



Corporate Governance Mechanism and Income Smoothing in Iran

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ABSTRACT

This paper investigated the relationship between corporate governance mechanism and income smoothing for 138 selected corporations in Tehran stock market at 1999-2008 period. Three hypotheses were introduced and tested to find whether there is a significant relationship between institutional stockholders' possession percent, non-bound members' percent and internal auditor with income smoothing. Results indicate a significant relation of all three selected mechanisms for corporate governance system and income smoothing. So, internal auditor and increase in institutional stock-holders' percent lead to income smoothing reduction, but there is a positive relationship between non-bound members' percent and income smoothing.

KEYWORDS: Corporate Governance System, Internal Auditor, Institutional Stock-holder, Non-bound members, Income Smoothing.

1. INTRODUCTION

Corporate governance system definitions and experts review declares the system as an interdisciplinary concept and its ultimate aim is to reach to following four fundamentals in corporate: Accountability, Clarity, and Justice and Observance of beneficiaries' rights.

Taking different features of governance system into account could lead to control of managers' authority in their reporting. The system affects the macro and micro variables in accounting through its mechanisms, for example it can affect the corporate' performance, dividend policy, income returns, corporate' capital and agency's costs and relate to some concepts including income manipulation, management and smoothing.

As weak corporate governance could lead to market distrustfulness and thereafter resources quitting or liquidity crisis and falling prices in exchange, an effective efficient system in corporate and society provide a level of trustfulness necessary for market performance.

On the other hand, manager's inclination to applied management in income appears in different methods including account's manipulation, big bath accounting, creative accounting and income smoothing, resulting in shareholders' incorrect information and a serious damage to their trustfulness.

Governance system with external (including laws and regulations) and internal (mostly arbitrary) mechanisms could lead to correct applied management, reduction of information asymmetry problems, increase in shareholders trust and as a result reduction of management application and income smoothing. Therefore, it is expected to decrease the fraudulent actions of managers by applying the governance principles and its promotion and to perform the supervising and control processes by managers' guarantee in such a way that it is corresponded by shareholders' benefit and not the manager himself. In principles of governance system, the role of non-bound members of board was emphasized in reduction of the aspects in which there is a potential probability of benefits' contrast in line with the aim of pure reporting. Also, institutional shareholders who act as the trustee should clarify his total policies in corporate governance system.

According to subject importance, the aim of this survey is corporate governance, its aspects and determination of its relation to income smoothing which is possible through investigating the relation of main mechanisms of governance system (institutional investors' percentage of ownership, percentage of non-bound members and existence of internal auditor) and income smoothing.

The relation of corporate governance system and income smoothing were investigated in this survey.

2. A Brief Literature Survey

Ali Shah and et al. (2009) investigated governance of corporate and income management. They have measured the quality of governance by three factors include of: board's structure, structure of corporate ownership and auditory committee's independency and apply Jones' sectional model for income management. After investigating their 53 sample corporations' information they have found the positive relationship between governance quality and income management.

Chung and Zhang (2009) investigated corporate governance as a factor attracting institutional investors in accepted corporations in New York stock-exchange. They have assessed the governance through 50 effective scales in 2 ways. By the use of minimum two-step squares regression and 12093 observations during 2001 to 2006, they have found that percentage of institutional ownership unevenly increase with the grade of governance quality (from 42% for those with low grade to 71% for those with high grade).

Xie and et al. (2003) investigated the role of board combination and auditory committee in income management' prevention in a survey called income management and corporate governance system. They have found that income management happens less in those corporations whose non-bound members' ratio is more than the total members. They have also found the relation between auditory committee members combination with the level of income management.

Yang, Murind and Ding (2007) have sought to find the effect of ownership structure and mechanisms corporation possession on income smoothing in China. They found that in China, more corporations did income smoothing rather than USA, Singapore and Japan ones. Also, smoothing (especially when Government is one of the main stock-holders) is mainly dependant on governance mechanisms. They have also found that unlike U.S.A and U.K, in China where political climate corresponds to law, the existence of more non-bound members couldn't decrease the income smoothing.

Blek (2002) has used the ranking of Brunswick Warburg investing bank which is based on eight governance factors which has its special weight. Clarity and Disclosure, reduction of share price, assignment of properties and prices, reduction of value cause of combination or restructuring, bankruptcy, limits on external ownership, manager's attitude toward shareholders and personnel risk; and in another survey, Blek, Jan and Kim (2003) have selected 42 question out of 123. They didn't show the factors depending on manager's attitude or the ones irrelative to governance system. Also they didn't show their quality and factors different from corporation to corporation, and then they classified the foresaid 42 to 4 parts with equal weight (0.25) as follows: shareholders rights, boards of directors in total, non-bound members of board, clarity and disclosure.

