Study of adjusted profit and productivity forecast error of bazaar with using of cost behavior

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Abstract: Empirical evidence of this study suggests the existence of sticky behavior of costs and costs of the Tehran stock Exchange that is according to research conducted by Anderson and Mediros. The difference in sticky strength is due to the differences in the nature of operating fixed assets. If the possibility of reducing and adjusting level of operating assets be less in periods of declining revenue, the sticky strength would be higher. The results of this study include important information on how to hand the costs that can be shared by users especially accountants, managers, financial analysts and auditors in their assessment and decision making. The mast mentioned writings and discussions represents a method (for example: regression analysis) to estimate the average change in costs for per unit change in cost stimulus about how to handle expenses. The results also provide suggestions for administrators. Administrators can control and identify the bonding costs of company. They can reduce the adjustments to decrease the level of operating assets in periods of demand and sales level reduction through appropriate contrasts (for example: short term contrasts) for leafed operating assets and hire staff and reduce sticky tensity of costs.

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Key words: Sticky of costs, Spent costs sticky of sold goods, Cost behavior, Sticky of costs behavior, Profit forecast accuracy

Introduction

Profit as the most important measurable performance index of an economic units, is one of the accounting topics which has maintained a special place in theoretical topics (Khaleghi Moghadam and Azad 15/1383). Active accountants who work in the field of management accounting, traditionally, conduct for cost behavior as an important dimension of benefit analysis for use of managers. Also financial analysts calculate the cost of future economic units based on a process of forecasting future earnings. Therefore, the forecast of cost behavior is an important and necessary part of revenues anticipation. Profit forecast are of great importance, because it is an appropriate judgments and decisions variables on consumers making and important factor in the efficiency of capital markets. Of course, the predictive value of accounting information does not mean that information is a forecast, but it means the use of these information is for forecast process.

Understanding the cost behavior is one of the important aspects of profit analysis for managers. Study of cost behavior is important not only for academic researchers but also for those who their profession activity directly related to company activities. In current model of cost behavior that have been accepted in accounting literature, the costs in terms of changes in activity level are consider as fixed and unviable .In this model variable costs fluctuate

with changes in stimulating activity (Balack Rishan and et al. 18, 2008). With this default, amount of changes in costs depend on changes value in activity level not on the route changes however, some authors such as, Nouron and Souderstrom (1998) believe that costs will increase by enhancement of activity than vise versa due to reduction of activities volume. This type of behavior cost is known as "costs sticky" by Anderson et al. (2003). Anderson et al believe that the costs are sticky when the increase in costs associated with the increase volume is larger than reduction of costs associated with the same amount of reduction in volume. Also, if activity volume reduces, the companies with costs sticky in contrast to companies having no costs sticky, will have greater reduction in revenue. Chen and Benker's findings (2006) show that the cost behavior in models used by financial analysts for profit forecast has an important role. Also, these findings are benefit for investors who use from anticipation revenues to value companies, because the research results of them show that costs sticky cause more volatile earnings in future, and change and variability in distribution.

It appears that the cost behavior is an effective determinant factor in analyst forecast accuracy. Therefore, acceding to these reminisced issues, this research is trying to answer this question: How much cost sticky causes to reduce earnings forecast accuracy and market adjusted yields?

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One of the accounting general objectives is to provide useful information to forecast economic events. Mean while, the profit forecast is of great importance, because these effective variables account for consumer judgments and decisions, and is considered as an important factor in the market efficiency. Whereas some of the events anticipations are necessary before decision making, it is appropriate to evaluate the usefulness of accounting information in terms of its ability to predict various events. Of course, the predictive value of accounting information does not mean that information is a forecast, but it means the use of these information is for forecast process. Forecast of earnings is one of the main accounting researches axis, and for doing them, they should resorted in different ways and various information. It is possible to seek the most important factor affecting stock price in profit anticipation. Forecasting is a key element in economic decision making. Investors, creditors, management and other persons base on forecast and expectations in their decision. Share holders expectations can be viewed as a major factor in profit forecast, value of per share and the total value of company in future. Creditors are also interested in company's future profits. Whatever forecasted profit value of company be more, the more likely exist that creditors receive principal and interest loans in fixed maturities.

Understanding the cost behavior is one of the important aspects of benefit analysis for mangers. Focus on analysis of cost – volume – profit that is discussed in many textbooks, are traditional models of fixed and variable cost. If this model be valid from part of description, then its estimates with use of old information should provide a basis for predict future profits.

Despite the importance of cost behavior concept into profitability analysis, a few numbers of empirical studies have systematically examined forecast ability of models, when they are forecasting future profitable, that have clearly recognized the relationship between costs and sales.

