

The relationship between performance on the midterm and earnings management of listed companies in Tehran stock exchange

Masoud Reyhani¹, Dr. Abbas Talebbeydokhti^{2,*}

¹Department of Management, Qeshm International Branch, Islamic Azad University, Qeshm, Iran

²Assistant Professor of Financial Management, Department of Management, Qeshm International Branch, Islamic Azad University, Qeshm, Iran

Abstract: This research is the investigation of the relationship between of Quarterly Performance and Earning Management of listed companies in Tehran Stock Exchange (TSE). The goal of this present research is application and the type of research methodology is causal. Statistic population is firms listed in Tehran Stock Exchange, and using systematic elimination sampling method, were selected as sample 100 firms, and time period has been during the years 2008 to 2012. The method used for information gathering is library research and this test hypotheses, we used of multivariate linear regression. The Quarterly Performance is measured with the criteria return on asset, earning per share and total accruals in this research. The results of this research show that there is positive and significant relationship between Quarterly Performance and Earning Management.

Key words: Quarterly performance; Earning management; Total accruals; Discretionary accruals

1. Introduction

One of the main issues in the capital markets study and analyze it to identify the extent and degree of their performance. This recognition is undoubtedly the one hand and security on the stock exchanges and investment decisions, investors and others to understand the authorities and market operators and to improve the operation of the market and lead to the development of the rule of law will be effective. Financial Accounting Standard No. 22 in the mid-term report content and principles of recognition and measures applicable to the preparation of financial statements for the period specified users will illustrate the purpose of supplying it. Earnings management accounting literature of the issues arises in earnings. The topics in accounting from the beginning of the twentieth century onwards were formed by several investigations by the authorities in the field of accounting. Harvest the benefits of deliberate steps within generally accepted accounting principles, which enable administrators to reported earnings to reach their optimal level. Usually yield different from the normal operations of the company. Such decisions are typically of a business entity may fluctuate.

1.1. Literature

Midterm financial reports on time and reliable, useful information regarding the potential gains and generates cash flows, financial condition and cash

flows of the business unit for investors, creditors, and other users have provided. Purpose Financial Reporting Standard No. 22, the minimum content of the recognition and measurement principles applicable to the determination of midterm and preparation of financial statements in full or midterm intensive Metro and users of financial reports midterm business units also have access to the latest annual financial report Transactions and other events described in the intermediate period is helpful to understand the changes in the entity's financial position and financial performance of the date of the last annual reporting, is important.

1.1.1. External research

China and Jeune Fong Chiu (2009), the survey forecast earnings management through neural network and decision tree presented; the main objective of the study was to investigate the application of neural networks to predict the top or bottom of the earnings management. The accuracy of prediction results showed a profit of up to 81.8%. Mahdavi et al (2012), in a study examining the relationship between earnings management and performance of Malaysian companies in the period 2004 to 2010 with a total of 50 samples examined, the conclusions of this is significant negative correlation between earnings management and corporate performance there. That is, companies that manage their interest to appear, performance decreases.

1.1.2. Internal research

* Corresponding Author.

Norosh et al. (2005), research on earnings management of listed companies in Tehran Stock Exchange in the period from 1996 to 2003 with total sample of 243 companies conducted; with larger firms, managers tend to manage their profits will increase. Mojtahedzadeh and Valizadeh Larijani (2010), the present study investigated the relationship between earnings management and asset returns and future operating cash flows of the companies listed in Tehran Stock Exchange conducted; the population is comprised of 52 companies in the period 2001 to 2006.

The results show that the future returns on assets and future operating cash flows and earnings management, there is no significant relationship. Hijazi et al. (2012), the survey forecast earnings management using neural networks and decision trees in the companies listed in Tehran Stock Exchange began; for this purpose, eleven variables affecting earnings management as the independent variables and the dependent variable is used as discretionary accruals.

