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Studying the Relationship between Economic Massive Changes with Earnings Management of Listed Companies in Tehran Stock Exchange

Reza PİRAYESH (PhD)[1], Hamid RAHMANİ SERYASAT[1,*], Hamid NOORALİDOKHT[1]

[1]*Department of Business Administration, Faculty of Humanities, University of Zanjan, Zanjan, Iran*

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Abstract. This study investigates the relationship between earnings management and profitability of companies listed in Tehran stock exchange and its purpose is to examine the existence of earnings management phenomenon of listed companies in Tehran stock exchange. One of the executives' main objectives about earning management is creation a more stable flow, in order to support higher earning payments. More stable earnings flow can be perceived as a lower risk that leads to higher stock prices and lower costs. Tendency of business unit management to increase investors' predictive power and reduce corporate risk by earnings stability and reduce its frequency can be consider as the other objectives of earning smoothing. The level of earning frequency can be effective on risk of company and thus the capital cost of firm. It can be affective in future debt contracts and therefore earning payments in future. The aim of the research is to establish the relationship between exchange growth rate and inflation rate with the average return on equity in the smoother earning company and non-smoother earning company. Financial data (2006 - 2013), the population and sample volume obtained by Cochran test, are equals to 75 companies. In the second stage, by using Acle indices, sample member companies based on three levels, net profit, operating profit and margin profit had been separated. Investigation results confirm the possibility of smoothing and the relationship between independent variables and return on equity of companies listed in the Stock Exchange. The main outcome of the study suggest with which a significant correlation between the increase in exchange rate and inflation rate in companies that do not make profit smoothing, there is not significant different between exchange increases rate and inflation rate and the stock return between two types of companies had been mentioned above.

Keywords: earnings management, exchange rates, inflation rates, stock returns

1. INTRODUCTION

With regard to the representative theory and managers' attempt in order to show the profit of company is higher in the short term; how to shape the topic investigate in the earning management subject. This paper provides evidence about the phenomenon of smoothing and earning management in Tehran Stock Exchange. In this research, in order to detect earnings management, companies had been classified in to tow group, earning smoother, non- smoother. Also, the most important incentives of earning smoothing is the belief that companies have proper profit process and their profit do no change majorly, compare to similar company have more value. The income measurement process, income measurement methods and obtained results, play important role in the business unit. In most cases, this measure, as a proper indicator, used to evaluate the entity's ability to continue Self-employed activities. Managers often in order to misleading shareholders for real economic performance of the company, manage the profit. Profit smoothing hypothesis suggests that income to reduce the fluctuations around surface that seems be normal for the company, consciously manipulated (Ronen and et al, 1891). And the managers within the field of accepted accounting principles, used policies and methods (Yoon et al 2002) that reduce the variance in reported earnings. Earnings management related to management incentive and management incentive more related to stock performance. Therefore, if be emphasized on the value of the company, in the earning smoothing researches, research would be useful. This kind of earning management that has been

*Corresponding author. Hamid RAHMANİ SERYASAT

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done by accounting numbers manipulating or real activities manipulate reduces correctness of message sending, increases risks and uncertainty of people outside of the organization. Also, it is likely lead to information asymmetry and reduces the investment performance (Abdul mahdi and et al. 2013) Earnings management not only hides the company's actual performance, but also hide the real process of earning growth and income of the company which is useful in future growth predicting of the company) McNichols, M.F. and S. R. Stubben, 2008). So it is not surprising that the various stakeholders of the company consider the earning management as unfavorable and they are trying to reduce enforcement and power of managers through intensified monitoring. In this regard, shareholders consider conservatism as a governance tool and regulatory corporate that limits accrual-based earnings management (Garcia et al 2012). Research on various issues affecting earning of shareholders is able to help the correct decisions making and the optimal allocation of economic resources can be done better and make better investment situation. Process investment requires the nature of investment decisions analyzing. In this case, in addition to the decomposition of activities related to the decision-making process, the most important factors influencing on the decision-making environment for investment activities is investigated. Among these factors can be referred to the macroeconomic factors such as exchange rate and inflation (Sameti, Moradian, 2007, p. 44-60). Researches show that there is a significant relationship between inflation and currency exchange rates with earning. There are also several factors affect the profitability that one of these factors is earning smoothing. Whereas a major focus of financial reporting based on earnings and cash flow predicting as a performance indicator of the company and major financial analysts consider earning as a prominent factor in their investigation and judgments, so the awareness of the effect of earning smoothing on stock returns for firms listed in Tehran Stock Exchange, has a special importance. The main goal of investors from investing in shares of companies, is "Wealth increasing" that is achieved by the "return on equity". Therefore assessment of "return on equity" of different companies is the most important problem that investors facing in the capital market and cab be increased by identification of variables influencing return on equity (Panahi, Mashayekhi, 2008, p 98-81). Analysts and investors in order to invest in stocks of companies are presented to companies with a higher risk. Therefore, in their investigation and judgment in order to select investment stocks, focused on earning as a prominent factor (Panahi and others, 2008, p. 81). So, awareness of smoothing effect on stock returns of firms listed in Tehran Stock Exchange has a special importance. The study also attempts to investigate the smoothing effect on firms listed in Tehran Stock Exchange and determine whether smoothing effect on the type, severity, and relationship between the exchange rate and exchange rate returns Stock or not?