With regards to above expression, this study is based on statistical tests to examine the relationship between costs sticky and earnings forecast accuracy. The main issue in this study is about behavior of costs sticky and also about sticky behavior of spent cost of sold goods. Also in this study, it have been studied that whether the costs sticky and sticky of spent costs of sold goods have any influence in earnings forecast accuracy and market moderated yield or not.

With revealing of this relationship, it can be possible to predict the extent of costs due to its association with sales revenue. Also auditors can determine the accuracy rate of costs and their changes with regard to these relationship according to the rates

and changes in sales revenue, and discover the possible distortion existing about cost rate in financial statement audit. Therefore, analysis of the relationship between sales revenue and costs of a company would be necessary.

In this study, the accuracy of profit forecast and market adjusted yield are as a dependent variable, And costs sticky, sticky of spent costs of sold goods and sticky of public and sales administrative costs are as an independent variable, and market value on Equity, real losses, losses anticipation, variations coefficient of sales, standard deviation of reported forecasts, ration of irrelevant profit to sales and profit changes over to the previous period are as the control variables. There is a meaning relationship between the accuracy of profit forecast and market adjusted yield with costs sticky, sticky of spent costs and sticky of public administrative costs.

Study Hypothesis:

The first main hypothesis

Increase of costs sticky reduces accuracy of profit forecast in the accepted companies in Tehran stock exchange.

Secondary hypotheses

- **1.** Increase of spent costs sticky of sold goods reduces accuracy of profit forecast in the accepted companies in Tehran stock exchange.
- **2.** Icrease of sticky of sales, public and administrative costs reduce accuracy of profit forecast in the accepted companies in Tehran stock exchange.

The second main hypothesis

Increase of costs sticky reduces the market adjusted yield of the accepted companies in Tehran stock exchange.

Secondary hypotheses

- **3**. Increase of spent costs sticky of sold goods reduces market adjusted yield of the accepted companies in Tehran stock exchange.
- **4**. Icrease of sticky of sales, public and administrative costs reduce market adjusted yield of the accepted companies in Tehran stock exchange.

Method of research

This research is one of the application researches regarding to it's purpose. This research method is correlation in nature and content. Research carried out in the framework of deductive –inductive reasoning. Thus, the theoretical and background basis of research has been done by library studies, articles and sites in inductive format and gathering information has been done deductively to confirm or refuse hypothesis.

Method of information collection

Data for this study have been collected through a survey of internal and external articles in forma of financial statements and annual audit notes of stock companies. Also, information has been collected from available information and software banks in the market and stock exchange website.

To access information needed for research hypotheses, you can use financial statements and attachment notes of financial statement, and also collected initial information by exchange board in the software "Tadbir Pardaz and Rahavard Novin".

Statistical population

This study of statistical population consists of all companies accepted in Tehran stock Exchange that should have all of the following conditions:

- **1-** They were accepted in Tehran stock exchange in 1379 or earlier.
- 2- They should be a part of manufacturing companies.(because classification and main issue of these researches are related to the manufacturing companies that their financial structure have industrial accounting)
- **3-** Financial year of companions in the whole period of the research domain should lead to the 29 of Esfand.
- **4-** They do not have any changes in financial year in the study period.
- 5- They should not be the member of investment companies and financial brokerage.
- **6-** They do not have any trading halt in the studied period.

Due to the applied restrictions, the volume of study population was 117 companies.

Methods of data analysis:

After calculating the dependent and independent variables, it considers to hypotheses test of search and analyze of them. First, the correlation relationship between the dependent variable and independent variables are tested and then regression method is used to determine the mathematical relationship between dependent and independent variables. In fact, regression analysis helps to find linear relationship among variables, if we will find this relationship. At the final step, correlation canonical is used to determine the value of relationship between dependant variables and independent variables in study. Fortunately, to avoid of calculating corresponding data in t table, SPSS software calculates and represents the possible value level that it can be used to reject or confirm the **zero** hypothesis.

For statistical tests:

- **1-** Kolmogrof _ Smirnof test: to check the normality of study variables
- 2- Doorbin _ Watson test: to check the lack of autocorrelation among errors or errors independence in regression
- **3-** Multivariate regression, scatter diagram, and linear equation have been used due to the less

standard error compared with other statistical methods.

Results:

Study of variables normality hypothesis:

Kolmogrof _ Smirnof test is used for variables normality hypothesis test. In this test, if significant level be less than 5%, zero hypothesis will be rejected at confidence level 95%.

1-4 chart, Kolmogrof _ Smirnof test (K-S)

Method of judgment: with regarding to 1-4chart, because significant level of independent variable is less than 0.05, H₀ hypothesis is rejected and H₁ hypothesis is accepted. It means that data do not follow the normal distribution. Mathematical transformation (2 power logarithm) is used for variables normality. Following test examines the normality hypothesis of changed variables.

