

STICKY COST BEHAVIOR AND ACCOUNTING CONSERVATISM: EVIDENCE FROM TEHRAN STOCK EXCHANGE

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Abstract

The purpose of this study is to fill the existing gap in the literature by examining the answers to these questions that what is the relationship between accounting conservatism and price stickiness in firms listed in Tehran stock exchange. The research population consisted of all companies listed in Tehran Stock Exchange, which are over a period of six years, from 2007 to 2012, respectively. Default assumptions were applied in sequence, so that the first company in default, the following assumptions are not counted. In this study, after the default, the remaining were 106 companies from 19 industries. The required financial statements data are extracted from Tehran Stock Exchange. To analysis of Research hypothesis was used linear regression. Findings show that between the behaviors of price stickiness and accounting conservatism there is a direct correlation.

Keywords: *Sticky Cost Behavior, accounting conservatism, Tehran Stock Exchange*

INTRODUCTION

One of the issues raised in the management accounting discussions is the cost behavior. Cost behavior will pay to change of Cost behavior due to the change in cost stimulator. Knowledge of the behavior of costs regarding to the changes in activity level or the sale level are of important information for management decisions on planning and budgeting, Product model pricing, determining the breakeven point, and other. Traditional practice of costs in management accounting, increase or decrease the variable costs regarding to the activity volume proportionally. This means that variation largeness in costs depends only on the magnitude of changes in the volume of activity and the change in the volume of activity direction (increase or decrease) has no effect on the magnitude of changes in costs. In the traditional approaches typically the cost behavior are classified in the fixed, variable or a

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combinations of them. However, in recent studies, new cost behavior is seen in the administrative, general and selling costs. The new behavior showed that the increase in costs, while increasing the level of activity is more than the decrease in costs when there is reduction in the volume of activity. Such behavior is called the costs sticky behavior (Anderson et al., 2003). Sticky behavior of the cost means that administrative and sales costs when the selling is reduced to that extent that sale will increase, will not change. In other words, with the increase in sales, administrative and selling expenses will be increased but with the decline in sales, administrative and selling expenses will not increase proportionally. (Namazi and Davanipour, 2010). Price stickiness behavior arises of the two main features of pricing behavior. First, most of the costs are created through managers' conscious commitments. Second, changing the committed level of resources does create cost to the company. Some of these costs can be re-employment of employees and the cost of installation and restart the machine (Anderson et al., 2008). Given the stickiness in price behavior this tendency will generate in the profit that with the increase or decrease on the sale show asymmetric behavior (Bunker et al., 2011).

Conservatism is interpreted as accountants' tendency to existence of a higher level of confirmation for the identification of good news than bad news in the financial statements. That means that in profit, bad news reflected faster than good news. Unrealized losses typically are identified earlier than unrealized gains (Basu, 1997). This asymmetry in identification, leads to systematic differences between periods with bad news and periods with the good news in terms of timeliness and consistency of profit. From the other hand, the stock price reflects the information that was received from sources in addition to current income. Thus, stock returns tend to be updated about bad news and good news and reflect their effects. Accordingly, the efficiency can be seen as a result of the news. To show the conservatism and its measure can be used of the relationship between earnings and stock returns (Basu, 1997; Ball et al 2011). In our country, the Technical Committee of the auditing theoretical in the concepts of financial reporting, assumed Conservatism as one component of a qualitative character of reliability, But the word conservatism is not used, but instead had used the word caution. In the theoretical concepts of financial reporting and in the appendix of Iran accounting standards about cautious it states, Preparers of financial statements however, should ban the ambiguities which inevitably shadow on many events and circumstances. An example of this ambiguity is the ability to collect receivables, the probable useful life of tangible fixed assets and the number of potential claims related to sold goods Guarantee. Such cases are identified with precautions in preparing the financial statements and accompanied by disclosure of their nature and amount. Caution is used as the degree of care which is required in the exercise of judgment in terms of ambiguity so that the income or assets more than what it is in real or liabilities and costs less than what it is in real, is not detected. Caution application should not lead to the creation of hidden reserves or unnecessary resources or intentionally show revenue and assets less than real, and deliberately show the costs and debts more than real, because this leads to Breach of neutrality and affects reliability of financial data (Technical Committee of the National Audit organization, 2003).

Accounting conservatism and price stickiness are the two phenomena that are discussed in the areas of financial accounting and management. Accounting conservatism by changing the identification of good and bad news has led to the changes in the behavior of symmetric interest. Also, price stickiness due to the sale's impact to the price behavior, has the ability to create an asymmetric behavior in profit (Bunker et al., 2010; 2011). Thus, the phenomena of price stickiness and accounting conservatism are leading to asymmetric behavior of income.

