



# Studying the Impact of Prior Years Adjustments on Earnings Persistence

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## Abstract

The present research discusses the relationship between prior years adjustments of financial statements and performance sustainability of the companies listed in Tehran Stock Exchange. Profit margin ratio was used to measure performance sustainability and the difference between reported earnings and restated earnings was used to measure figure restatement value. The statistical sample includes 80 companies, which were members of Tehran Stock Exchange during 2008 - 2012. Simple and multiple regression techniques were used to implement the applied statistical pattern. In this research, we realized that when debit ratio is included in the model as a control variable, a significant relationship is established between absolute value of restatement and performance sustainability so that there is a positive relationship between earnings factor and financial consistency. That is, with the accounting changes increasing, performance sustainability increases, but with the debit ratio increasing, financial performance sustainability decreases.

**Keywords:** Adjustments, financial performance, debit ratio, earnings persistence.

## Introduction

The companies enjoying less competitive power attempt to pretend that they are more successful than what they look through manipulating financial information. When growth rate of a company slows down or when it takes an unfavorable process, management attempts to pretend that the conditions are suitable. This is performed by overstating sales and other growth criteria<sup>1</sup>. Financial restatements clearly reveal messages and signals about unreliability of statements of prior terms and their low quality<sup>2</sup>. Earlier studies about Iran indicate that a high percentage of the Iranian companies submit financial statements and report a figure as a prior years adjustment<sup>3</sup>. With respect to the major activity of a company that submits restatements, the influence of restatement on quality of earnings might be variable. The stability of the companies, which have restated the primary accounts, is higher than the ones restated secondary accounts<sup>4</sup>.

**Background:** A research conducted by Bahar Moghaddam and Dolatabadi<sup>5</sup> on comparing quality of reported earnings and restated earnings shows that restated earning enjoys further forecast ability and restated earning enjoys further consistency (persistence) as compared with reported profit.

In a research called 'Comparing Incremental Information Content of Liquid and Gearing Ratios to Estimate Financial Performance', Hashemi *et al.*<sup>6</sup> concluded that incremental information content of cash ratios exceeds gearing ratios to predict financial performance of the strong companies.

In 2013, Ben Chin-Fook Yap<sup>7</sup> studied six financial ratios,

including earnings before interest and tax, current asset turnover, cash flows on total assets, cash to current liabilities, and total liabilities by stockholders' equity. The results show that all the ratios, except cash flow on total assets, had earnings persistence.

In 2011, Chen Ma Junrui Zhang<sup>8</sup>, conducted a research on impact of financial restatement on firm value in Chinese listed firms. The results show that the restating companies have lower value than the non-restating ones.

**Research Hypothesis:** The present research aims at studying the impact of prior year's adjustments on performance sustainability. Following hypothesis was used to achieve the objective: There is a significant relationship between absolute value of earnings restatement and performance sustainability of a company.

## Methodology

**Type and Method of Research:** As far as objective-based research classification is concerned, this study is of applied research. As far as method-based classification is concerned, it is of descriptive-correlation research. It mainly aims at determining existence, amount, and type of relationship between the variables under experiment through retrospective approach (using information of past events).

Statistical population of the research includes the companies listed in Tehran Stock Exchange, which were selected during 2008 – 2012 using systematic elimination sampling.

**Research Variables: Independent variable:** Earning Adjustments: It is obtained from a change in earnings due to financial restatements. To measure earnings changes in terms of changing in them, it would be sufficient to consider figure of the reported earnings subtracted by the earnings restated from profit and loss statement<sup>9</sup>.

**Dependent variable:** Profitability Ratio: Profitability ratio indicates to what extent an institute is managed efficiently and favorably. In fact, it shows the degree of success of a company to gain net return to sales revenue or to investments. The more progressive the ratio is, the more consistent an economic unit is. Profit margin ratio, which is obtained from net earning divided by net sales, was used to calculate profitability ratio.

**Control Variables:** Company Size: Two features of total assets and total sales of companies can be used to calculate company size. Logarithm of these values should be taken. Logarithm of amount of sales of the sample companies was used in this research.

**Debit ratio:** It is obtained by dividing total debits to total assets whose figures are achieved by a balance sheet<sup>10,11</sup>.

**Auditor's Report:** If type of the opinion of an auditor is accepted (with or without clauses and the explanatory statements), figure one is allocated to it; otherwise, zero is assigned.

**Research Model:** (Profitability Percentage Ratio)= $\alpha + \beta_1$  (Earnings Prior Years Adjustment)+ $\beta_2$ (Size of

Company)+ $\beta_3$ (Debit Ratio)+ $\beta_4$ (Auditor's Report)+  $\epsilon_j t$

## Results and Discussion

**Analysis and Test:** The results of variance analysis of the fitted model (table-3) show that the significance level of the statistic value (8.545) is significant at the error level of 5 percent. Therefore, linearity assumption of the research hypothesis regression model is confirmed.