2. THEORETICAL PRINCIPLES

First, earnings management hypothesis, as earnings smoothing presented by Hope Worth (1953) and then introduced by Gordon (1964). For the first time the term "earnings management" replaces out the term "Smoothing" by Mc Nicholson (1988). In this respect, focus of attention was on earnings management; Base on that can influenced on summary of company's performance preparation and reflects the considering results (Riahi Blocky 2000). Schipper (1989) defined the concept of earnings management as following: an intentional intervention in the financial reporting to obtain the expected benefits. Burgstahler Dichev, (1997) believe that most companies report earning changes less than expected and the evidence indicates opportunistic earnings management. Evidences suggest that companies are highly motivated to escape from losses and benefit cuts. Cegink (1999) argues that the companies, voluntarily report information on net earnings, try to increased net profit by decreasing discretionary accruals, in order to reach expected earnings. Conservatism is the result of asymmetric obligations to identify economic benefits and losses in the company's financial statements that lead to reflect and identify accountants economic losses compare to timely earning (Basu 1997). Guay and Verrecchia (2006) believe that conservatism through immediate detection of losses and delay in the recognition of profits reduces successful accrual-based earnings management opportunities. This issue consistent and matched with broader perspective represent about conservatism in Watts' research (2003). Watts state that one of the important roles of conservatism is to restrict financial reporting opportunistic behavior of managers and also counteract and eliminate biases practices in financial reporting by jobber and benefit-seeking people. Chen, Hemmer and Zhang (2007), shows that conservatism can reduce opportunistic biases in the accounting. According to that, earnings actual management and earnings accrual-based management can be interchangeable; there are critics who claim that the strict and more stringent supervision (e.g. more conservative) leading to inefficiency in corporate governance and increase actual earnings management. Hermalin and Weisbach (2012) believe that monitoring can create incentives for managers who are going to seem more capable to reach out to activities that activities are reducing the value of the company. Demski (2005) consistent with the vision of Ewert and Wangerhofer (2009) about the outcomes of severe monitoring, the analysis showed that greater oversight of stricter and more closed accounting standards lead to a rise in real earnings management because increase the ultimate benefit of the actual management of the earnings.

