The relationship between Profit Smoothing with Stock Return and Systematic Risk of the Accepted Firms in Tehran Securities Exchange (Bourse)

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Abstract: The investors, creditors and financial analysts would like to have more information about profit smoothing in investment receiving firms; specially, if this action affects on risk and return of the firm. Profit smoothing is a know ledge ably action to reduce the periodic changes of the real profit with pre-determined profit using accounting optional technics at the frame of accounting accepted principles. This is a study on the relation between profit smoothing with stock return and systematic risk of the productory factories was active from Farvardin in 1383 to Esfand in 1387 in Tehran securities exchange (bourse) and at least, their stock was traded for 40 months. It was analyzed monthly in the form of 13 industries and 252 companies. The assumption trial was studied and also was done in isolation of smoothing and non-smoothing firms using multivariable regression and the assumption trial of being meaningful the profit smoothing relation with stock profit and systematic risk of the firms at the entire sample.The results of the assumptions trial of this study, shows that in Tehran securities exchange, smoothing can't be considered as useful tools on stock return and systematic risk of the firms.

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1. Introduction

Financial statement reflects the action of commercial unit and comprises the return from sources under the management control of commercial unit. As the commercial unit management is responsible for preparing the financial statements; it may act for profit smoothing for different reasons. Profit smoothing happens when the managers make changes using judgments in financial reports and exchanges structure for the benefit of some beneficiaries (including stock holders, creditors, government employees, investors, etc…) about the economical action of the firm in financial reporting (Hemmeti, 1383, p.43). Profit smoothing is the most important method used by firms in for managing the profit that could have different effects on the benefits of the active members in the market according to the manner of the actions, (Karimi, 1385). Public believe that organizations change the accounting ways to cover their action deficiencies. On the other hand, the compilers of the accounting rules and regulations have tried to restrict the abilities of the management in accounting changes (with the aim of increasing or decreasing the het profit) (Kordestani, 1381, P. 57). Since 1953, Hivert has Claimed that the goals of performed profit management by different technics of smoothing is upon this point that the relation with creators and employees improve and on the other side by psychological actions, commercial cycles and volatilities reduce (scat, 1997, P. 295). In this study, the profit smoothing was analyzed with stock return and the systematic risk of the productory companies accepted in Tehran Securities exchange that was activated from Farvardin 1383 to Esfand 1387 in Tehran Securities exchange and their stock was traded at least for 40 months in the form of 73 industries and 252 companies.

2. Importance and necessity of the research

Gordon (1969) believed that:

- The index the company management uses in choosing among accounting methods is the above method, maximizes desirability or welfare.
- Desirability is a function job security, the level and rate of increasing the salaries and level and rate of the company improvement (in the view of size or greatness).
- The stock holders' satisfaction about the company's action causes the position and the amount of managers' reward increase.

It means, if other factors are pixed, the more the stock holders convey satisfaction, the more job security, income and other desires of the management. This satisfaction would depends on the development rate and company profit stability. According to the above stimulants, a manager smoothes the reported profit and also the rate of the profit growth. The aim to smooth the rate of profit growth is as following: if the growth rate is high, some policies are executed to reduce it and the reverse is true, too.

Bidleman (1998) gives two reasons that management tries according to it to smooth the reported net profits. The first reason in based on this assumption that a fixed current of profit could affect on investor's mental expectations about the possible results of the profit and future stock and as a result has a desirable effect on the firm stock value, because it reduces the amount of the risk of the whole firm. Biddle man considers the ability for confronting the nature of profit periodicality and reduced correlation probability of the return under the exception of the company with the return of the market set, as the second stimulant of profit smoothing and says: "As far as it is successful to get ordinary and until investors recognize the reduction of stock return covariance and market return and involve them in their evaluation process, smoothing the stock value, will have useful effects." (Bidleman, 2003). As a matter of fact, profit smoothing arises from feeling this need that management wants to neutralize the environmental uncertainty and reduces the organization's operation volatility that results from inter period cycle that is based on flourish and dullness.

According to the studies increasing the return level and reducing the risk of the firm can be one of the smoothing goals. In a general dividing risk can be categorized in two parts: (booth et al, 1996) (martin et al, 2002).

- The operation risk.
- The risk resulted from financial structure of the firm.