2-4 chart, Kolmogrof _ Smirnof test (changed values)

As regard to 2-4 chart, because significant level in variables is bigger than 0.05, H_0 is accepted and H_1 is refused. In the other words, data has normal distribution. Thus, variable normality hypothesis of this theory is accepted.

Hypotheses test *Main hypothesis*

Increase of costs sticky reduces accuracy of profit forecast in the accepted companies in Tehran stock exchange.

The first hypothesis test of study

The first output of 3-4chart shows the interred independent variables, deleted variables and method of regression determination.

3-4chart, interred independent variables / deleted variables

Enter method is a function for selecting variables that all of the interred variables are used up in determination of regression in one step.

The second output of 4-4chart

4-4 chart: correlation coefficient, determination coefficient, Doorbin-watson test between independent and dependent variables

The second output of 4-4 chart represents the correlation coefficient between (SEASON, DISP, OPLEV,STICKY, DOWN, VSALE, MV, LOSS) as independent variables and (ABS-FE) as a dependent variable = 0.308, determination coefficient (the changeable value of independent valuable that can be explained by regression), adjusted Determination coefficient and estimate standard error, respectively.

Doorbin-watson test statistic is 1.669 that places in the range of 1.5-2.5. Inexistence of self correlation hypothesis is not rejected among errors and thus, regression can be used.

In the following output, significant level is less than 5%, so hypothesis of linear relationship of two variables is confirmed.

5-4chart. Regression analysis

5-4 chart consists of analysis of regression variance to examine the finality of existence of linear relationship between two variables. According to this output, F=8.250 and also significant level contains 0.000 and less than 0.05. Therefore, in 0.05level, the meaningful relationship exists between dependent variable (accuracy of profit forecast) and independent variable (costs sticky).

F statistic is obtained from division of regression squares average on average of remainder squares. In 5-4chart, F statistic= 8.250 that means regression in 0.95level is meaningful. Obtained P-value confirms this issue. Hence, H₀ is rejected, and the existence of meaningful relationship between costs sticky and profit forecast errors is confirmed.

With regarding to this issue that the meaningful relationship exists between dependent and independent variables, increase of costs sticky reduces accuracy of profit forecast in the accepted companies in Tehran stock exchange.

Second main hypothesis

Increase of costs sticky reduces the market adjusted yield of the accepted companies in Tehran stock exchange.

6-4) Second hypothesis test of study

The first output of 7-4chart shows the interred independent variables, deleted variables and method of regression determination.

6-4chart, interred independent variables / deleted variables

Enter method is a function for selecting variables that all of the interred variables are used up in determination of regression in one step.

The second output of 8-4chart

7-4 chart: correlation coefficient, determination coefficient, Doorbin-watson test between independent and dependent variables

The second output of 8-4 chart represents the correlation coefficient between (DISP, STICKY, VSALE) as independent and control variables and (CAR) as a dependent variable = 0.374, determination coefficient (the changeable value of independent valuable that can be explained by regression), adjusted Determination coefficient and estimate standard error, respectively.

Doorbin-watson test statistic is 1.850 that places in the range of 1.5 - 2.5. Inexistence of self correlation hypothesis is not rejected among errors and thus, regression can be used.

The third output of 9-4chart contains regression analysis to examine the finality of existence of linear relationship between variables.

In the following output, significant level is less than 5%, so hypothesis of linear relationship of two variables is confirmed.

8-4chart. Regression analysis

8-4 chart consists of analysis of regression variance to examine the finality of existence of linear relationship between two variables. According to this output, F=12.238 and also significant level contains 0.000 and less than 0.05. Therefore, in 0.05level, the meaningful relationship exists between dependent variable (market adjusted yield) and independent variable (costs sticky).

F statistic is obtained from division of regression squares average on average of remainder squares. In 9-4chart, F statistic= 12.238 that means, regression in 0.95level is meaningful. Obtained P-value confirms this issue. Hence, H₀ is rejected, and the existence of meaningful relationship between costs sticky and market adjusted yield is confirmed.

With regarding to this issue that the meaningful relationship exists between dependent and independent variables, increase of costs sticky reduces market adjusted yield in the accepted companies in Tehran stock exchange.

The first Secondary hypotheses test

Increase of spent costs sticky of sold goods reduces accuracy of profit forecast in the accepted companies in Tehran stock exchange.

The first output of 9-4chart shows the interred independent variables, deleted variables and method of regression determination.

9-4chart, interred independent variables / deleted variables

Enter method is a function for selecting variables that all of the interred variables are used up in determination of regression in one step.

The second output of 10-4chart

10-4 chart: correlation coefficient, determination coefficient, Doorbin-watson test between independent and dependent variables

The second output of 4-4 chart represents the correlation coefficient between (SEASON, DISP, OPLEV,COGSSTICKY, DOWN, VSALE, MV, LOSS) as independent variables and (ABS-FE) as a dependent variable = 0.307, determination coefficient (the changeable value of independent valuable that can be explained by regression), adjusted Determination coefficient and estimate standard error, respectively.