3. REVIEW OF LITERATURE

Nelson, Elliott and Tarply (2002), in their study, was questioned five largest audit firm about the earnings management by executives of the companies. The results showed that managers, in some cases in which was no clear standards of financial events and also when manager had authority to act the particular standard (e.g. changes in interest rates, reserve for doubtful receivables, guaranteed renewable and cost of goods sold structure) have done the most of earnings management. Cheny and Jiter (1997), in their research, have been investigated the impact of firm size, leverage, profitability, efficiency, accruals and growth in earnings smoothing to showed that smoother companies compare to other firms are larger and have more efficiency and larger discretionary accruals and more debt ratio. The companies that are underperforming pay less to smoothing. They also observed negative relationship between smoothing and growth. Results of Michlson and others (2000) showed that smoother firms are larger than non-smoother firms and have higher cumulative abnormal average return. Ronen and Sadan (1981) concluded that if managers use their powers in order to increase their reward, their behavior will be opportunistic, in contrast, many recent studies have suggested that earnings smoothing can cause the improvement of investors' perception about the companies that their earnings have been smooth. Schipper (1989) believes that earnings management involves positive themes of earning. Black (1993) states that managers perform smoothing in order to make more concrete benefits and be provided in a manner that is informative. Also, it's increased the relationship between earning and value. Their research indicated that only the stable income is effective on equity cost of share holders. Solano (2000) investigate the relationship between exchange rates and the stock return and the results of this study show that there is a Simultaneous relationship between exchange rates and stock returns. In other words, simultaneous changes in exchange rates immediately will be effective on return on equity, Otama and Sirgar (2008) also consider that whether companies listed on the Jakarta Stock Exchange, (Indonesia) intend to opportunistic management or not. In their study, they used independent variables such as ownership structure, company size and corporate governance practices (corporate governance) and by using multiple regression conclude that the size of the company dose not impact on earnings management. The results contrast with obtained results of advanced enterprise. Walti (2005) evaluated the impact of macroeconomic variables exchange and inflation on the stock return. The results of this study indicate that financial integration, economical structure and foreign exchange regime are the factors that will have an impact on stock returns. Also Abugri (2003) evaluated the impact of macroeconomic variables on stock returns and concluded that these variables have a positive impact on stock returns. Hang and others (2009) investigated the potential effect of artificial smoothing and real smoothing for the value of the company. Their research results show that company's value decreases with artificial smoothing increasing and increases with real smooth increasing. They stated that the companies can increase companies' earnings informative by real smoothing and reduce agency costs of the companies. Fama and French in 1992, investigated the average cross-sectional variation of stock returns to market risk, company size, financial leverage, book value of the equity to market value of equity and benefit-cost ratios through regression and conclude that the market risk and the company size does not related to the average of stock returns. But the average return of shares has inverse relationship with the book value of financial leverage and has a direct relationship with the market value of financial leverage. This relationship is mentioned as a "mystery" by Fama and French.

Badri (2002) investigated the existence of smoothing and influencing factors on it. The results of his research showed that the ownership, size, type of pricing and industry are not important factors in earnings smoothing, but profitability ratio is an effective factor on smoothing and there is a negative relationship between profitability and earnings smoothing, i.e. by reducing the relative profitability of the company, smoothing possibility increases. Qaemi and others (2003) investigate the effects of earnings smoothing on stock returns of Companies listed in Tehran Stock Exchange. The results show that there is no significant difference between the abnormal return of smoother and non-smoother companies. Samaie (2003) examined the relationship between earnings smoothing and adjusted returns based on risk. His research showed that companies that start to earnings smoothing, have more abnormal return than the non-smoothers companies. Mashayekhi and others (2005) examine the role of optional items, earnings management companies listed in Tehran Stock Exchange. Their results showed that the company was investigated, earnings management used and corporate executives to decrease in cash from operations, which reflects the poor performance of the business unit, in order to compensate this subject, increase discretionary accruals. Meshki (2012) in his research suggested that, management in order to achieve continuous and stable profit, try to remove the periodic oscillation, planning a profit with a fixed growth rate. This is due to the company's future prospects, to look good and evaluated acceptable performance. The purpose of this study is to evaluate the effects of smoothing on stable corporate profits of collecting information about 95 companies during the years 2005 to 2010, and using stable integrative data and statistics analysis. The results show that the stable profits of smoother companies are more than the earning stability of the non-smoother companies and companies that have attempted to smooth earnings, compared with other companies, has announced more stable stock earning in future. Badri (1999), in the study showed that smoothing takes place in the companies listed in Tehran Stock Exchange. According to the results of the study, the ratio of profitability has been an effective incentive to earning smoothing and productive company listed in stock exchange that have lower profitability, have been more involved in smoothing. Nouroush and others (2007) in the study of smoother companies' features concluded that earning smoothing companies are older, with weaker performance and higher debt ratio compare to non-smoothers companies. Venos et al (2006), investigate smoothing of listed companies in Tehran Stock Exchange by using Iran Accounting Standard No. 15 (Accounting for investments). The results of this study suggest that although the use of this tool for smoothing largely absent, but observe that the earnings smoothing in companies that earning of capital selling is nonzero by the companies that used these tools. Lotfi Mazrae Shahi (2000) investigate the effects of inflation on stock returns in Firms listed in Tehran Stock Exchange and the results of this study indicated a direct relationship between the inflation rate and stock returns and by increase in inflation rate, stock returns increased in more amount. Yahya zade fard (2001) studied the relationship between inflation and real stock return in companies listed in Tehran Stock Exchange. For this purpose, he used the data of 72 companies listed in Tehran Stock Exchange and sign their names in exchange rates and their activities have continued since 1991 by the end of 1996. The results indicate that there is a one-way relationship between nominal stock returns and inflation in the period from 1991 to 1996, i.e. increased in inflation raises the nominal stock return in Iran. Davood Abadi (2006) concluded that there is a dilatory relationship between the currency exchange rate and stock returns, which reflects the market's reaction to currency exchange rate changes until the observed effect on the Company's revenues and expenses. Since the currency exchange rate changes do not immediately impact on a firm's costs and revenues. Taleb bidokhti and Mosavi (2012), in a study, examine the main influencing factors of earnings management in companies listed on the Stock Exchange associate with variables such as firm size, firm age, the ratio of debt to equity and amount of the reward. And concluded that there is a direct relationship between the size of the company and the ratio of debt with earnings management, but company's age and reward do no significantly effect on the earnings management.