The less the profit deviation, the less the operational risk of the firm. As, today the main concentration of the financial reporting is based on predicting the profit and return as action index in commercial unit, smoothed profits, as decision making measure, brave special credits and most of the financial analysts consider the profit as a main factor in their studies and judgments, also investors, creditors and financial analysts like to bear more information about profit smoothing in companies which accept in vests, specially if this action is useful on risk and company return. So, recognizing the profit smoothing effect on the stock return of accepted companies in Tehran securities exchange could have a special credit. As a result, in this study, the effect of profit smoothing on stock return and systematic risk of accepted productory companies in Tehran securities exchange was analyzed, until using study findings it gets obvious that if market answers to smoothed profits or not.

3. Research goals

Investors, creditors and financial analysts like to have more information about profit smoothing in companies which receive the investment, especially if this action is useful on risk and return of the company. So, defining the effect of smoothing the profit on stock return of the accepted companies in Tehran securities exchange con has a special credit. The end of this research is to study the effect of profit smoothing on stock return and systematic risk of accepted companies in Tehran securities exchange and to determine, using its findings, if smoothing is useful independently and with every factors of risk, industry and the size of the company on return of companies stock and the market shows positive answer to smoothed profit or not?

4. The assumptions of the research

The assumptions of this research include:

- There is a significant difference between the stock return of smoothing and non smoothing companies.
- There is a significant difference between systematic risk of smoothing and non-smoothing firms.
- There is a significant difference between the stock return of smoothing and non-smoothing firms in different industries.
- There is a significant difference between stock return of smoothing and non-smoothing firms according to the size of different firms.

If the mentioned assumptions are confirmed, it could be said that smoothing is useful independently and with every factory of risk industry and the size of company on stock return of the company and the market shows positive answer to smoothed profit.

5. The antecedent of the research

The existence of the relatively long studying record (antecedent) about profit smoothing is the sign of its importance in scientific and professional assemblies. After more than seventy years from the beginning the study in this field, the witnesses show that the research about profit smoothing hasn't been reduced yet. Some of the performed investigation and their results are shown in the following table1.

Table1. Performed investigation and their results

Research topic	Researcher and the year of research	The variables of the research	Results
the effect of reward plans on accounting decisions	Healy (1985)	obligatory optional variable, management reward	management using of obligatory optional variables as maximizing tool for profit that is different according to the kind of management reward plan
financial action of high-level executive managers at the end of office period	Zimmerman Murphy (1993)	The changes of costs in research and development, propaganda and investment costs	the optional mentioned variable to maximize the reward and professional security at the end of management office period have been used a lot
the management	Hajivand (1375)	Profit- smoothing management	because of considering profit as evaluating measure of