Doorbin-watson test statistic is 1.680 that places in the range of 1.5-2.5. Inexistence of self correlation hypothesis is not rejected among errors and thus, regression can be used.

The third output of 13-4chart contains regression analysis to examine the finality of existence of linear relationship between variables.

In the following output, significant level is less than 5%, so hypothesis of linear relationship of two variables is confirmed.

13-4chart. Regression analysis

11-4 chart consists of analysis of regression variance to examine the finality of existence of linear relationship between two variables. According to this output, F=7.982 and also significant level contains 0.000 and less than 0.05. Therefore, in 0.05level, the meaningful relationship exists between independent variable (accuracy of profit forecast) and dependent variable (spent costs sticky of sold goods).

F statistic is obtained from division of regression squares average on average of remainder squares. In 13-4chart, F statistic= 7.982 that means regression in 0.95level is meaningful. Obtained P-value confirms this issue. Hence, H_0 is rejected, and the existence of meaningful relationship between spent costs sticky of sold goods and profit forecast errors is confirmed.

With regarding to this issue that the meaningful relationship exists between dependent and independent variables, increase of spent costs sticky of sold goods reduces accuracy of profit forecast in the accepted companies in Tehran stock exchange.

The second Secondary hypotheses test

1. Increase of sticky of sales, public and administrative costs reduce accuracy of profit forecast in the accepted companies in Tehran stock exchange.

The first output of 12-4chart shows the interred independent variables, deleted variables and method of regression determination.

12-4chart, interred independent variables / deleted variables

Enter method is a function for selecting variables that all of the interred variables are used up in determination of regression in one step.

The second output of 13-4chart

13-4 chart: correlation coefficient, determination coefficient, Doorbin-watson test between independent and dependent variables

The second output of 13-4 chart represents the correlation coefficient between (SEASON, DISP, OPLEV,SGASTICKY, DOWN, VSALE, MV) as independent variables and (ABS-FE) as a dependent variable = 0.311, determination coefficient (the changeable value of independent valuable that can be explained by regression), adjusted Determination coefficient and estimate standard error, respectively.

Doorbin-watson test statistic is 1.679 that places in the range of 1.5-2.5. Inexistence of self correlation hypothesis is not rejected among errors and thus, regression can be used.

The third output of 14-4chart contains regression analysis to examine the finality of existence of linear relationship between variables.

In the following output, significant level is less than 5%, so hypothesis of linear relationship of two variables is confirmed.

14-4chart. Regression analysis

14-4 chart consists of analysis of regression variance to examine the finality of existence of linear relationship between two variables. According to this output, F=10.531 and also significant level contains 0.000 and less than 0.05. Therefore, in 0.05level, the meaningful relationship exists between independent variable (accuracy of profit forecast) and dependent variable (sticky of sales, public and administrative costs of company).

F statistic is obtained from division of regression squares average on average of remainder squares. In 15-4chart, F statistic= 10.531 that means regression in 0.95level is meaningful. Obtained P-value confirms this issue. Hence, H₀ is rejected, and the existence of meaningful relationship between sticky of sales, public and administrative costs of company and profit forecast errors is confirmed.

With regarding to this issue that the meaningful relationship exists between dependent and independent variables, increase of sticky of sales, public and administrative costs of company reduces accuracy of profit forecast in the accepted companies in Tehran stock exchange.

The third secondary hypothesis test

Increase of spent costs sticky of sold goods reduces market adjusted yield of the accepted companies in Tehran stock exchange.

The first output of 15-4chart shows the interred independent variables, deleted variables and method of regression determination.

15-4chart, interred independent variables / deleted variables

Enter method is a function for selecting variables that all of the interred variables are used up in determination of regression in one step.

The second output of 16-4chart

16-4 chart: correlation coefficient, determination coefficient, Doorbin-watson test between independent and dependent variables

The second output of 16-4 chart represents the correlation coefficient between (DISP, COGSSTICKY, VSALE) as independent and control variables and (CAR) as a dependent variable = 0.543, determination coefficient (the changeable value of independent valuable that can be explained by regression), adjusted Determination coefficient and estimate standard error, respectively.

Doorbin-watson test statistic is 1.817 that places in the range of 1.5-2.5. Inexistence of self correlation hypothesis is not rejected among errors and thus, regression can be used.

The third output of 17-4chart contains regression analysis to examine the finality of existence of linear relationship between variables.

In the following output, significant level is less than 5%, so hypothesis of linear relationship of two variables is confirmed.

17-4chart. Regression analysis

17-4 chart consists of analysis of regression variance to examine the finality of existence of linear relationship between two variables. According to this output, F=11.030 and also significant level contains 0.000 and less than 0.05. Therefore, in 0.05level, the meaningful relationship exists between dependent variable (market adjusted yield) and independent variable (Spent costs sticky of sold goods).

