between total accruals and accruals involuntary	Discretionary accruals

Table 2: Measure the dependent variables and criteria

Dependent variables	
Measuring Criteria	Type of variable
Net cash flow from operations a year later (CFO _{t+1})	Future profitability
Net profit after a year without discretionary accruals (NDN _{t+1})	
Changes in net profit next year (ΔEARN _{t+1})	

4-3) statistical method

After the transfer and processing in spreadsheet EXCEL, analyzed by SPSS software is located. To ensure the normal test variables "Kolmogorov - Smirnov" is used. In this way, a simple non-parametric method to determine the fit of the experimental data and statistical distribution (K-S) is shown (AselAzar, 2006). Pearson correlation coefficient was used to evaluate the correlation, multiple regression analysis was used to test the hypothesis of the test is actually the effect of multiple independent variables on the dependent variable show. In order to determine the independence of errors (the difference between actual and predicted by the regression equation) in different periods of the camera test, we used SPSS software. If the statistics of cameras in the range of 1.5 or 2.5 is Watson test H_0 (no correlation between errors) is accepted, otherwise H_0 is rejected and that there is a correlation between errors (Momeni, 2008).

4-4) research model

Jones modified model

A fundamental factor in the company's earnings management tests, the authority and actions of managers in determining earnings estimates. One of the main approaches to estimate and measure in determining revenue management, discretionary accruals-based approach is used as an indicator to determine and discover the benefits management business units. Dicho et al (2012) study a model that was named after the modified Jones model. Jones concluded that the modified model of more power than other models to discover business units are earnings management [11].

In 1991, Jones was the model for earnings management businesses into two categories: voluntary and involuntary, in which accruals, and accruals involuntary separation was constant. In this model it is assumed that sales revenue is involuntary if a profit through revenue management is optional. Jones model managed to remove a portion of the profits that Jones model is considered limited.

$$ACCR_{i,t} = \alpha_0 + \alpha_1 \Delta REV_{i,t} + \alpha_2 PPE_{i,t} + \varepsilon_{i,t}$$

ACCR: Total Accruals

ΔREV: Changes in income from year t-1 to year t, $(REV_t - REV_{t-1})$

PPE: The gross value of property, machinery,

equipment

ε: Residual

Dicho et al modified Jones model with revenue changes by subtracting changes were associated with receivables. The modified Jones model, both in terms of economic transactions and accruals for credit policy controls. In addition, "they provided evidence showing that a modified version of the standard model of Jones, the discovery of stronger earnings manipulation. Jones modified model accounts for changes in income received by the changes and assumes all changes in sales credit adjustment of earnings management arise (Rasaedian and Hosseini, 2008).

- Jones adapted model: Dicho, Sloan and Suwon (1995)

$$ACCR_{i,t} = \alpha_0 + \alpha_1 (\Delta REV_{i,t} - \Delta REC_{i,t}) + \alpha_2 PPE_{i,t} + \varepsilon_{i,t}$$

ΔREC: Net change in accounts and notes receivable Trade of year t-1 to year t, $(RECT - REC_{t-1})$

FPit+1: Future profitability – CFOit: Cash flow from operations

NDACit: Non-discretionary accruals – DACit: Discretionary accruals

4-5) Research Limits

Target population, according to the conditions and limitations of the sample companies has been selected:

- For homogeneous sample, companies must be accepted before 2007 in Tehran Stock Exchange since the beginning of 2007 shares traded on the exchange is made.
- In order to select companies, trading companies during the period 2007-2011 in exchange is not interrupted.
- In terms of increased comparability, the financial period ending in March.
- Among 2007-2011 fiscal year does not change or modify activities.
- Access to information needed for companies to be allowed.
- By applying the above conditions, a sample of 91 companies in the study were selected.
- Data analysis method

• Data collection methods generally can be divided into two categories: methods and techniques of library-field (Hafez Nia, 2005).

5 Findings

In order to identify initial data and descriptive variables, the indicators are descriptive data.

Table (3) shows the descriptive statistics of variables.

Elongation	Skewness	Var.	S.D.	Ave.	Max	Min	No.	Variable
-.041	.318	.020	.14209	.13382	.51995	-.2332	455	CFOt+1
.468	.376	.025	.159593	.153093	.88402	-.2538	455	NDNIt+1
.549	.109	.005	.072668	.024501	.25241	-.21012	455	EARNt+1
3.655	.966	.025	.15818	.14789	1.220	-.23328	455	CFO
22.354	1.404	.008	.08683	.02983	.9374	-.5078	455	NDAC
4.009	-.513	.024	.15366	.02551	.6669	-.9527	455	DAC

5-1) Data normality test

Kolmogorov-Smirnov test for normality of data test (KS) is used, according to the results table (4),

with a significant level of error variables 0.05 H_0 rejected the assumption that distributions are not normal variables.