Meanwhile, earnings management, discretionary accruals and involuntary variables before and company performance, size, continued gains in both methods have the greatest relationship. Khodadadi and Janjany (2013), in a study entitled investigate the relationship between earnings management and profitability of the companies listed in Tehran Stock Exchange in the period from 2000 to 2006, the company had a total of 98 sample; the results of the logistic model shows that firms manage earnings have been growing more and more efficiency.

2. Methods

Since this study was to examine the relationship between performance and earnings management's midterm, so the study of research methods in order to fit this description. Descriptive studies to describe and interpret the terms and relations deals. The aim of the study, as applied research takes place. The approach used in this study is retrospective.

2.1. Population and sample

The study sample consists of all firms listed in Tehran Stock Exchange. Information and statistical data relating to the companies in the sample, in the period between the years 2008 to 2012 were collected. In this study, sampling was done using systematic elimination. The sample consists of firms listed in Tehran Stock Exchange that the following conditions must be met

During the period of study there is not changed their fiscal year.

Information and explanatory notes accompanying the financial statements fully and consistently are accessible.

3. Research hypothesis

The main hypothesis of this study, the performance of the mid-term and there is a significant relationship between earnings management.

Alternative hypotheses derived from the research hypothesis:

The first sub-hypothesis: the return on assets is a significant correlation between the cyclical and discretionary accruals.

The second sub-hypothesis: the earnings per share, there is a significant correlation between the cyclical and discretionary accruals.

The third sub-hypothesis: the mid-term accruals and discretionary accruals are significantly related.

3.1. Data analysis

Tehran Stock Exchange data on the outcomes of the new software to be collected; after collecting data from existing applications, by entering the data into EXCEL software functions are used to calculate the variables.

3.2. The findings

3.2.1. Descriptive statistics of variables shows:

Table 1: Descriptive statistics of variables

Variables	ROA	EPS	TA	DA	SIZE
Average	0.161889	8.309542	0.073288	0.180610	5.655384
Middle	0.093306	3.317976	0.014178	0.091809	5.585245
Maximum	1.706944	135.7080	2.300416	2.290775	7.487918
Minimum	-0.438978	-33.75000	-1.223756	0.000584	4.408172
Standard deviation	0.253064	18.25345	0.307078	0.264869	0.606922
Skewness	2.479999	3.364930	2.598826	3.663075	0.505444
Elongation	12.02165	19.50582	16.64456	21.25975	3.155424

3.2.2. Static test variables

To check reliability variables, tests Lyon, Lynn Dickey-Fuller test and Choi is generalized, Table 2

shows Manayy all variables. In Table 2 Note that the p-value variables in both tests, Lyon, Lynn Dickey-Fuller test generalized and Choi and less than 5%, then all variables are stationary.

Table 2: Test Manay variables

Variables	Lyon test, Lin and Choi		Dickey-Fuller test generalized		Diagnosis
	F	p-value	F	p-value	
ROA	-346.930	0.0000	296.772	0.0000	Mana
EPS	-147.247	0.0000	277.667	0.0000	Mana
TA	-31.6671	0.0000	292.180	0.0000	Mana
DA	-55.5372	0.0000	270.056	0.0000	Mana
SIZE	-31.7596	0.0000	233.906	0.0001	Mana

3.3. Correlation

Hypothesis of correlation between variables in this study are as follows:

H0: There is no significant correlation between the two variables.

H1: There is a significant correlation between the two variables.