F statistic is obtained from division of regression squares average on average of remainder squares. In 19-4chart, F statistic= 11.030 that means regression in 0.95level is meaningful. Obtained P-value confirms this issue. Hence, H_0 is rejected, and the existence of meaningful relationship between market adjusted yield and spent costs sticky of sold goods is confirmed.

With regarding to this issue that the meaningful relationship exists between dependent and independent variables, increase of spent costs sticky of sold goods reduces the market adjusted yield in the accepted companies in Tehran stock exchange.

The Fourth secondary hypothesis test

Increase of sticky of sales, public and administrative costs reduce market adjusted yield of the accepted companies in Tehran stock exchange.

The first output of 18-4chart shows the interred independent variables, deleted variables and method of regression determination.

18-4chart, interred independent variables / deleted variables

Enter method is a function for selecting variables that all of the interred variables are used up in determination of regression in one step.

The second output of 19-4chart

19-4 chart: correlation coefficient, determination coefficient, Doorbin-watson test between independent and dependent variables

The second output of 19-4 chart represents the correlation coefficient between (DISP, SGASTICKY, VSALE) as independent and control variables and (CAR) as a dependent variable = 0.601, determination coefficient (the changeable value of independent valuable that can be explained by regression), adjusted Determination coefficient and estimate standard error, respectively.

Doorbin-watson test statistic is 1.833 that places in the range of 1.5 - 2.5. Inexistence of self correlation hypothesis is not rejected among errors and thus, regression can be used.

The third output of 20-4chart contains regression analysis to examine the finality of existence of linear relationship between variables.

In the following output, significant level is less than 5%, so hypothesis of linear relationship of two variables is confirmed.

20-4chart. Regression analysis

20-4 chart consists of analysis of regression variance to examine the finality of existence of linear relationship between two variables. According to this output, F=13.248 and also significant level contains 0.000 and less than 0.05. Therefore, in 0.05level, the meaningful relationship exists between dependent variable (market adjusted yield) and independent variable (sticky of sales, public and administrative costs).

F statistic is obtained from division of regression squares average on average of remainder squares. In 23-4chart, F statistic= 13.248 that means regression in 0.95level is meaningful. Obtained P-value confirms this issue. Hence, H₀ is rejected, and the existence of meaningful relationship between market adjusted yield and sticky of sales, public and administrative costs is confirmed.

With regarding to this issue that the meaningful relationship exists between dependent and independent variables, increase of sticky of sales, public and administrative costs reduces the market adjusted yield in the accepted companies in Tehran stock exchange.

Discussion and Conclusion:

regarding to the tests and analysis that were done in chapter 4 by regression and correlation, and as can be seen in 4-4chart, we found that coefficient of positive correlation exists between the independent variables and control variables with accuracy of profit predict in accepted companies in the Iranian capital market and it's value is 0.308; In (4-5) chart, F statistic is 8.25 and the value of sig= 0 indicates the significance of the multiple regression at 95% confidence level.

So, H_0 hypothesis is rejected and increase of costs sticky reduces the accuracy of profit forecast in the accepted companies in Tehran stock Exchange.

Obtained T statistic value of costs sticky variant (STICKY) indicates significance of coefficient of this variable at the 5% level with control variants. Obtained t statistic value (LOSS) is 4.082 that indicates direct relation of control variable with dependent variable; and obtained t- statistic value (MV) is -2.82 that indicates the inverse relation of control variable with dependent variable, and obtained t- statistic value (DEASON) is 3.769 that indicates the direct relation of this control variable with dependent variable. Regarding to the obtained results, increase of costs sticky reduces the accuracy of profit forecast in accepted companies in Tehran stock

Exchange. The results of this study is similar to the results of the Khaleghi Moghadam, Karami, Namazi, Davanipour, Chen, Benker (2006), and Anderson et al. (2007) and (2003).

Regarding to the tests and analysis that were done in chapter 4 by regression and correlation, and as can be seen in 4-8chart, we found that coefficient of positive correlation exists between the independent variables and control variables with accuracy of profit predict in accepted companies in the Iranian capital market and it's value is 0.374; In (4-9) chart, F statistic is 12.238 and the value of sig= 0 indicates the significance of the multiple regression at 95% confidence level.

So, H_0 hypothesis is rejected and increase of costs sticky reduces the market adjusted yield in the accepted companies in Tehran stock Exchange.

Obtained t-statistic value of costs sticky variant (STICKY) indicates significance of coefficient of this variable at the 5% level with control variants. Obtained t statistic value (DISP) is -23.754 that indicates inverse relation of control variable with dependent variable; and obtained t- statistic value (VSALE) is -11.897 that indicates the inverse relation of control variable with dependent variable. Regarding to the obtained results, increase of costs sticky reduces the market adjusted yield in accepted companies in Tehran stock Exchange. The results of this study are similar to the results of Dan Wice (2010), and Dan Wice's research is the only one that can be as background in this context.