The purpose of this study is to fill the existing gap in the literature by examining the answers to these questions that what is the relationship between accounting conservatism and price stickiness in firms listed in Tehran stock exchange. Research goals in both scientific and practical purposes objectives are as follows. In view of the above description it can be argued that the main research question as follows: Do sticky price behavior can have an impact on accounting conservatism?

METHODOLOGY

The research population consisted of all companies listed in Tehran Stock Exchange, which are over a period of six years, from 2007 to 2012, respectively.

For the sample selection we used of Criteria-Filtering Technique. For this purpose, the following criteria are considered and, if a company has met all the criteria to be selected as one of the companies in the sample. The sample selection process is depicted in Table 1-3.

1. According to the information required from 2007, companies which up to the end of Esfand 2006 were accepted on Tehran Stock Exchange and by the end of 2012 their name is not removed from the list of mentioned companies.
2. During the period in question, their shares are actively traded on the exchange.
3. To enhance the comparability of companies surveyed, their financial period should be ended up to 29 Esfand and they should have no changes in the financial period during the study period.
4. They should not be a component of financial intermediation firms (investment, holding, leasing and banking and insurance) because they have different functions.
5. The required information should be available.

Table 1: the sample Selection procedure

All companies listed on 2012/12/29	520
Companies that have been accepted since 2006 in stock	44
Companies that have been suspended during the investigation or have been out of stock	124
Companies that their financial year is not ended up to 29 Esfand or have changed their fiscal year	92
Financial intermediation firms (investment, holding, leasing and banks)	18
Companies, whose shares are actively traded on the exchange during the period in question,	58
Companies which have not delivered their financial statements of 2012 at the time of the investigation	3
Companies that their data are not sufficient to obtain some variables	75
All the statistical testable samples with regard to the defaults	106

Default assumptions were applied in sequence, so that the first company in default, the following assumptions are not counted. In this study, after the default, the remaining were 106 companies from 19 industries.

The required financial statements data are extracted from the sites of research management, development and Islamic Studies belonged to the Securities and Exchange organization with

the address www.rdis.ir, codal network, comprehensive systems to inform publishers with the address www.codal.ir, the Iran financial data process with the address www.fipiran.com, CDs of the Securities and Exchange organization manually, Which seems to be higher than other available sources of credit. For Research hypothesis, linear regression analysis was used.

RESULTS

The first hypothesis test goal was the investigation of *the relationship between price sticky behavior and companies'* accounting conservatism and its statistical hypothesis is defined as follows:

- H_0 : *Between the behavior of price stickiness and conservative accounting of firms, there was no significant relationship.*
- H_1 : *Between the behavior of price stickiness and conservative accounting of firms, there was significant relationship.*

This assumption is estimated using panel data and if the β_1 coefficient by the confidence of 95% become significant, it will be approved.

$$\frac{EPS_{it}}{P_{it-1}} = \alpha_0 + \alpha_1 DR_{it} + \alpha_2 RET_{it} + \alpha_3 DR_{it} * RET_{it} + \beta_1 SD_{it} + \beta_2 \frac{Salse_{it}}{P_{it-1}} + \beta_3 SD_{it} * \frac{Salse_{it}}{P_{it-1}} + \varepsilon_{it}$$

$$\begin{cases} H_0 : \beta_1 = 0 \\ H_1 : \beta_1 \neq 0 \end{cases}$$

In order to determine whether using panel data to estimate the given model would be effective or not, Chow test or bound F is used to make clear which method is suitable (fixed effects or random effects) in order to better estimate (detection of Fixed or random variation of sectional units) the Hasman test was used. The results of these tests are presented in Table 2.

Table 2: Chow and Hasman test results for the model (1)

Test	n	Statistics	Statistics amount	df	P-Value
Chow	636	F	7.2531	10.524	.000
Hasman	636	χ^2	9.23	6	.011