4. EARNINGS SMOOTHING CONCEPTS

One of the main issues of earnings management is earning smoothing. Generally, earning smoothing included the desired actions of management about the transposition of company accounting record of expenses and incomes and or accounting costs or transfers them to later years in a manner that it cause company have a stable earning process without changing. The goal of management is that to show the company is stable and dynamic in investors and capital markets view (Garen and et al., 2010). Different definitions of income smoothing are almost similar presented as the following:

1- Earning smoothing is the process of modifying the recognition of income or reported income in order to the reported earnings have a little change, while do not increase reported earnings in the long period (Daniel et al. 2011).

2- Earnings smoothing is considered as a form of manipulation of accounts in order to create a constant growth rate of received earnings and companies by creation of regulates decrease the earning flow through the pathways of its deviation, (Yoshihiro, Iyam 2011: 1-25.)

3- Most of the researchers believe that the diversion associated with the risk and if the diversion to be taken in profits, shareholders perception from companies risk will be different, from 1968 to 1987, researchers have presented different concepts in their research in all of which have a common definition (Yoshihiro, Iyam 2011: 1-25) "major fluctuations of the earnings had been done by a deliberate practice of management in order to manage mental goals of management".

5. SMOOTHING EFFECT ON EARNINGS

If smoothing has been done, reported earnings sometimes are higher and sometimes lower than economic benefits. And there is no problem to report float earnings of managers. Only explanation is that some managers reported profits lower than observing earnings, and it will be very difficult and pause able. Managers respond to the impact of market perceptions about earnings volatility by earning smoothing. And in other words, perceptions about market placed in the balance and cannot be deceptive. But this issue depends on the stock earning that can be recognized in the future (Anand, Thakor, 2003).

6. EARNINGS SMOOTHING COSTS

Discernment and discretion of the manager does not have a real impact on company performance by themselves. In this case, we can point to the actual costs of smoothing. These costs include the manipulation of accounts and cost efficient decisions. So, these costs will be zero when manager manipulate revenue less than a certain amount and they reached to the maximum when revenue manipulation is more than a certain amount, done by the manager (Anand, Thakor, 2003).

7. THE MAIN VARIABLES OF THE RESEARCH

7.1. Stock returns

Earning from investments is a kind of capital gains (the price change of an asset) or profit and interest received. Stock return of the companies listed on the Stock Exchange is obtained by equation (1) and using data that was presented in Stock exchange (Jahankhani, Parsaeean, 1996).

$$r=\frac{(P_1-\ P_0)+D_1}{P_0} \tag{1}$$

r= annual return rate price at the beginning of year= p0 price of the end of year= p1 stock earning=D1

7.2. Exchange rate

The exchange is any device such as money, draft or cheque in foreign exchange that were used for payment (Jihad, 2008, p. 44). And foreign rate of exchange is the amount of the national currency that was paid to obtain currency of the other countries (Kalan Shakeri, 2010 p 356). Also, exchange rates can be considered as the equal value of a foreign currency against the local currency (Rahmani, p. 215). In other words, the cost of buying or selling a foreign currency to the country's currency is the rate of exchange (Jahad: 2008, p. 44).