3. Theoretical Framework

Income smoothing, a kind of income manipulation, is performed to demonstrate an excessive stable flow of financial reports. In simple words, it is the reduction of income fluctuations. But there is only a reduction in income changes and its range and nothing is added to the reported income in long-term. Income fluctuation is one of the income risk factors. So, it is expected that the market understanding would be balanced about the related risk by the omission or reduction of income fluctuations. Briefly, the followings are the main points of income smoothing:

- Income smoothing is a conscious and purposeful action which is placed in acceptable accounting rules.
- Some experts have a positive attitude toward it and describe it as a measure for information presenting and name it as the increase of informative value of reported incomes.

To be simple, Corporate Governance System is defined:

“Systems and processes carried out to determine the organization path and to control it to increase the performance and provide stable value for shareholders. In this attitude one must pay attention to effectiveness of management structures which are: Board of directors, trustfulness and efficiency of corporate reports and effectiveness of risk management system.

Governance system controls the corporate activities and causes the promotion of accountability and accessibility to other system's aims by its internal and external mechanisms. In this survey the following mechanisms were applied: institutional investors, non-bound managers of board and internal auditor which will be discussed later in detail.

As there is a close relation between bound members' responsibilities and managing director, supervising over the management is mainly the responsibility of non-bound members. So, they have an important role in solving problems between managers and owners. The contrast between bound managers' motivation (use of the owners' investment for personal interests) and non-bound ones (reputation) improve the supervising over the corporation manager and as a result performance and reduction of agency's costs.

4. RESEARCH METHOD

As one can generalize the derived results to the society after data gathering and related calculations, so the method is inductive. With respect to time, the method is fact-based because last year's data were analyzed and with respect to objective it is applied research.

Data gathering was sectional and data analysis method was correlation which was performed with OLS. This paper is also descriptive, describing the relationships between variables (dependant and independent) by the use of statistical tests. Data were measured as follows:

- Smoothing Index

In spite of different ways of smoothing measuring, in this survey, smoothing was evaluated on the basis of income variability ratio to cash currents fluctuations. To do that, standard deviation of net income was divided to standard deviation of operational cash currents. Remember that to standardize income and operational cash currents, they were divided to the average of total assets (Leuz et al. Francis, Lafond, Olsson and Schipper). Required calculations are as follows:

$$SMTH = \frac{\partial NI}{\partial CFO}$$

Which SMITH: Income Smoothing Index, ∂NI is standard error of net profit and ∂CFO is Standard Deviation of Operational Cash Currents.

Net income was expected from sample corporation's income and damage and operational cash currents from corporation's cash flow.

Net income and operational cash currents were divided to the average of total assets to be standardized. To do that, average of total assets is calculated as follows:

The amounts were adopted from corporate' balance sheet.

$$ATA = \frac{TA_t}{TA_{t-1}}$$

Which:

ATA: Average of total assets

TA: Total assets of supposed year called t

TA_{t-1}: Total assets of supposed year called t-1

At last, to separate those corporations which smoothed the income from those which didn't, smoothing index is multiplied to -1. Those with higher index (near zero) were smoothed income and the others didn't.

Hypotheses:

- 1- There is a significance relation between percentage of institutional investors' possession an income smoothing.
- 2- There is a significance relation between percentage of board's non-bound members and income smoothing.
- 3- There is a significance relation between internal auditor and income smoothing.

Variables:

According to those three hypotheses, the effect of related variables on income smoothing is analyzed. So, the variables are:

Dependant Variables: Corporations Income Smoothing

Independent Variables: 1- The percentage of institutional investors' possession 2- The percentage of non-bound Managers in Board and 3- The existence of internal auditor.

Society, Sampling and Sample:

- 1. For homogenizing sample with respect to the number of corporations, we have considered those corporations which were accepted at stock-exchange before 1999 as sample and their symbol was not removed of stock-exchange board till the end of 2007.
- 2. For more stability and reliability of estimated results, medieval finance and investment corporations are not considered as sample, as their nature and their type of activity differ from those of other corporations.
- 3. Sample corporations didn't have loss in foresaid years.

5. Data Description

The following index shows the statistics related to net income amounts during 1999-2007. These amounts of foresaid years are increasing which seems normal.