Regarding to the tests and analysis that were done in chapter 4 by regression and correlation, and as can be seen in 4-12chart, we found that coefficient of positive correlation exists between the independent variables and control variables with accuracy of profit predict in accepted companies in the Iranian capital market and it's value is 0.307; In (4-12) chart, F statistic is 7.982 and the value of sig= 0 indicates the significance of the multiple regression at 95% confidence level.

So, H₀ hypothesis is rejected and increase of sticky of spent costs of sold goods reduces the accuracy of profit forecast in the accepted companies in Tehran stock Exchange. Obtained t-statistic value (LOSS) is 4.079 that indicates direct relation of this control variable with dependent variable and obtained t statistic value (MV) is -2.716 that indicates inverse relation of this control variable with dependent variable and the obtained t- statistic value (SEASON) is -3.677 that indicates the direct relation of this control variable with dependent variable. Regarding to the obtained results, increase of spent costs sticky of the sold goods reduces the accuracy of profit forecast in accepted companies in Tehran stock Exchange. The results of this study are similar to the research results

of khaleghi moghadam, karami, namzi, davanipour, chen, Banker (2006) and Anderson et al.(2007), (2003).

Regarding to the tests and analysis that were done in chapter 4 by regression and correlation and as can be see in figure(4-15) we found that there is a coefficient of positive correlation between the independent variable and control variables with accuracy of profit forecast in accepted companies existing in the Iranian capital market and the value is 0.311. In chart (4-16) F statistic is 10.531 and value of sig =0 indicates the significance of multiple regressions at 95% confidence level. So, H₀ hypothesis is rejected and increase of sticky of sales, public and administrative costs reduce the accuracy of profit forecast in the accepted companies in Tehran stock exchange. The obtained t-statistic value (LOSS) is 4.844 that indicates direct relationship of this control variable with dependent variable and obtained t- statistic value (MV) is -2.966 that indicates the inverse relationship of this control variable with dependent variable and the obtained t- statistic value (SEASON) is equal to 4.529 that indicates the direct relationship of this control variable with dependent variable. According to the obtained results, the increase of sticky of sale, public and administrative costs reduce the accuracy of profit forecast in accepted companies in Tehran stock exchange. The results of this study is similar to the research results of Khalegi Moghadam, Karami, Namazi, Davanipour, Chen, banker (2006) and Anderson et al. (2007) and (2003).

Regarding to the tests and analysis that were done in chapter 4 by regression and correlation, and as can be seen in chart (4-18), we found that there is a coefficient of positive correlation between the independent and control variables with market adjusted yield in accepted companies existing in the Iranian capital market and its value is 0.543. In chart (4-19) f- statistic is equal to 11.030 and the value of sig =0 indicates the significance of the multiple regressions at 95% confidence level.

Thus, H₀ hypothesis is rejected and increase of sticky of spent costs of the sold goods reduce the market adjusted yield in accepted companies in Tehran stock exchange. The obtained t- statistic value of sticky variable of spent costs of the sold goods (COGSSTICKY) indicates significance of coefficient of this variable at 5% level with control variables, and its relation is inverse, the obtained statistic value of (DISP) is equal to 17.727 that indicates the direct relationship of this control variable with dependent variable and the obtained t statistic value of (VSALE) is equal to 10.188 that indicates the direct relationship of this control variable with dependent variable. According to the results, increase of sticky of spent costs of the sold goods reduces the market adjusted

yield in accepted companies in Tehran stock exchange. The results of this hypothesis are similar to the research results of Dan wice in 2010. Dan wice's research is the only one that can be noted as the background in this context.

As can be seen in chart (4-22), we found that there is a coefficient of positive correlation between the independent variable and control variables with market adjusted yield in accepted companies existing in Iran capital market and its value is 0.601; In chart (4-23) F- statistic is equal to 13.248 and the value of sig=0 indicates the significance of the multiple regression at 95% confidence level. Hence, H₀ hypothesis is rejected, and increase of sticky of sales, public and administrative costs reduces the market adjusted yield in accepted companies in Tehran stock exchange.

The obtained t- statistic of sticky variable of sales, public and administrative costs (SGASTICKY) indicates the significance of this variable coefficient at the 5% level with control variables, and also coefficient of this variable is negative and its relation is inverse. The obtained t statistic value (DISP) is equal to 11.873 that indicate direct relation of this control variable with dependent variable and the obtained t- statistic value of (VSALE) is equal to 9.863 that indicate the direct relation of this control variable with dependent variable.

According to the results, increase of sticky of sales, public and administrative costs reduces the market adjusted yield in accepted companies in Tehran stock exchange. The results of this hypothesis are similar to the research results of Dan wice in (2010) and his research is the only one that can be noted as a background in this context.