stimulus in profit smoothing		personal benefits, the benefits of the firm	the manager, the management does the profit smoothing just for personal benefit so, it is necessary to make some changes in evaluating the action
Profit-smoothing and professional security	Ahmed lobo zhou (2000)	the degree of competition, the durability of the produced products, the amount of investment usage, industry	the profit smoothing has direct relation with the amount of investment usage completion and durability of produced products in every industry and has an indirect relation with professional security
Research topic	**Researcher and the year of research**	**The variables of the research**	**Results**
Management stimuli in profit smoothing by reserving the loss of bank contracts	Kanagaretnam Mathieu, 2000	The present action of the bank, reserving the loss of loan contracts, future action of bank, optional tools of profit management	Profit-smoothing is performed according to the present condition of the company and it's expected action, so that it provides the professional security of the bank management in long term.
The critical study of accounting demonstrative theory	Oucharme Shores Bown (1995)	Implicit contracts of management, the profit level sued accounting methods	the management contact like it's credit hear stock holders is reinforced by increasing the profitability level. Hence, the companies try to choose the accounting methods to develop the profit
An interpretation about profit smoothing accounting	Titman Truemwn (1988)	Profit smoothing, the rate of financing intrest, stock Exchange price	Profit smoothing as a tool to show the company action desirable, decrease the company financing costs, increase the profit and consequently increases the price of stock Exchange
Offending against financing contracts and accounting reactions of the managers	Sweeny (1999)	Offending against financing contracts, the amount of using the profit increasing standards, the amount of flexibility in companies accounting	The amount of using the profit increasing standards by companies in the years before in ability to payback has indirect relation with flexibility of the companies accounting and has a direct relation with inability costs in payback
Recognizing the effective factors on profit smoothing	Badry (1378)	The amount of profit smoothing, the size of company than profit making, the sort of industry, the sort of ownership, the pricing provisions of government	The companies which are present in bourse have attempted to smooth the profit, that it's degree is different based on the sort of industry, the amount of profit making in companies and pricing provisions in governments.
The behavior of the accounting profit	Aghai-Saghafi	The accounting profit in different time periods, quality of its changes	The profit changes in companies accounting is not linear, but it is explained by different models. So that even some companies in similar industries have considerable difference in profit process.
Research topic	**Researcher and the year of research**	**The variables of the research**	**Results**
Profit smoothing and its role on priority of top investors.	Aiyesha dey (2002)	Artifitial smoothing, actual smoothing, natural smoothing, the number of financial analysts in company, the number of institutional investors.	The financial analysts consider the natural smoothing desirable because of its economical value. The investing institutions, because of different stock boskets, are in different to natural smoothing, and think actual smoothing. So the important companies in market problem, take the action to real of implicit smoothing.
The rights of stock holders of the organizational investors and the related financial analysts.	Bushan obrean (2009)	The common decisions of financial analysts and investing institutions and profit behavior	The decision makings are true which are by considering the idea of other groups. Investing is good at firms which firstly, have less volatility in reported profit and in other hand, action industries that the number of its participants are high and have defined revealing policies in their financial reports.
Does the profit smoothing give informational load.	Zarowin (2000)	Profit smoothing, the changes of optional-committal items, the changes of operational criticism currents.	By increasing the profit smoothing, the correlation between accounting profit and future operational criticism currents increases.
The market takings from profit smoothing	Khairal anuar wan, adibah bt, muhd, wan kamil	Smoothing, market value of the company	There is profit smoothing among the companies of Malaysia. Though it is a little. Also there is a meaningful relation between market value of companies with smoothed profit than un smoothed companies.
Profit smoothing and adjusted risk of operations	Wagner Michelson (2009)	Profit smoothing, company return, the size of company with unusual return, the sort of industry	There is a direct relation between the amount of profit smoothing with company return and the size of the company and indirect relation between profit smoothing and unusual return.
The effect of profit smoothing on market stock	Motasemi (1376)	Profit smoothing, annual average return, investing risk.	The companies present in bourse took action in profit smoothing that, in this relation, there isn't a meaningful difference between the risk of building the companies with smoothed profit and building the companies with un smoothed profit.

6. Statistical society

The statistical society of this research is the accepted companies in Tehran securities exchange that their financial year is Esfand 29 and from Farvardin 1384 to Esfand 1387, their stock has been traded at least for 40 month in Tehran securities exchange bourse and among them productory companies have been chosen using unprobable sampling that its rationale is its availability. From 1384 to 1387 252 companies in the form of industry were active continuously in Tehran bourse.

7. The research method

According to the classification of the different research on the basis of goal, this research is of the applicable researches stock.

The intention of applicable researches is to develop applicable knowledge in a special field (Sarmad, Bazargan and Hejazi, 79, 1382). In a more exact word, applicable research is an endeavor to respond to a scientific intricate or difficult that there is in a read world. In another classifying of researches that is performed on the basis of method, this research is of correlation sort that it is tried in them that the relation between different variables gets discovered or determined using correlation coefficient. The intention of correlation coefficient research method is to study the limits of changes of one or several variables with the limits of changes in one or several other variables.

In this research, the relation between profit smoothing with stock return and systematic risk of productory companied accepted in Tehran securities exchange bourse was analyzed by coefficient correlation.

8. The way of information collecting

The data that are used in research may be either first or second. In the present research, the required data are collected in different ways. The theoretical subjects like literature the research topic is library method and the data of research variables that are collected and produced by the managers of the companies and are as historical information and data, have been collected using software and informational bases, weekly and monthly publications and monthly and yearly reports and monthlies of Tehran securities exchange bourse and Internet World wide web. So, according to this fact, the research data are related to 1384 to 1387 are of the sort of second data.

9. The method of analyzing the data

In order to examine the assumptions and to achieve the answer of research questions the suitable method of data analyzing should be used. The collected information has been first classified and described using descriptive statistics. To describe investigation in formation, the descriptive Indies, having tendency to center and dispersing were calculated.The nature of data and statistical information caused using the regression trial for assumptions trial and the effect of independent variable on dependent variable has been studied.

10. The general model of research

In this research, multi-variables regression model has been used as follows:

$$CAR=\beta_0+\beta_1 smth+\beta_2 ind+\beta_3 size+\beta_i+\varepsilon$$

In which the coefficient *SAR* is the stock return and dependent variable and Smith is zero for un smoothing companies and one for smoothing companies and ind that is according to industry code (the industry code will be considered from 1-11) and Size is Z for big companies and is zero for small companies.