Table 1. Descriptive statistic of Net Income

Descriptive statistic	Year									
	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Average	49088	58857	6337	75000	137109	188960	207743	209927	214315	
Stdev	96154	120754	123551	166612	424121	603123	741527	739633	782176	
Mx	798477	1002336	1057237	1251796	3847261	5238834	6680251	7497337	769801	
Min	-18267	-18267	-38280	-41449	-86472	-128858	-35742	-22526	-18267	

The following index shows the statistics related to the amounts of net current of cash input derived from operational activities during 1999-2007. These amounts are increasing. Their minimum average is in 1999 and their maximum average is in 2007.

Table 1. Descriptive statistic of net current of cash input derived from operational activities

Descriptive statistic	Year								
	1999	2000	2001	2002	2003	2004	2005	2006	2007
Average	30510	64025	78802	112526	80622	59074	129884	190136	262766
Stdev	75929	247237	299076	474089	200218	253627	600454	818380	1199704
Mx	613875	2526485	3246710	5286717	1385963	2110031	6141715	8109616	12324710
Min	-169325	-212470	-61643	-17130	-62607	-1002251	-1552481	-2516274	-1137227

6. EMPIRICAL RESULTS

Using E-views, the following equation was estimated to investigate the relation of independent and dependant variables and to determine the governance mechanisms coefficients and income smoothing:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Which:

Y: income Smoothing of "i" corporation at the end of the year t

X₁: Percentage of institutional investors' possession of "i" at the end of the year t

X₂: Percentage of non-bound managers in board of "i" corporation at the end of the year t

X₃: Existence of internal Auditor in "i" at the end of the year t

B_i: Estimated Coefficients of Regression Model

ε: Model's error

Model's software output is shown in the following index through OLS:

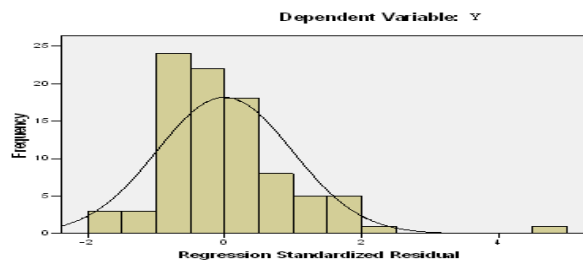
$$Y=8.93-1.42 X_1+2.34 X_2-0.45 X_3$$

Table 3. Estimation Results

Name of Variables	Coefficient	t-statistic	P-Value	R ²
X ₁	-1.42	-6.64	0.00	0.73
X ₂	2.34	4.635	0.00	
X ₃	-0.45	-2.034	0.00	

Determination coefficient is about 73% i.e. 73 percent of dependant variables can be described by independent variables. At 95% confidence level, the amount of T index must be more than 1.96. T index related to all independent variables is significance at 95% confidence level. F index must be more than 3.8 at 95% confidence level. In estimated model, F index is 22 which mean that the total fitted model is significance. Equation errors have the normal distribution with zero average. Errors components Curve is plotted in regression model to investigate the normality of errors. As the average of errors distribution is zero and SD is near one, so the errors distribution of regression model is normal.

Plot 1. Residual Histogram



Durbin-Watson index, according to the estimated results is 2.03. If the index placed between 1.5 and 2.5, we can accept the non-existence of autocorrelation between model's errors. So the independence of errors in estimated regression model is confirmed.

Co linearity is the state in which one independent variable is a function of another one which we sought to refuse it. To do that one can analyze correlation of independent variables. So, this is necessary to check the co linearity.

{H0: There is no co linearity (internal correlation doesn't exist)

{H1: There is co linearity (internal correlation does exist)

Significance of independent variables with dependant variables and their relation size and type is estimated through Spearman Correlation Coefficient.

First Hypothesis Test

There is a significance relation between percentages of institutional investors' possession and income smoothing.

Correlation coefficient of institutional investors and income smoothing is -0.481 which shows the strong negative relation of two independent and dependant variables.

Significance level of model is 95% and error percentage is 0.05 which means Significance level is less than error (0.05>0.000), so According to Spearman Test, we can accept that H0 of first hypotheses is refused by the hypothesis "There is no significance relation between institutional investors possession and income smoothing" and we can say with 95% certainty that:

"There is a significance relation between institutional investors and income smoothing"

As the related coefficient is negative, the relation is vice versa.