According to the results of the Chow test and its P-Value (0/0000), the test H0 hypothesis was rejected at 95%, indicating that the method panel data can be used. Also according to the results of the Hasman test and its P-Value (0/0110), which is less than 0/05, hypothesis H0 of the test is rejected at 95% and H1 will be accepted. The model is required to be estimated using fixed effects. To check the validity of the model and the assumptions of the classical regression it is necessary to assess the absence of co-linearity between the independent variables in the model, and perform tests in relation to the normality of remaining, homogeneity of variances, independence of residuals and the absence of clear error of the model (model being linear). To test the normality of error sentences can be used of various tests. One of these tests is Jarque-Beratest which of these tests have been used in this study. Jarque-Beratest results indicate that the residues of the model estimation with confidence of 95% have the normal distribution, so that the probability of the test (0/8235) is larger than 0/05. One of the assumptions of the classical regression is consistency of residual

variance. If the variances are nonlinear linear estimator will be unbiased and have no variance. In this study to test the homogeneity of variance, Pagan cut was used. Due to the importance of this test, which is smaller than 0/05 (0450/0), the null hypothesis based on variance consistency is rejected and we can say that there is variance anisotropy in the model. In this study, to remove this problem, in estimating, the generalized least squares estimation method (GLS) is used. Also in this study to test the residuals are not correlated, which is one of the assumptions of the analysis and regression analysis, and called autocorrelation, Durbin Watson test (DW) has been used. According to the preliminary results of estimating the Durbin Watson statistic was equal to 02/2 and are between 5.1 and 5.2 since it may be concluded that the residuals are independent of each other. In addition, to test whether the model has a linear relationship and whether the desired model of study from being linear and non-linear explanation is correctly explained or not, coded test is applied. Due to the level of the encoded test (0/2450) which is larger than 0/05, the null hypothesis of this test is accepted to verify that the model is linear and the model has no clear error. In Table 3 summary of the results of these tests are presented.

Table 3: summary of the tests results

Ramsey		Durbin-Watson	Breusch-Pagan		Jarque-Bera	
<i>P-Value</i>	<i>F</i>	D	<i>P-Value</i>	<i>F</i>	<i>P-Value</i>	χ^2
.245	1.409	2.02	.045	2.1619	0.8235	1.92

According to the results of Chow and Hasman tests and test results of the statistical assumptions of the classical regression, model (1) of the research are estimated using panel data and using fixed effects.

The results are presented in Table 4. Estimated form of the model using Eviews software will be as follows:

$$\frac{EPS_{it}}{P_{it-1}} = 0.3131 + 0.0378 DR_{it} + 0.0135 RET_{it} - 0.0234 DR_{it} * RET_{it} - 0.0299 SD_{it} - 0.0759 \frac{Salse_{it}}{P_{it-1}} + 0.0335 SD_{it} * \frac{Salse_{it}}{P_{it-1}} + \varepsilon_{it}$$

Table 4: first hypothesis test results using fixed effects

variable	<i>B</i>	t	P-Value	Result
Constant	.313	22.12	.000	H ₁
News dummy variable	.0378	2.72	.006	H ₁
Return per share	.0135	0.773	.439	H ₀
News dummy variable vs returns per share	-0.0234	-1.003	.316	H ₀
Dummy variable for sale	-0.0299	-2.311	.021	H ₁
Adjusted sales	-0.0759	-4.887	.000	H ₁
Adjusted sales vs selling dummy variable	0.0304	2.17	.030	H ₁
R ²	0.611			
<i>F</i>	7.416			

<i>P-Value</i>	.0000
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Dependent variable: adjusted earnings per share

In considering the significance of whole of the model since the probability of F statistics is smaller than 0.05 (0.000) with a significance of 95% the model is confirmed. Determining factor of the model also suggests that 61.10% of the company's adjusted earnings per share are explained by the variables in the model.

in the evaluation of factor significance of the results presented in Table 4, since the probability of t-statistic for variable coefficient in contrast to the ratio of dummy variable of sales and adjusted sales is less than 0.05 (0.0304), As a result there is a significant relationship between sales and sales dummy variable contrast adjusted and adjusted earnings per share at 95 percent is approved. The first hypothesis is accepted and can say with 95% of confidence that between dummy variable contrast sales and adjusted sales and profit of per adjusted share for company, there is a significant relationship.

The positive coefficient of this variable (0.0335) suggests a direct relationship between sales and sales adjusted dummy variable contrast and adjusted earnings per share of the company so that with 1 unit increase in sales and sales dummy variable contrast adjustment, the company's adjusted earnings per share also increases to the amount of 0.0335. Thus, according to the analysis made in connection with the hypothesis it can be concluded that between the behaviors of price stickiness and accounting conservatism there is a direct correlation.

CONCLUSION

In this chapter firstly summarizes of the descriptive statistics for the variables was shown. Then inferential statistics were used in the research model and hypotheses presented in the form of inferential statistics. Chow test was used to test the first models to determine whether the panel method should be used or mixed and then Hasman test using panel method for random effects or fixed effects was used. Finally fit model presented and the results of the classical regression model assumptions presented for the model. According to the analysis made in connection with this hypothesis, we determined that between the behaviors of price stickiness and accounting conservatism there is a direct correlation.

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