Since most of the variables are stationary; the Pearson correlation coefficient was used to examine the relationship between variables, the results are shown in Table 3:

Table 3: Results of the correlation variables

		DA	ROA	EPS	TA	SIZE
DA	Pearson correlation	1	.705**	.035	.802**	.023
	Sig	-	.000	.482	.000	.646
ROA	Pearson correlation	.705**	1	.025	.761**	.102*
	Sig	.000	-	.610	.000	.038
EPS	Pearson correlation	.035	.025	1	.030	.132**
	Sig	.482	.610	-	.548	.008
TA	Pearson correlation	.802**	.761**	.030	1	.152**
	Sig	.000	.000	.548	-	.002
SIZE	Pearson correlation	.023	.102*	.132**	.152**	1
	Sig	.646	.038	.008	.002	-

** Correlation significant at 1%

* Correlation significant at the 5% level

In Table 3, the relationship between variables can be expressed as; level of significance (Sig) variables, return on assets (ROA), earnings per share (EPS), accruals (TA) and firm size (SIZE) respectively (0.000, 0.482, 0.000 and 0.646), respectively.

3.4. Variance anisotropy test research hypotheses

One of the important issues that we encountered in econometric issue is the variance anisotropy. In order to assess the variance anisotropy of waste, use of ARCH test, the results in table (5, 4) are provided:

Table 4: Results of the variance anisotropy test research hypotheses

Research hypotheses	Arch test	
	F	p-value
The first sub-hypothesis	0.499529	0.4801
The second sub-hypothesis	0.502839	0.4787
The third sub-hypothesis	0.038430	0.8447

The data in Table 4 show that the probability (p-value) test models of more than 5%, so assuming Volatility disturbing sentences rejected.

Limmer F test (Chow) and Hausman test

In order to estimate models of data fusion techniques are used. Application of this technique, which combines cross-sectional time series data, the greater the increase in the number of observations, Enhancing the degree of freedom, reduce dissonance and reduce the variance between variables is linear.

To this end, Limmer test (Chow) is used to test the hypotheses are as follows:

H0: the same latitudes (data fusion)

H1: Anisotropy Intercept (panel data)

F test results Limmer (Chow) and Hausman test for the hypothesis of the study are presented in Table 5.

Table 5: Results Limmer F test (Chow) and Hausman test

Research hypotheses	Limmer F test (Chow)		Hausman test		Effects Method
	F	p-value	F	p-value	
The first sub-hypothesis	1.144585	0.2087	-	-	-
The second sub-hypothesis	1.341518	0.0460	27.390500	0.0000	Fixed
The third sub-hypothesis	0.936975	0.6303	-	-	-

In Table 5, according to the amount of F-test p-value Limmer (Chow) for the first and second sub-hypothesis of no more than 5 percent, Hausman test does not seem necessary, therefore, to test hypotheses in the first and second derivative of the compound (Pooled) is used.

3.5. Linear test research hypotheses

Test results are presented in Table 6. Linear research hypotheses:

Table 6: Linear test research hypotheses

Hypothesis	First Subsidiary	second Subsidiary	Third Subsidiary
Dimension	Status indicator	Status indicator	Status indicator
1	1.000	1.000	1.000
2	2.012	1.425	1.534
3	20.289	18.655	19.123

The index value of 30 represents the most serious problem is the use of regression in the status quo; according to Table 6, the problem of the linear regression equation is intense.

therefore, this study examined the sub-hypothesis testing.

4. Test the hypothesis

4.2. The first sub-hypothesis testing research

4.1. The main hypothesis testing research

This first sub-hypothesis states that the return on assets is a significant correlation between the cyclical and discretionary accruals.

Main hypothesis of this study, the performance of the mid-term and there is a significant relationship between earnings management. Since the mid-term performance of the three indicators to measure return on assets, income and accruals ratio is used;

Fig. 1, the test statistic histogram sentences waste Jark - to the normal, plus a series of simple descriptive statistics of the residual terms shows for the first sub-hypothesis research.