Second Hypothesis Test

There is a significance relation between non-bound members and income smoothing.

As shown in following index, correlation coefficient of two variables is 0.678 which shows the strong straight relation of the two.

Significance level is 95% and errors level is 0.05. As seen in the above index, Significance level is less than the errors (0.004<0.05), so according to Spearman Test, we can accept that H0 of second hypothesis is refused with the hypothesis "There is no significance relation between non-bound members and income smoothing" at 5% level and we can say with 95% certainty that:

"There is a significance relation between non-bound members and income smoothing"

According to positive related coefficient, the relation is straight.

Third Hypothesis Test

There is a significance relation between internal auditor and income smoothing.

Correlation coefficient of the two variables is -0.213 which shows the weak vice versa relation of them.

Significance level is 95% and errors level is 0.05. As seen in the index, significance level is less than the errors level (0.028<0.05), so according to Spearman Test, we can accept that H0 of third hypothesis is refused with the hypothesis "there is no significance relation between internal auditor and income smoothing" at 5% level and we can say by 95% certainty that:

"There is a significant relationship between internal auditor and income smoothing"

According to the negative coefficient the relation is vice versa.

So, all the three hypotheses were confirmed by Spearman test.

Complemented Test: Investigating the effect of independent variables on income smoothing by step-by-step Regression

As in Spearman method, size and type of the relation of each independent variable with income smoothing are estimated separately, we must use step-by-step regression to estimate and determine the importance coefficient of each independent variable on income smoothing with respect to other variables. In this method, each variable, having the most effect on dependant variable in Spearman, first is applied to the equation as the first independent variable and then the second one in Spearman, is applied. This procedure will repeat till the new variable be statistically significance. In following table, r and rank of effectiveness of variables is inserted in front of dependant variable.

Table 4.Spearman Correlation Coefficient Estimation

Rank	P-Value	Correlation Coefficient	Variables
2	0.00	0.481	The property percentage of Institutional investors
1	0.00	0.678	The percentage of non-bound members
3	0.02	0.213	internal auditor

By using step-by-step method and SPSS, income smoothing is calculated on the basis of three independent variables.

First Step: Apply the percentage of non-bound members to model

Model' output is applied to the following index.

Table 5. Regression Statistics of One Step

Mode I	Correlation Coefficient	R-Square	Adjusted R-Square	Durbin-Watson Statistic	F-Statistic	P-Value
1	0.645	0.416	0.3966	1.87	17.60	0.00

Table 6. Estimation Results

P-Value	t-statistic	Stdev	Coefficient	
0.013	2.983	6.060	18.07	Intercept
0.020	-3.073	-2.031	6.24	(X ₂)

R² is estimated 0.416 which means 41.6% of income smoothing changes can be determined by percentage of non-bound members' variable.

Second Step: Apply the percentage of institutional investors possession to model

Model output is applied in the following table:

Table 7. Regression Statistics of Second Step

Mode I	Correlation Coefficient	R-Square	Adjusted R-Square	Durbin-Watson Statistic	F-Statistic	P-Value
1	0.796	0.6340	0.59	1.82	27.35	0.00

Table 8. Estimation Results

P-Value	t-statistic	Stdev	Coefficient	
0.035	2.114	5.89	12.46	Intercept
0.001	4.030	3.56	14.35	X ₂
0.013	-2.153	1.69	-3.65	X ₁

R² is 0.634 which means that 63% of smoothing changes can be determined by percentage of non-bound members' percentage and institutional investors' possession percentage.

Third Step: Apply the internal auditor to model

Model output is applied in the following table:

Table 9. Regression Statistics of Third Step

Mode I	Correlation Coefficient	R-Square	Adjusted R-Square	Durbin-Watson Statistic	F-Statistic	P-Value
1	0.824	0.679	0.634	1.777	19.49	0.00

Table 10. Estimation Results

P-Value	t-statistic	Stdev	Coefficient	
0.220	1.548	5.68	8.79	Intercept
0.002	3.214	4.45	14.30	X ₂
0.034	-2.733	2.41	-6.60	X ₁
0.011	01.836	3.81	-7.01	X ₃

Coefficient is estimated 0.679 which means that 67.9% of smoothing changes can be determined by the percentages of the three foresaid variables. So, calculations of stepbystep method show the Significance of independent variables on smoothing.

Remember that the results and tests and step-by-step regression correspond each other in confirmation and refusing of hypotheses of income smoothing and the difference is of the two different software.