$$Et = (FEt - FE0) / FE0 \times 100 \tag{2}$$

FE0 exchange rate at the beginning of the period
FE_t exchange rate at the end of the period
E_t indicates the change percentage in the exchange rate in period t^{th}

7.3. Inflation rate

Inflation implies a situation in which the money demand grows for the product toward production, a situation that, in the absence of effective control, reveal as the increased price of a unit of produced object (Davoodabadi,2006). Inflation usually associated with actual or potential increase in the general level of prices, or in other words, by reducing the potentially purchasing power of the monetary unit. Sometimes, inflation occurs when the general level of prices not degrade by the increase in the efficiency of the Economic processes entail. Inflation as usually understood associate with an unusual increase in prices (Gold and kokab 2005, p. 278). When economists talk about inflation, they refer to the growth of general price; inflation mean that pay more money to purchase goods and services, in the other words, raise the level of money prices of goods and services in a certain period of time, called inflation (Gold and kokab 2005, p. 278). In order to calculate it, the consumer price index (CPI) had been used. That was announced by the central bank and can be calculated by equation (3).

$$INF = \frac{CPI\ _{t}-CPI_{t-1}}{CPI_{t-1}} \times 100 \tag{3}$$

INF inflation rate CPI_{1-t} the consumer price index at the beginning of the period
CPI_t the consumer price index at the end of the period

8. DATA SOURCES

To find information about the selected companies, the data included in the Tehran Stock Exchange (Tadbirpardazan and Rahavard Nowin Software) and also the data from the central bank and relevant magazines in order to access to the information about the variables used in the study will be used.

9. STATISTICAL SAMPLE AND TIME DURATION OF THE STUDY

Doing any scientific research necessary to spend time and money, for this reason, there is no possibility of the full population census, therefore, researchers according to this fact, using data obtained from the analysis of samples and finally through the data generalized can be attributable to the main population (Bazargan, Sarmad, Hejazi, 1997). So, in this study, population consisted of all companies listed in Tehran Stock Exchange, during the years 2004 to 2011, except investment firms, financial intermediaries and banks, who have the following conditions:

1. Before the year 2004 are listed in the stock exchange 2- Their financial year end to 20th on March. 3- Their trading mark has not been closed more than 3 times in a year, 4- Companies that have the required qualifications for the calculation of variables and 5. Access to their information and financial statements are available.

According to the above situation, the numbers of member companies in the study are around 92 companies which number of considering samples by using the finite population sampling formula are as follows:

$$\mathrm{n} = \frac{NZ^2_{\alpha/2}pq}{\varepsilon^2(N-1) + Z^2_{\alpha/2}\,pq} \tag{4}$$

$$n = \frac{92\times(1.96)^2\times0.5\times0.5}{(91)\times(0.05)^2+(1.96)^2\times0.5\times0.5} = \cong 74$$

10.INVESTIGATE THE EARNING SMOOTHING IN THIS STUDY

In this study, in order to identify the earning smoothing behavior, Acle model was used. This index is not able to identify all companies that try to smooth earning. In other words, if companies are partly successful or unsuccessful for earning smoothing based on this index, will be classified as non-smoothing company. However, this characteristic of conservative views are considered positive, because companies based on this are classified as a smoother, are smoother with a high confidence coefficient. However, considering all the features and compared with other smoothing criteria, Acle index for the purposes of this study is an acceptable criterion. If a company at least in one gross or net operating level, be smoother, in this study will be considered as a smoother company. Acle model used in this study for the following reasons.(Panahi, Mashayekh, 2008, p 81-98)., the shelter, Presbyterians, 2935, p 32

1. Acle model to forecast earnings estimates cannot appeal to subjective judgments.

2. Acle model instead of applying one year information, use a multi-year period.

Acle model instead of considering the impact of each variable separately, consider several variables together (Panahi, Mashayekh, 2008, p81-98).