**Table-1**  
**Descriptive Statistics**

Earnings Performance Sustainability	Absolute Value of Earnings Adjustments	Statistic
0.15	21776.60	Mean
0.12	2002.00	Median
0.10	78202.97	Standard Deviation
0.90	5.17	Variance
0.02	0.00	Range

**Table-2**  
**Summary of Model**

Durbin-Watson	Standard Error of Estimate	Adjusted Coefficient of Determination	Coefficient of Determination	Multiple Correlation Coefficient	Model
1.651	0.8621	0.295	0.335	0.578	1

**Table-3**  
**Model Significance**

Level of Significance	Statistic F	Median of squares	Degree of Freedom	Total of squares	Model
0.000	8.545	0.064	4	0.254	Regression 1
		0.007	68	0.505	Remainder
			79	0.759	Total

**Table-4**  
**Coefficients**

Level of Significance	T	Standardized Coefficients	Unstandardized Coefficients		Model
		Beta	Standard Error	B	
0.12	2.582		0.124	0.321	Constant Number 1
0.840	0.203	0.031	0.11	0.002	Size of Company
0.000	-5.419	-0.539	0.76	0.414-	Debit Ratio
0.244	1.174	0.117	0.20	0.24	Auditor's Report
0.543	0.612	0.094	0.007	0.004	Absolute Value of Earnings of Prior Years Adjustments

To implement coefficients significance test, statistical hypotheses are formulated as follows.

The effect of the absolute value of earnings restatement, type of opinion of auditor, debit ratio, and size of company on performance sustainability of the companies listed in Tehran Stock Exchange is not significant.  $H_0 : \beta = 0$

The effect of the absolute value of earnings restatement, type of opinion of auditor, debit ratio, and size of company on performance sustainability of the companies listed in Tehran Stock Exchange is significant.  $H_1 : \beta \neq 0$

The results of table of regression model coefficients test shows that there is a significant relationship between variable coefficient of debit ratio (-0.414) at level of 5 percent and performance sustainability of the companies. Therefore, hypothesis  $H_1$ , which expresses that the effect of variables on performance sustainability of the companies is significant, is confirmed. Studying regression coefficient (Beta) of variable of regression ratio (-0.539) shows that this variable has a negative and significant effect on performance sustainability of the companies. That is, the more debit ratio increases, the more companies' performance sustainability decreases.

The results of other coefficient of the research variables show that type of auditor's opinion, logarithm of absolute value of earnings restatement and size of company have positive coefficients as 0.117, 0.94, and 0,031, respectively. They can change the dependant variable as big as the coefficient toward their coefficient, so that all the three variables increase the dependent variable.

Finally, with respect to the coefficients table, we can formulate the regression model equation using coefficients of variables in the model as follows.

$$\text{Performance Sustainability} = \hat{Y} = 2.231 + 0.004 (\text{Absolute Value of Earnings Restatement}) + -0.414 (\text{Debit Ratio}) + 0,002 (\text{Size of Company}) + 0.24 (\text{Type of Auditor's opinion})$$

**Absolute Value of Earnings Restatement:** According to the results of independent t-test, as the significance level of t statistic (-0.718) exceeds 5 percent, assumption of zero (assumption of equality of the means) is accepted and the main assumption – non-equality of both companies – is rejected. That is, at level of 5 percent, there is no significant relationship between the companies restating more earnings and the ones restating fewer earnings.

**Table-5**  
**Mean Test of the Two Statistical Populations**

t-test (Equality of Means)						Leven's Test (Equality of Variances)			
Confidence Interval of 95 %		Standard Error Difference	Mean Difference	Level of Significance	Degree of Freedom	Statistic t	Level of Significance	Statistic F	
Upper Limit	Lower Limit								
0.04518	-0.09617	0.03549	-0.02549	0.475	77	-0.718	0.113	2.571	Variance Equality
0.04558	-0.09657	0.03563	-0.02549	0.477	69.481	0.716			Variance Inequality

## Conclusion

The statistical results showed that a significant relationship is established between absolute value of earnings restatement and performance sustainability of the companies. Studying the results of regression coefficient (Beta) of variable of debit ratio (-0.539) shows that this variable has a negative and significant effect on performance consistency of the companies at level of 5 percent. That is, with the debit ratio increasing, the companies' performance sustainability decreases.

The research results are consistent with the results of Afsaneh Rafiei's research<sup>11</sup>, who announced that one of the factors of restatements is high 'debit ratio. According to the hypothesis, while performance sustainability decreases with the debit ratio increasing, with the increase of accounting changes, attempts were made to increase performance sustainability. Moreover, the results of the study of Kordestani *et al.*<sup>3</sup> are in agreement with the hypothesis; they stated that existence of important prior years adjustments figures indicates manipulation of restatements figures; they particularly show overstatement of earnings. In addition, the results are also in agreement with the results of Hossein Kazemi<sup>12</sup>; he stated that these are indications of a weak accounting information and reporting system and possibly a turning point in connection with management problems. We also realized that financial restatements undermine ability of users of financial statements to evaluate performance of a company accurately.

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