7. Conclusion

Significance and vice versa relation of institutional investors possession' percentage and smoothing shows the effective effect of them in corporation.

As institutional investors have more information about the results, profitability and future cash flows rather than the other investors, they are informed of smoothing of investing corporation. This may be lead to limitations on income smoothing and its management. Our results correspond to them, while this is not possible for legal and micro investors.

As the same behavior must be taken into account for all stock-holders, it seems that applying appropriate regulations can be effective for their right reservation.

It is expected that non-bound members works unbiased where paradox potential does exist by applying income management. But, significance negative relation of this group and smoothing make some doubts.

The results of foreign surveys don't correspond to that of us. For example, Biao, Davidson and Dadalet (2003) have found that smoothing was less in corporation with higher non-bound members.

The following is why our survey differs from them:

1. The effective role of government on country's economy. Governmental system dominance on managers and board members in some corporations, have lessen non-bound managers and board independence, because many of the investors' agents in board depend on government. This could lead to less independence in decision taking of board and related corporations. This is also possible for non-governmental corporations.

2. According to nonexistence of non-bound members, in related corporations' activities at the time of financial reporting, they have less dominance on reportings. So, they can't manage it correctly.

3. Non-bound members short period, can lead to less role of balancing smoothing.

Weakness of the relation between internal auditor and income smoothing can be stimulating for financial regulations.

Internal auditors unlike the independent ones are elected by corporations and their managers for internal system control.

According to the weak relation in this survey and other same ones some questions appear to come such as: If managers pay required attention to the reports? If tasks, investigating domain and objectives are correctly defined?

But, as internal auditor can be prevention for misuses and limitation for managers in smoothing, it is better to take more measures for that.

Some suggestions for future works:

- Comparison of private and governmental stock-holders in governance system
- Investigating the relation of governance system and price and market profitability
- Investigating the effect of governance system regulations on decreasing misuses and increasing the quality of financial reporting

REFERENCES

- [1]. Belk.W, Jan.m and kim.L 2003,"Earnings Management and Corporate Governance", *Journal of Corporate Finance*, Vol. 9 No. 3, pp. 295-316.
- [2]. Beidleman, C.R.,1973,"Incom Smoothing: The Role of Management", *The Accounting Review*, October, pp.653-667.
- [3]. Biao Xie,Wallace N. Davidson ,Peter J. DaDalt,2003,"Earnings management and corporate governance, the role of the board and the audit committee", *Journal of Corporate Finance* 9 ,2003 295– 316
- [4]. Chi-YihYang,VictorMurinde,Xiaoming Ding,2007,"Ownership Structure, Corporate Governance and Income Smoothing in China", Department of Business, Economics & Management, Xi'an Jiaotong-Liverpool University.
- [5]. Chung, R. zun, M, 2009,"Earning management, surplus free cash flow, and external monitoring", *Journal of business research*.
- [6]. Fama, E. F., & Jensen, M. C. 1983,"Separation of ownership and control",*Jounal of Law and Economics*, 26: 327349
- [7]. Fama, E. F. 1980,"Agency problems and the theory of the firm",*Journal of Political Economy*, 88: 288307.
- [8]. Francis, J.,LaFond, R, Olsson, P., and Schipper, K., 2004,*The Accounting Review* 79, 967-1010.*The Accounting Review*.39(2),p. 120.
- [9]. Imhoff, JR,1981,"Income Smoothing: An Analysis of Critical Issues", *The Quarterly Review of Economics and Business*, pp. 23-42.
- [10]. KirschenheiterMelumad, 2002,"Earning's quality & smoothing", Michigan University.
- [11]. Leuz, Christian, 2003,"Discussion of ADRs, Analysts and Accuracy: Does Cross Listing in the US Improve a Firm's Information Environment and Increase Market Value?",*Journal of Accounting Research*,Supplement41, 347-362.
- [12]. Peasnell,V.,Pope,F.andYoung,S. 2003,"managerial equity ownership and the demand for outside directors",*European Financial Management*.
- [13]. Syed Zulfiqar Ali shah,Safdar Ali Butt,ArshadHasan, 2009,"Corporate Governance and Earnings Management an Empirical Evidence Form Pakistani Listed Companies",*European Journal of Scientific Research*, ISSN 1450-216X Vol.26 No.4,2009, pp.624-638.
- [14]. Watts L and Zimmerman. L (1986),"Positive Accounting Theory: A Ten Year Perspective",*The Accounting Review*,Vol 65, No 1.
- [15]. www.Rdis.ir