This index has been used by Acle and many other researchers within the country and abroad. In this model, the coefficient of variation, CV or coefficient of dispersion or variability that is one of the indicators of the relative dispersion, obtained by dividing dispersion index namely standard deviation on a central index namely average, is used. Theoretical framework of Acle model, defines smoothers institute as a unit that use several variables in such a way that the resultant effects minimize earning volatility. According to this model, company is known as the coefficient of variation smoothers that distribution coefficient of changes in a gross profit period, operating profit or net profit on the distribution coefficient of changes in a selling period is smaller than one. In this study, we consider companies as a smoother who at least in one benefit levels (special, operation, and non-specific) do earning smoothing. In other words the smoothing index calculated by equations (5, 6, 7) (Badri, 1378).

$$CY = CV\Delta I / CV\Delta S \tag{5}$$

$$CV\Delta I = \frac{\sqrt{\sum(\Delta Ii - \Delta I)^2 \ /n-1}}{\Delta I} \tag{6}$$

$$CV\Delta S = \frac{\sqrt{\sum(\Delta Si - \Delta S)^2 \ /n-1}}{\Delta S} \tag{7}$$

Where in this model $CV_{\Delta I}$ is distribution coefficient of earning in firm *i* in the time period of research and $CV_{S\Delta}$ is distribution coefficient in *i* company in the period of research. If $CY \geq 1$, company does not smoothing the earning and if $CY < 1$, company smoothed the earning (Panahi, Mashayekh, 2008, p 81-98). In Tables 1, 2 and 3 can be observed how to choose the Iran carbon company as a earning smoother company in the special profit and operating profit level respectively. These tables were presented as an example. Table one and two shown who to choose the carbon company by operating profit and net profit as earning smoother. According to that considering index is smaller than one, therefore can be argued that the company has attempted to smooth at earnings special level.

Table 1. Smoothing at net profit level (special).

Selling changes	Selling	Profit changes	Special profit	Year
-	250996	-	117354	2004
19640	270636	112560	229914	2005
17754	288390	174234-	55680	2006
108498	396888	30984	86664	2007
121500	518388	34-	86630	2008
99257-	419131	84114-	2516	2009
68245-	350886	21121-	18,605-	2010
36619	378505	9237-	-27842	2011
136509	-	-145196	-	Total
82080.43	-	89983.45	-	Standard deviation
19501.28	-	-20742.3	-	Mean
4.2		4.33-	-	distribution coefficient

$$CY = \frac{CV\Delta I}{CV\Delta S} \quad \rightarrow \quad CY = \frac{-4.33}{4.20} = 1.03$$

Table 2. How to select Iran Carbon Company as earning smoother at level (operating profit).

year	Operating profit	Profit changes	Selling	Selling changes
2004	75851	-	250996	-
2005	80721	4870	270636	19640
2006	73482	7239-	28839	17754
2007	114090	40608	396888	108498
2008	123314	9224	518388	121500
2009	37809	85505-	419131	99257-
2010	13502	24307-	350886	68245-
2011	113ϵ	8213-	378505	36619
total	-	-70562	-	136509
Standard deviation	-	38876.54	-	82080.43
Mean	-	-10080.3	-	19501.28
distribution coefficient	-	3.85-	-	4.2

$$CY=\frac{CV\Delta I}{CV\Delta S} \rightarrow CY=\frac{-3.85}{4.20}=-.91$$

According to that considering index is smaller than one, therefore can be argued that the company has attempted to smooth at earnings operating level. Table 3 show how to choose Mashhad packaging company as a non-profit smoothers level (margin). Because the index is less than one so that can be claimed company attempt to smooth earning at the margin level. With regard to the fact that we are involved in the study that companies at least in one benefit levels(Special, operating, margin) attempt to smoothing, be taken as smoothers. Because obtained ratio is smaller than one at the net, operating and margin level. So this company is smoother. Specifically, the purpose of this model is artificial earning smoothing. Natural earnings smoothing, primarily do not related to managerial decision or any action. Also, true earning smoothing is represents an economic situation that is not located in the restriction of this study. But against artificial smoothing represent intentional action of managers to smooth time series of reported earnings that obviously lead to deviation in providing economic reality which investigate in this study (Etemadi, Javadi Mazdeh, 2009, p. 130-134).