Figure 1: The first sub-hypothesis of normality of the residual terms

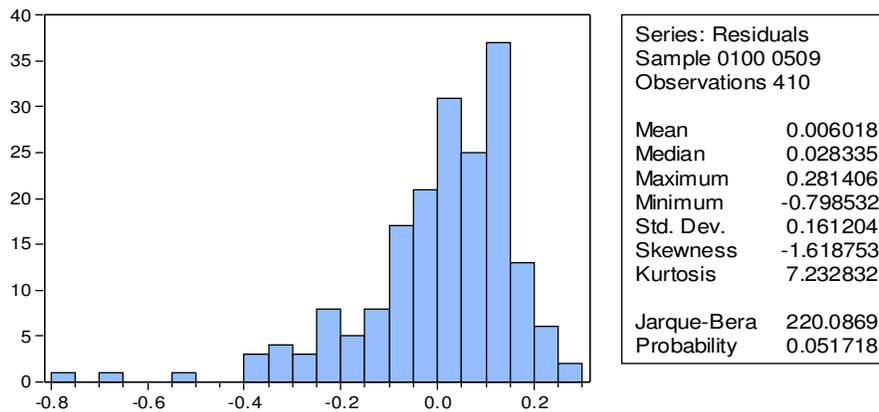


Fig. 1: The first sub-hypothesis of normality of the residual terms

Fig. 1 shows that all residuals are normally distributed statistics Jark- to also confirm this.

To examine the relationship between asset returns Quarterly discretionary accruals, multiple linear regression analysis was performed; the results are presented in Table 7:

It should be noted that the model used for this study is the first sub-hypothesis:

$$DA = \alpha + \beta_1 ROA + \beta_2 SIZE + \epsilon_i$$

Table 7: Summary of results of the first sub-hypothesis testing research

Variables	Factor β	t	T-statistics	
			Prob.t	
α	0.327944	1.238160	0.2166	
ROA	1.104873	10.37279	0.0000	
SIZE	-0.096702	-2.075988	0.0387	
Watson camera	The coefficient of determination	Adjusted coefficient of determination	F statistics	Prob.F
2.428125	0.426056	0.275780	2.835165	0.000000

Table 7: A condition of using the regression residuals is independent. Since the camera Watson statistic is between 1.5 and 2.5, the assumption of non-correlation between the errors will be accepted. ≠ Significance level (Sig) varies between firm size and firm size shows that there is a significant negative relationship between discretionary accruals.

Second sub-hypothesis states that the earnings per share, the mid-term discretionary accruals significant relationship.

Fig. 2 test statistic histogram sentences waste Jark - to the normal, plus a series of simple descriptive statistics waste sentences for second sub-hypothesis research shows.

4.2. Second sub-hypothesis test

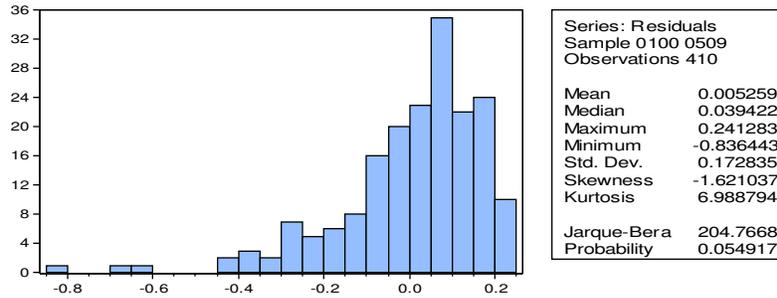


Fig. 2: The second sub-hypothesis test for normality of residual sentences

Fig. 2 shows that all residuals are normally distributed statistics Jark - to also confirm this.

It should be noted that the model used for the second sub-hypothesis is:

$$DA = \alpha + \beta_1EPS + \beta_2SIZE + \epsilon_i$$

To investigate the association between discretionary accruals and earnings per share, the mid-term, multiple linear regression analysis was conducted in which the results are presented in Table 8:

Table 8: Summarizes the results of the second sub-hypothesis test

T-statistics		Factor β	Variables
Prob.t	t		
0.2897	1.060490	0.146011	α
0.0000	5.022915	0.043920	EPS
0.8950	-0.132067	-0.003178	SIZE
Prob.F	F statistics	Adjusted coefficient of determination	The coefficient of determination
0.000005	12.64429	0.066674	0.072400
			Watson camera
			2.077855

Table 8: A condition of using the regression residuals is independent. Since the camera Watson statistic is between 1.5 and 2.5, the assumption of non-correlation between the errors will be accepted. ≠ Significance level (Sig) firm size variable indicates that there is no significant relationship between firm size and discretionary accruals.