Table (4): Kolomogrov-Smirnov test result

$\Delta EARN_{t+1}$	NDNIt+1	CFOt+1	dependent variable	
455	455	455	Number of Observations	
.028526	.165747	.158422	Average	
.1060618	.203022	.4067169	S.D.	
.110	.079	.227	Absolute value	maximum deviation
.105	.079	.222	Positive	
-.110	-.055	-.227	Negative	
2.769	2.001	5.737	Kolomogrov-Smirnov	
.000	.001	.000	Significant level	

Therefore, to normalize distribution of the data, $Ln\left(\frac{1}{V^2}\right)$ Was used and outlier removal, which results in the table (5) is shown.

Table (5): Kolomogrov-Smirnov test result based on $Ln\left(\frac{1}{V^2}\right)$ and outlier removal

$\Delta EARN_{t+1}$	NDNIt+1	CFOt+1	dependent variable	
455	455	455	Number	
.02450	.15309	.1338	Average	
.072668	.15959	.142099	S.D.	
.049	.037	.048	Absolute value	maximum deviation
.049	.037	.048	Positive	
-.044	-.022	-.035	Negative	
1.208	.930	1.181	Kolomogrov-Smirnov	
.108	.353	.123	Significant level	

As shown in Table (5), the significance level of 5% is more than three dependent variables H_0 confirmed the hypothesis and showed normal data variables.

5-2) Correlations

To study the correlation of Pearson's correlation coefficient is used. The results of this study (Table 6) are displayed.

Table (6): The results of the study of the correlation between variables Pearson's correlation coefficient

DAC	NDAC	CFO	EARNt+1	NDNIt+1	CFOt+1	Variable
.052	.020	.432**	.294**	.853**	1	CFOt+1
.008	.196**	.407**	.385**	1	.853**	NDNIt+1
-.157**	.083*	.180**	1	.385**	.294**	EARNt+1
.371**	.068	1	.180**	.407**	.432**	CFO
.311**	1	.068	.083*	.196**	.020	NDAC
1	.311**	.371**	-.157**	.008	.052	DAC

** Significant at 1% error level; * A significant level of 5% error level

According to Table (6) observed that the net cash flow from operations a year later (CFOt + 1) and net profit after a year without discretionary accruals ((NDNIt + 1) positive correlation between the number (.853) in the 1% error level. 1% error level of discretionary accruals (DAC) and cash flow from operations (CFO) significant negative correlation with the (0.371-), because when companies are classified according to CFO fewer companies are willing to increase accruals and companies with the CFO, the desire to reduce their accruals.

The net profit and cash flow from operations, free of discretionary accruals in significant positive correlation with the error of 1% (0.407) in the absence of a positive correlation between these two variables

earnings management is expected to exist as both an indicator of the performance of the company.

6 Hypothesis test

Multivariate linear regression analysis was used to test the hypothesis. Watson test used to check camera's correlation test. With regard to the future profitability of the three indicatorS, variables CFOt + 1, NDNIt + 1, Δ EARNt + 1 measured. Therefore significant in the case of these two indices, the hypothesis is confirmed.

6-1) hypotheses test:

Research Hypothesis: there is a significant relationship between discretionary accruals and future profitability?

Table 7: Results of regression testing hypotheses

Δ EARNt+1			NDNIt+1			CFOt+1			Independent Dependent
Sig.	t	Coef.	Sig.	t	Coef.	Sig.	t	Coef.	
.309	1.019	.015	.209	1.257	.036	.829	.216	.005	β_0
.694	.393	.019	.000	8.158	.349	.000	9.574	.411	CFO
.980	.025	.001	.000	5.163	.191	.772	.289	.011	NDAC
.000	-3.586	-.166	.000	4.149	.170	.000	4.708	.193	DAC

Table 8 – Summary of hypothesis test by Enter method

Result	Sig	Stat. t	DAC coef.	Sig	Stat. F	Watson camera	Adjusted coefficient of determination	Independent Dependent
confirm	0.000	4.708	0.193	0.000	29.611	1.802	0.271	CFOt+1
confirm	0.000	4.149	0.170	0.000	30.511	1.780	0.277	NDNIt+1
confirm	0.000	-3.586	-0.166	0.000	7.295	1.771	0.076	Δ EARNt+1

- (F) Test

According to Table (8) noted that a significant amount of surface area for each dependent variable of 0.000 at 95% (5% error) is less than 5%. The linear regression model was significant and the assumption of the model is approved.