11. The final regression model is as follow

Stock return=-43/028+79/777 size 1+55/065inc-cap+4

The final regression result tells about the effect of size on stock return of companies accepted in Tehran securities exchange bourse.

12. The research findings

The result of performed investigations in this research about smoothing variable and the number of smoothing companies indicates that as a whole, 30.5 percent of the companies in which this phenomenon has been studied are smoothing. This rate was received before eliminating the companies which have had at least a 12 month stop in their stock trading. After eliminating these companies the smoothing rate reduces to 23.3 percent.

Table 2. the smoothing and non-smoothing companies

Description	Smoothing	Non-smoothing	Sum	The percent of smoothing
The whole society with the exception of ivesting and intermediary companies	77	175	252	30.5
The whole society with the exception of investing and intermediary companies with stock tradings stop.	48	158	206	23.3
On the basis of industry in cluedes:	48	158	206	23.3
Mine extraction	3	2	5	60
Food industry	11	25	36	30.5
Wood, paper, and paper products.	2	7	9	22.2
Weaving	0	4	4	0
The products of oil refining	4	7	11	36.3
Chemical products	10	23	33	30.3
Ruber and plastic	2	6	8	25

Mineral and unmetal products	5	26	31	16.1
Basic metals and metal products	5	21	26	19.2
Machineries and equipment	2	14	16	12.5
Electrical machines	0	4	4	0
Radio and T.V	2	2	4	50
Automobile and the pieces of automobile	2	17	19	10.5
According to the size includes:	48	158	206	23.3
Big size	38	125	163	30.4
Small size	10	33	43	30.3

In comparison between the dimension of number of smoothing and unsmoothing companies in different industries, the result indicates that the mine extraction industry with 60 percent rate, in comparison with other industries has the most smoothing in its own group. The next rank is related to radio and television industry which allocated the 50 percent rate to it. The weaving and electrical machineries industry doesn't have smoothing and machineries and equipment and automobile and pieces of automobile nave the last smoothing rate in their community. In big and small smoothing and un-smoothing companies group the percent of smoothing is roughly the same (about 30 percent).

The end of performing every research and investigation is to examine the discussed assumptions in that research. According to research assumption and in answer to this question if there is smoothing in Tehran securities exchange bourse? This research, like the other ones done before performed researches confirmed the existence of smoothing in companies accepted in Tehran securities exchange bourse. According to the time period the smoothing behavior is observed in bourse that the percent of smoothing companies in chosen sample is 30.5 percent.

13. The results of examining the results assumptions

The first assumption: there is a meaning foul difference between the stock return of smoothing and non-smoothing companies.

H_0: There isn't a meaningful difference between the stock return of smoothing and non-smoothing companies.

H_1: There is a meaningful difference between stock return of smoothing and non-smoothing companies.

Table 3. the statistical examination result of first assumption

The whole sample		The average stock returns		The level of examination	P-value of the equality examination of variances	According to P-value the variances equality assumption
Smoothing	Non-smoothing	Smoothing	Non-smoothing			
48	158	82.9117	35.3876	0.05	0.99	Isn't rejected

The result of first assumption- In consideration of table 3 and achieved statistical results, since the P-value of variances equality examination is 0.99 and is more than 0.05, the average stock return of smoothing and un-smoothing companies that in meaningful level 5 percent is examined, the assumption H_0 was confirmed and statistically doesn't show the statistical difference, so we can not consider profit.

Table 4. statistical examination of second assumption

The whole sample		The average stock returns		The level of test	P-value of the equality test of variances	According to P-value the variances equality assumption
Smoothing	Non-smoothing	Smoothing	Non-smoothing			
48	158	22.1232	13.2591	0.05	0.97	Isn't rejected

The result of second assumption: According to table 4 and achieved statistical results, since the P-value of variance equality examination is 0.97 and is more than 0.05, the average systematic risk of smoothing and non-smoothing companies that in meaningful level 5 percent is examined, the assumption H_0 was confirmed, and statistically also doesn't show the statistical difference, so profit smoothing cannot be considered as a useful factor on systematic risk of Tehran securities exchange bourse companies

The third assumption- there is a meaningful difference between the stock return of smoothing and non-smoothing companies in different industries.

H_0: There isn't a meaningful difference between the stock return of smoothing and non-smoothing companies in different industries.

H_1: There is a meaningful difference between stock return of smoothing and non-smoothing companies in different industries.