What general conclusion can be summarized and stated are:

- 1- According to the results of the first main hypothesis of research, increase of costs sticky reduces the accuracy profit forecast in accepted companies in Tehran stock exchange.
- 2- According to the results of the second main hypothesis of research, increase of costs sticky reduces the market adjusted yield in accepted companies in Tehran stock exchange.
- 3- According to the results of the first secondary hypothesis of research, increase of sticky of spent cost of the sold goods reduces the accuracy of profit forecast in accepted companies in Tehran stock exchange.
- 4- According to the results of the second secondary hypothesis of research, increase of sticky of sales, public and administrative costs reduces the accuracy of profit forecast

- in accepted companies in Tehran stock exchange.
- 5- According to the results of the third secondary hypothesis of research, increase of sticky of spent cost of the sold goods reduces the market adjusted yield in accepted companies in Tehran stock exchange.
- 6- According to the results of the forth secondary hypothesis of research, increase of sticky of sales, public and administrative costs reduces the market adjusted yield in accepted companies in Tehran stock exchange.

According to the results of the first main hypothesis based on that "increase of costs sticky reduces the accuracy profit forecast in accepted companies in Tehran stock exchange." confirmed, shareholders and other investors are recommended that managers of manufacturing companies in planning and budget issues, consider to company activities for predicting future costs, relation of costs with incomes and effects of income changes on costs value, and thereby provide more comprehensive budget. Also share holders and other investors are recommended that with according to the results of main hypothesis of research, attend to the increase of costs sticky, because the increase of costs sticky causes to increase of profit forecast error.

According to the result of the first secondary hypothesis (increase of sticky of spent cost of the sold goods reduces the accuracy of profit forecast in accepted companies in Tehran stock exchange.) that was confirmed, so share holders and other investors are recommended that according to the results of this secondary hypothesis, pay attention to the increase of sticky of spent cost of the sold goods, because it causes to increase of profit forecast error.

Regarding to the results of the second secondary hypothesis (increase of sticky of sales, public and administrative costs reduces the accuracy of profit forecast in accepted companies in Tehran stock exchange.) that was confirmed, the managers of manufacturing companies are recommended that take such companies, particularly in the manufacturing sector, analyze the costs presented in the financial statements due to the costs associated with sales and predicting the value of these costs with a mount of sales revenue, thereby to identify the cases that can be controlled or reduced in order to provide and regulate more complete budget, so they can increase the accuracy of profit forecast in these companies.

Regarding to the result of third secondary hypothesis (increase of sticky of spent cost of the sold goods reduces the market adjusted yield in accepted companies in Tehran stock exchange.) that was confirmed, so, share holders and other investors are recommended that pay attention to this secondary hypothesis, because the increase of sticky of spent cost of the sold goods causes to decrease of profit. If the profit of company reduces, the yield will decrease, and the reduction of share yield will reduce the market adjusted yield.

Regarding to the result of the forth secondary hypothesis (increase of sticky of sales, public and administrative costs reduces the market adjusted yield in accepted companies in Tehran stock exchange.) that was confirmed, shareholders and other investors are recommended that pay attention to this secondary hypothesis, because the increase of sticky of sales, public and administrative costs will reduce the profit, and the yield of company is reduced by reduction of profit, hence the reduction of share yield causes to decrease of the market adjusted yield.

The models used up in this research can be a proper instrument for accomplishing future research about reason and effects of costs sticky behavior. Because of inexistence of classified information accessibility with related with component of administrative, public and sales costs, we just could study sticky of gathering administrative, public and sales costs. Future researches can represent profitable information about quality behavior of each its

component and other costs. Documents demonstrate that costs sticky about wise decision of management are for adjusting production capacity level and market demand.

Scrutiny of patterns of masters decision making and its effects on costs sticky is a significant step for examining better costs behavior in future researches, and finally, sticky and intensity of other important costs of company are studied.

The following topics are suggested by other researches:

- To examine the relation between costs sticky and unusual yields and market reactions of companies shares.
- To examine the relation between costs sticky and profit management.
- To examine the relation between costs sticky with smoothing of profit and corporative jurisdiction.
- To examine the relation between costs sticky with added value of accounting and economic.
- To examine the relation between costs sticky with fund structure.