- (T) Test

According to the statistic t, independent variable coefficients for variables DAC CFOt + 1, NDNIt + 1 .193 and .170, respectively, which represents a 95% positive correlation was significant and DAC

coefficient independent variable to the dependent variable is -0.166 Δ EARNt + 1 digit indicator is negative and significant relationship. In other words, using cash flow from operations and net income dependent variables without discretionary accruals could be argued that discretionary accruals on future profitability will have a positive effect and if we use the variable change in income as an indicator of profitability could be argued that discretionary accruals on future profitability will backfire. Finally, we can conclude that the Tehran stock exchange

earnings management tends to be effective, because two of the coefficients calculated for positive DAC.

• **Adjusted Coefficient of Determination (\bar{R}^2)**

The coefficient of determination adjusted for the dependent variables in the regression model presented CFO_t + 1, NDN_t + 1, ΔEARN_t + 1, respectively, 0.271, 0.277, 0.076. These figures show that the effect of other factors constant, 27.1% of the changes in cash flow from operations 27.7 percent of net profit change without discretionary accruals, 7.6 percent of variations in profitability can be modified by changes in independent variables in the model explained and the rest of the changes in future profitability indicators explained by factors other than the above.

• **Watson camera test (D.W)**

In order to determine the independence of errors (the difference between actual and predicted by the regression equation) in different periods of Watson camera test we used SPSS software. The value of the test statistic d is calculated according to the table (8), for each dependent variable, respectively, 1.802, 1.780 and 1.771, respectively. It can be concluded that given their level of random error correlation model errors are estimated to be rejected.

7 Discussion and Conclusion

Results from the analysis showed that earnings management in Tehran Stock Exchange has a tendency to be efficient that is in accordance with the findings Siregar et al. (2008), Baharmoghadam et al (2010). The earnings management as one of the most challenging issues is accounting. Because investors as one of the important factors in the decision to pay special attention to profits, the investigation in this regard is very important. According to scientific studies have been conducted, despite the possibility of malicious phenomenon of earnings management, scope management plays an important role in modulating profit and managers the possibility that private and secret data transfer to users. The results of this study indicate evidence of earnings management performance in the Tehran Stock Exchange is consistent with the view that earnings management is not too detrimental. It is worth noting that the issue with regard to earnings management is one of the new issues of the day. The investigation in this case was high due to factors such as different time period, research different standards and different structures might be the results of research conducted both inside and outside the country and in different countries vary

not match.

References:

1. Aghaei, M.A.; Chalaki, P. (2009). "The relationship between corporate governance and earnings management features in the Tehran Stock Exchange listed companies", *Journal of Accounting Research*, No. 4, pp. 54-77.
2. Babaei, A. (2013). "The effects of corporate strategic monitoring tools on the relationship between earnings management and future profitability of listed companies in Tehran Stock Exchange" Master's thesis, Islamic Azad University, Science and Research Branch of Tehran.
3. Baharmoghadam, M. and Hasanikhoo, H. (2010). "The relationship between the actual events, financial and earnings management in firms listed in the Tehran Stock Exchange", *Journal of Accounting Research*, No. 6, pp. 136-161.
4. Hasasyeganeh, Y. (2006). "Corporate governance in Iran", *Journal of the auditor*, No. 39, p. 32.
5. Rasaeyan, A. and Hosseini, V. (2006). "The relationship between quality and cost of capital accruals in Iran", *Reviews of accounting and auditing, management faculty of Tehran University*, No. 53, pp. 67-82.
6. Mashayekhi, B., Mehrani, S., Mehrani, K. and Karami, Gh. (2005). "The role of discretionary accruals in earnings management in firms listed on Tehran Stock Exchange", *Journal of Accounting and Auditing Reviews*, No. 42, pp. 74, 61.
7. Noorvash, I., Spasi, S., Nikbakht, M.R.(2005), "The earnings management in firms accepted in Tehran stock exchange", *Journal of Humanities and Social Sciences*, Shiraz University, No. 43, pp. 165-177.
8. Noorvash, I., Mirhosseini, S.A. (2009). The relationship between disclosure quality (reliability and timeliness) and earnings management ", *Journal of Accounting and Auditing Reviews*, No. 55, pp. 117-134.
9. Bathler, B.J., Carter, M., & Gerakos, J. (2011), "Institutional investor preferences for corporate governance, mechanism", working paper, University of Pennsylvania, The Wharton School , Boston College, Carroll School of Management and University of Chicago, Graduate School of Business.
10. Bhattacharya, Q., Zhou (Joe) Lu. (2010), "Corporate governance and earnings management in the Chinese listed companies: A tunneling perspective", *Journal of Corporate Finance*, Vol. 13, pp. 881-906.
11. Dechow, P.M. (1994), "Accounting Earnings and Cash Flows as Measures of Firm Performance: The Role of Accounting Accruals", *Journal of Accounting and Economics*, pp. 3-42.
12. Yue Liu, L.E., Luo, (2007), "Institutional Ownership Composition and Accruals Quality", pp. 1-39.