Table 3. Non-smoothing at net profit level (margin).

year	net profit	Profit changes	Selling	Selling changes
2004	87932	-	250996	-
2005	93297	5365	270636	19640
2006	85818	7479-	288390	17754
2007	131299	45481	396888	108498
2008	143401	12102	518388	121500
2009	54500	88901-	419131	99257-
2010	39113	15387-	350886	68245-
2011	99505	2406-	378505	36619
total	-	-51225	-	136509
Standard deviation	-	40969.04	-	82080.43

Mean	-	-7317.85	-	19501.28
distribution coefficient	-	5.59-		4.2

$$CY=\frac{CV\Delta I}{CV\Delta S} \rightarrow CY=\frac{-5.59}{4.20}=-1.33$$

11.PURPOSES OF THE STUDY

This study aimed to determine the impact of earnings smoothing on the existence, type and intensity of the relationship between exchange rate changes and inflation with stock returns average in order to the users or decision makers such as investors, creditors, banks, credit and financial institutions, governments and other users in their analysis and decision makers, consider financial ratios that are significantly related to stock returns and while smoothing is an effective factor regarding to the results of this study in decision making. But in this study, there are two the sub-goal that stems from main objective:

1 - Identifying earning smoother companies listed in Tehran Stock Exchange among the selective samples of the research;

2- Identifying the amount or percentage of the profits smoother companies listed in Tehran stock exchange.

12.RESEARCH HYPOTHESES

1- There is a significant relationship between inflation and stock average return in smother companies.

2- There is a significant difference between earning smoother and non-smoother companies in the respect of exchange currency rate and stock returns average.

13. STATISTICAL TESTS OF THE RESEARCH

13.1. T-test for two independent populations

By using T test of the two independent populations, the average of the two groups was compared. This test is used to compute the confident distance and or the test hypotheses of the average of the two populations are used. In this study, this test was used to determine the difference between the efficiency of the non-smoothers and smoothers companies.

The mathematical form of the hypothesis is as follows:

H_0: $\mu_1 = \mu_2$ average return of profit smoothers and non-smoothers companies are equal.
$H1$: $\mu_1 \neq \mu_2$ average return profit smoothers and non-smoothers companies are not equal.

Descriptive statistics for both groups are shown in Table 4:

Table 4. Return descriptive statistics of earnings smoother and non-smoother companies.

	Company	Number	Mean	Standard deviation
Return	Profit smoother	44	9642	11233
	Profit non-smoother	30	17751	32463

To test the above hypothesis, at first, is carried out the equality test of two groups' variances assumption, the mathematical form of this test is as follows.

$$\begin{cases} H_0 : \delta_1^2 = \delta_2^2 \\ H_1 : \delta_1^2 \neq \delta_2^2 \end{cases}$$

The output of the test results during Leven's test to check for equality of variances are shown in Table 5:

Table 5. Examine the variances' equality assumption by Loon test.

Return	Variance equality assumption	Variance equality test	
		Amount of Fisher statistic	Significant level
		67.5	0.044

As it was observed, the amount of obtained significance level is less than 0.05 and therefore there is no enough evidence in order to approve the null hypothesis, so at the level of 95%, null hypothesis was reject and the hypothesis of equal variances is not confirmed. So, the independent t-test for non-equality situation of variances will be done.

Table 6. Examine independent T teast for sub hypothesis.

Return	T statistic	Freedom degree	Significant level	Means differences
	4.93	73	0.002	129.97

As observed in table (6), the amount of achieved significant level was less than 0.05 and so the null hypothesis is rejected and opposite hypothesis is accepted. Thus, the 95% confidence level can determine existence of differences profit smoothers and non-smoothers companies. The results of regression test are given in Table 7.

Table 7: The results of regression test.

Hypothesis	Fixed value (α)	Coefficient	Std. Error	determination coefficient(R^2)	Sig
Inflation rate impact on stock return average in earning non-smoother companies	012	1001	0.013	0.211	0.012
Currency exchange rate impact on stock return average in earning non-smoother companies	2031	1011	0.221	0.222	0.012

As specified in the above table, based on regression test, because the significance level of hypothesis is less than 0.05 (Prob <0.05), therefore the null hypothesis is rejected and the opposite hypothesis that suggests the impact will be accepted. And the amount of effect is specified in the above table. So, in order to verify the effectiveness, Grenger causality test was used.