Second sub-hypothesis states that the mid-term accruals and discretionary accruals are significantly related.

Fig. 3, the test statistic histogram sentences waste Jark - to the normal, plus a series of simple descriptive statistics, hypothesis sentences for minor hysteresis third research shows.

4.3. The third sub-hypothesis testing research

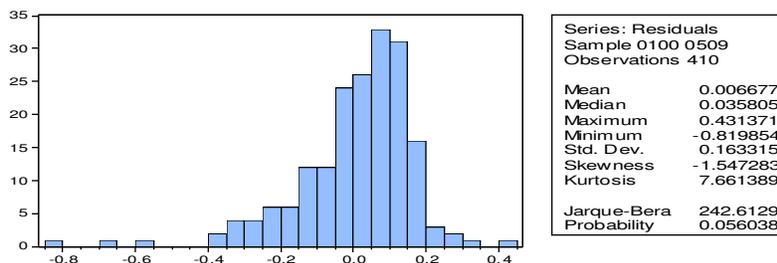


Fig. 3: The third sub-hypothesis of normality of the residual terms

Fig. 3 shows that all residuals are normally distributed statistics Jark- to also confirm this.

It should be noted that the third sub-hypothesis model used for this study are:

$$DA = \alpha + \beta_1TA + \beta_2SIZE + \epsilon_i$$

To investigate the association between accruals and discretionary accruals midterm, multiple linear regression analysis was performed. The results are presented in Table 9.

Table 9: Summary of results for the third sub-hypothesis testing research

T-statistics		t	Factor β	Variables
Prob.t				
	0.0001	3.879100	0.355632	α
	0.0000	23.64456	0.700482	TA
	0.0141	-2.467167	-0.039953	SIZE
Prob.F	F statistics	Adjusted coefficient of determination	The coefficient of determination	Watson camera
0.000000	9.306615	0.627657	0.703218	2.282844

Table 9: a condition of using the regression residuals is independent. Since the camera Watson statistic is between 1.5 and 2.5, the assumption of non-correlation between the errors will be accepted. \neq Significance level (Sig) show variable size

There is a negative relationship between firm size and discretionary accruals. Summary results of the test the hypothesis

A summary of results is presented in Table 10. The test research hypotheses:

Table 10: Summarizes the results of the test the hypothesis

Hypothesis	Research hypotheses	Results
First	There is a relationship between quarterly return on assets and discretionary accruals.	Positive Confirmation
Second	There is a relationship between quarterly earnings per share and discretionary accruals.	Positive Confirmation
Third	There is a relationship between the mid-term accruals and discretionary accruals.	Positive Confirmation
The main hypothesis: there is a relationship between the midterm and earnings management.		Positive Confirmation

Interpretation of the results of the test the hypothesis according to the results of the analysis of the research hypotheses, we can thus say that the performance of the mid-term and earnings management in companies listed in Tehran stock exchange and there is a significant positive relationship. Quarterly report on the financial statements when the financial situation of a company in order to highlight important events, during which the company provides. Companies, who profit from better, usually "return on assets, earnings per share and accruals (corporate performance measurement criteria) will be a good experience for many years. Thus, the increase in corporate profits, return on assets fields can be increased, earnings per share and accruals provided, and the increased profits associated with the aforementioned criteria. Can be expressed in the Iranian capital markets, earnings management affect firm performance criteria are the increasing importance of corporate profits in the stock market, resulting in improved performance and thus manipulate the company's profits.

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