Table 5. the result of assumption test 3 (the average comparison in every one of industrial group)

Industry code	The title of industry	The whole sample		The average stock returns		The level of freedom	The degree of freedom	P-value of resulted from averages equality using t-test	The result of test
		Smoothing	Non-smoothing	Smoothing	Non-smoothing				
1	Mine extraction	3	2	118/07	-0/27	0/05	3	0/597	Assumption 3 isn't rejected.
2	Food industries	11	25	4/04	-24/33	0/05	34	0/451	Assumption H_0 isn't rejected.
3	Wood, paper and paper products	2	7	-107/09	92/65	0/05	7	0/018	Assumption H_0 isn't rejected.
4	The products resulted from oil	4	7	406/53	47/37	0/05	9	0/221	Assumption H_0 isn't rejected.
5	Chemical products	10	23	125/56	-16/89	0/05	31	0/045	Assumption H_0 isn't rejected.
6	Rubber-Plastic	2	6	-101/06	52/9	0/05	6	0/548	Assumption H_0 isn't rejected.
7	Mineral un-metal products	5	26	271/62	125/88	0/05	29	0/348	Assumption H_0 isn't rejected.
8	The main metals and metal products	5	21	-25/06	-25/06	0/05	24	0/768	The H_0 assumption isn't rejected.
9	Machiner, is and equipment	2	14	-106/02	-106/02	0/05	14	0/44	H_0 assumption isn't rejected.
10	Radio and television	2	2	-118/81	-118/81	0/05	2	0/443	H_0 assumption isn't rejected.
11	Automobile and the pieces of automobile	2	17	147/27	147/27	0/05	17	0/490	H_0 assumption isn't rejected.

The results of the third assumption- the result inserted in table 5 indicates the statistical difference in average stock return in different industries, so the relation between industry and smoothing and the effect on stock return is not so important. In the present research in 11 industries the comparison between average stock return was done between smoothing and non-smoothing companies that only in three industries (wood, paper and paper products and chemical products) the average difference was observed between stock return, although this assumption is confirmed, it can be said that the relation between smoothing and industry and its effect stock return is weak and this is also confirmed in multi-regression that is done.

The fourth assumption- There is a meaningful difference between stock return of smoothing and non-smoothing companies with consideration to the size of the companies.

H_0: There isn't a meaningful difference between the stock return of smoothing and non-smoothing companies with consideration to the size of the companies.

H_1: There is a meaningful difference between the stock return of smoothing and non-smoothing companies with consideration to the size of the companies.

Table 6. the test of the fourth assumption (the companies with small sizes)

The number of samples		The average stock return		The level of the test	P-value of equality test of variances	According to P-value the assumption of equality of variances	The degree of freedom	P-value resulted from equality test of averages using t-test	The statistical results
Smoothing	Non-smoothing	Smoothing	Non-smoothing						
38	125	50/79	-2/86	0/05	0/17	Isn't rejected	161	0/151	H_0 assumption isn't rejected.

Table 7. the test of the fourth assumption (companies with big sizes)

The number of samples		The average stock return		The level of the test	P-value of equality test of variances	According to P-value the assumption of equality of variances	The degree of freedom	P-value resulted from equality test of averages using t-test	The statistical results
Smoothing	Non-smoothing	Smoothing	Non-smoothing						
10	33	202.56	180.26	0.05	0.613	H_0 assumption isn't rejected.	42	0.84	assumption isn't rejected.

The results of the fourth assumption- The table 6 shows that there isn't a meaningful difference between average stock return of smoothing and non-smoothing in relation to size.

As the P-value of equality test of variances is more than 0.05, Michelson and his co-workers had announced in similar research that the stock return of smoothing and non-smoothing companies is influenced by its size. According to them, when the size is considered, the stock return of smaller companies is more than bigger companies. This research has a reversed result similar to mentioned research. The separated study about the size of companies shows that, roughly, the percent of smoothing companies in big companies is equal with small companies, but stock return in big smoothing companies is more than big non-smoothing companies.

14. Discussion and conclusion

The total results received in this research present that in Tehran securities exchange bourse, smoothing can't be considered a useful tool on stock return of companies. On the basis of a similar research by Michelson, Vagner and Woton, it was expected that companies which report smoothing profit, have more return than non-smoothing companies, but another result was achieved by this research.

Furthermore, the result of this study show that smoothing and industry jointly are not effective factor on return and investors don't pay attention to smoothing except in three industries. The size of the company together with smoothing action has an important effect on stock return and could influence on the company return and it is a sign of investor's inclination toward bigger companies. Moreover, the market answer to the smoothed profits is weak.

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