14.RESULTS AND RECOMMENDATIONS

In response to the question whether there is smoothing in Tehran Stock Exchange or no, this study, like other previous researches, confirmed the existence of smoothing in the companies listed in Tehran Stock Exchange. With respect to the period of current study, profit smoothing behavior in the stock exchange can be seen that the percentage of firms in the sample smoothers equals to 60%, compared with the results of previous research, significantly increased, also according to this study, around 40% of companies at the gross profit level, 42% at operating profit level and 52% at the net profit, perform the smoothing. Current results obtained from hypothesis test showed that there is a relationship between exchange rates and inflation with stock returns is non-smoother companies. The final result is that, according to the relationship between exchange rate and inflation, there is no relationship between non-smoothers and smoothers companies. Companies that controlled the volatility of profits, has a positive act to rein the inflation and somehow can neutralize its effect on efficiency. So, in terms of inflation, suggest that investors provide companies shares that return against inflation and depression is partially guaranteed by profit smoothing. And company has positive adjusted profit. So investors who wish to invest in shares of companies listed in Tehran Stock Exchange, in its evaluation, they should consider profit smoothing to select stocks for investment, in order to reduce the volatility of returns. If companies start to smoothing profits, changes of currency exchange rate immediately impact on costs and revenues of the firm. The reason for this difference can be detected by the exact time of income by smoother companies, the reported income stream have little change by companies. That is why smoothing of the currency exchange rate changes is somewhat ineffective on equity return. Therefore suggest when exchange rate volatility is high and investment risk in shares of the companies goes up as much as possible to consider the possible smoothing and selected companies that have a balanced output and profits, due to the high volatility of currency fluctuations is at least. The results of dividing companies in to two groups, smoothers and non-smoothers, according to three level of gross profit, operating profit and net profit and comparing the percentage of profit smoothing company in the period of research, i.e. 2004-2011 is shown in table 8.

Table 8. Distinguish the smoother and non-smoother companies.

No	Name of company	Smoother	Non-smoother	No	Name of company	Smoother	Non-smoother	Name of company	Smoother	Non-smoother	No
1	Abadan petrochimy	*		25	Saipa	*		Niromohareke Machinery	*		49
2	Iran Rock mineral	*		26	Mashhad ring	*		Iran Tractor	*		50
3	Iran carbon	*		27	Saipa diesel	*		Teraktorsazi		*	51
4	Nirocolor	*		28	Tractor engine	*		Sarmafrin	*		52
5	Tolipers		*	29	Electric khodro Sharq	*		Agricultural Services	*		53
6	Khrk petrochimy		*	30	Irankhodro diesel	*		Pars petroleum	*		54
7	Shazand petrochimy	*		31	Tirotrans	*		Behran petroleum		*	55
8	Brake pads	*		32	chadormaloo	*		Shahroud Cement	*		56
9	Mehrcom pars	*		33	bama		*	Sofian cement	*		57
10	Casting tractor	*		34	Iran Manganese Mines ofran	*		Kerman Cement	*		58
11	Zamyad	*		35	Naghsh jahan sugar	*		Orumieh Cement	*		59
12	Khavar spring		*	36	Isfahan sugar		*	Behnoosh		*	60
13	Pars Khodro		*	37	Sina drug	*		Shahdiran		*	61
14	Osve drug		*	38	Jabber ebn hayan drug		*	Pars Animal Feed		*	62
15	Injectable products	*		39	Mavad daropakhsh	*		Pak Dairy		*	63
16	Kosar drug	*		40	Rooz drug		*	Maritime Industry		*	64

17	Eksir drug	*		41	Kavian steel	*		Qazvin Glass		*	65
18	Abidi drug	*		42	Tubes and machinery		*	Azar Refractories		*	66
19	Farabi drug	*		43	National Lead and Zinc		*	Glass and gas		*	67
20	Alborz drug	*		44	Aluminum Rolling		*	Negin Coal	*		68
21	Damelran Razak drug	*		45	kalsimin	*		Transportation Engineering Petrochemical		*	69
22	Daroupakhsh	*		46	Bahonar Copper		*	Sharq Cement		*	70
23	Pars drug	*		47	Alumtak	*		Tehran Cement	*		71
24	Zahravi drug		*	48	Sepahan industry		*	Sepahan Cement	*		72

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