1-4 chart, Kolmogrof Smirnof test (K-S)

	Accuracy of profit forecast	Market adjusted yield
Number of data	935	819
average	.0575	1.9375
Standard deviation	.09743	10.24254
Absolute value of maximum deviations	.278	.172
Maximum positive deviation	.227	.172
Maximum negative deviation	278	138
Value of Z statistics	8.490	4.923
Significant level	.000	.000

2-4 chart, Kolmogrof Smirnof test (changed values)

·	Accuracy of profit forecast	Market adjusted yield
Number of data	893	667
average	-3.7383	2.2452
Standard deviation	1.52571	3.12543
Absolute value of maximum deviations	.057	.094
Maximum positive deviation	.025	.046
Maximum negative deviation	057	094
Value of Z statistics	1.714	2.418
Significant level	.056	.085

3-4chart, interred independent variables / deleted variables

model	Interred variables	Deleted variables	method
1	SEASON, DISP, OPLEV, STICKY, DOWN, VSALE, MV, LOSS ^a		Enter

4-4 chart: correlation coefficient, determination coefficient, Doorbin-watson test between independent and dependent variables

	Correlation	Determination	Adjusted Determination	Estimate standard	
Model	coefficient	coefficient	coefficient	error	Doorbin-watson test
1	.308ª	0.095	0.084	1.49943	1.669

5-4chart. Regression analysis

	model		Squares total	Free grade	Squares average	F statistics	Significant level
		Regression	148.381	8	18.548	8.25	.000 ^a
	1	Remainder	1411.924	628	2.248		
		total	1560.305	636			

6-4chart, interred independent variables / deleted variables

	<u> </u>		
model	Interred variables	Deleted variables	method
1	DISP,STICKY, VSALE		Enter

7-4 chart: correlation coefficient, determination coefficient, Doorbin-watson test between independent and dependent variables

		-	Adjusted Determination	Estimate standard	Doorbin-watson
Model	Correlation coefficient	Determination coefficient	coefficient	error	test
1	.374ª	.397	.396	1.12768	1.850

8-4chart. Regression analysis

model		model	Squares total	Free grade	Squares average	F statistics	Significant level
		Regression	6.297	4	9.574	12.238	.000ª
	1	Remainder	4499.888	460	.782		
		total	4506.185	464			

9-4chart, interred independent variables / deleted variables

n	nodel	Interred variables	Deleted variables	method
- 11	nouci	interred variables	Defeted variables	memou
	1	SEASON, DISP, OPLEV, COGSSTICKY, DOWN, VSALE, MV, LOSS ^a		Enter

10-4 chart: correlation coefficient, determination coefficient, Doorbin-watson test between independent and dependent variables

		Correlation		Adjusted Determination	Estimate	Doorbin-watson
N	Model	coefficient	Determination coefficient	coefficient	standard error	test
	1	.307ª	0.094	0.082	1.50789	1.68

11-4chart. Regression analysis

model		model	Squares total	Free grade	Squares average	F statistics	Significant level
I		Regression	145.185	8	18.148	7.982	$.000^{a}$
	1	Remainder	1398.337	615	2.274		
		total	1543.522	623			

12-4chart, interred independent variables / deleted variables

model	Interred variables	Deleted variables	method
1	SEASON, DISP, OPLEV, SGASTICKY, DOWN, VSALE, MV		Enter

13-4 chart: correlation coefficient, determination coefficient, Doorbin-watson test between independent and dependent variables

			Adjusted Determination	Estimate standard	
Model	Correlation coefficient	Determination coefficient	coefficient	error	Doorbin-watson test
1	.311 ^a	0.096	0.087	1.47242	1.679

14-4chart. Regression analysis

model		Squares total	Free grade	Squares average	F statistics	Significant level
	Regression	182.649	8	22.831	10.531	$.000^{a}$
1	Remainder	1710.577	789	2.168		
	total	1893.226	797			

15-4chart, interred independent variables / deleted variables

	model Interred variables		Deleted variables	method
ſ	1	DISP ^a , COGSSTICKY, VSALE		Enter

16-4 chart: correlation coefficient, determination coefficient, Doorbin-watson test between independent and dependent variables

	Correlation	Determination	Adjusted Determination	Estimate standard	Doorbin-watson
Model	coefficient	coefficient	coefficient	error	test
1	.543ª	.555	.554	1.13279	1.817

17-4chart. Regression analysis

model		Squares total	Free grade	Squares average	F statistics	Significant level
	Regression	8.046	4	20.012	11.030	.000°
1	Remainder	4396.835	448	1.814		
	total	4404.881	452			

18-4chart, interred independent variables / deleted variables

	, , ,		
model Interred variables		Deleted variables	method
1	DISP, SGASTICKY, VSALE		Enter

19-4 chart: correlation coefficient, determination coefficient, Doorbin-watson test between independent and dependent variables

			Adjusted Determination	Estimate	Doorbin-watson
Model	Correlation coefficient	Determination coefficient	coefficient	standard error	test
1	.601 ^a	.361	.359	1.12742	1.833

20-4chart. Regression analysis

model		model	Squares total	Free grade	Squares average	F statistics	Significant level
		Regression	21.394	4	13.349	13.248	$.000^{a}$
	1	Remainder	5907.579	604	1.008		
		total	5928.973	608			

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