AESS

Author(s)

Mahdi Salehi, PhD

Accounting Department
Ferdowsi University of Mashhad
Mashhad, Iran
E-mail: *mahdi_salehi54@yahoo.com*

Azam Zareijam

Bandar Abbas Branch,
Islamic Azad University
Bandar Abbas, Iran

A Study of the Effect of Conservatism on Stock Return: Evidence of Iranian Chemical Industry

Abstract

Financial statements are the main part of financial reporting process. Purpose of financial statements is providing classified information about the financial situation, financial performance, and financial flexibility for the business unit that can be useful in a wide range of users of financial statements used in economic decision. The purpose of financial reporting and accounting principles, will require information that may be provided by financial reporting, be enjoyed of certain features. Based on theoretical concepts of financial reporting, the information can be useful that is qualitative feature of financial information. The main qualitative characteristics associated with information content are relevancy and reliability, and conservative or precaution is one of the main characteristics of reliability. Conservative has been interpreted as accountants tend to require a higher degree of quality to identify the good news confirmed as profit and to identify the bad news as losses. The aim of the current study is assesses the relationship between conservatism and share return of chemical companies listed on Tehran Stock Exchange. Statistical Society is pharmaceutical and chemical companies during 2004-2010. Required data in this study has been collected using the library method. Other word, information has been gathered from existing documents and databases of Tehran Stock Exchange. The Study method is solidarity. Information required by companies manage database processor is gathered and then summarized and calculations required in Excel spreadsheet for analysis is prepared.

Introduction

Today, one of the deciding factors is access to appropriate information and the related issue of decided; if the required information be distributed asymmetric between individuals, they may cause different results than those of single issue (Salehi, 2009). So, before the information will be important for the individual decision maker, information distribution must be evaluated accurately. Asymmetry of the information is a negative phenomenon that typically occurs in securities markets and causes a difference between the intrinsic value of stock and the estimated value of the shares by investors and leads to inappropriate economic decisions by investors. In addition, to lack of information symmetry securities markets (Salehi and Biglar, 2009), also play an important role in secondary mortgage markets and can cause enormous losses. But seems to disclose additional information to a large extent the occurrence of negative modes lack of symmetry in market information prevent debit. Asymmetry When comes into existence that information one of side of the contract or transaction is more than other one, conditional on that information are used effectively when communicating with other parties (Salehi and Rostami, 2009). The conservative has been one of the most sensible features of financial reporting that on the basis of opinion of Watts (2003) and at least since the beginning of the twentieth century has have most impressive quality in the field of accounting and financial reporting.

Continuous and ongoing attention to the aforementioned concept and its importance to the Standards accounting, it could indicate that the use of conservative procedures and practices of the characteristics of interest on excess spending is high (Moradi *et al*., 2010). Although for a long period of time, the features and quality of data has been and is emphasized, but has not done so far little effort to check the benefits and disadvantages resulting from acts conservatism. It said not only about conservatism but also on the other qualitative features governing financial reporting is true (Namazi and Salehi, 2010).

Research Problem

Purpose of financial statements, is the providing of classified information about the financial situation, financial performance and financial flexibility for the business unit in a wide range of users of financial statements in economic decision making is useful (Salehi *et al*., 2011).

The purpose of financial reporting and accounting principles will require, financial reporting information that provided by financial reporting be enjoyed of certain features. The main qualitative characteristics associated with information content, relevance and being reliable and conservative precaution or as one of the main characteristics is reliability.

Conservatism is of accounting concepts that its applying can be caused to the company detects profits and losses later and earlier respectively. Conservative generally defined as the failure to exceed the benefits versus the losses surpassed. Surpassed the profits exist before a legal claim to verifiable income that provides benefits (Rostami and Salehi, 2011).

One important result of this asymmetric behavior of conservatism with profits and losses is ongoing ones of net asset values. Conservatism has been criticized by capital market laws, and standards, because the ones in the current period resulting in exaggerated future profits due to cost ones will in the future (Salehi and Rostami, 2011). Conservative minimum has had influence of five hundred years ago on accounting practice (Basu, 1997).

Conservatism is made as the most influential assessment on accounting (Sterling, 1970). Basu (1997) offered model to measure conservatism. Based on this model, the foundation of conservative earnings estimates the relationship between earnings and returns. In this definition, the accounting change shareholder wealth during the fiscal year brings the action, while the yield estimate market rate of change of shareholder wealth during the financial looses. The difference between profits and efficiency in getting the results expected in the future creates a technique for observing and measuring benefits is conservative. Basu (1997) expressed that the bad news is expected for the future as something that the current stock return is negative. Basu (1997) defined the conservatism as follows: Major conservatism is simply a higher degree of accounting requirements of the approved quality to identify the good news or earnings quality compared to the amount approved for bad news or losses identified conservatism according to the equation is calculated as following:

$$\frac{E_{it}}{P_{it-1}} = a_{it} + \beta R_{it} + \eta [DR]_{it} + \gamma R_{it}[DR]_{it} + \varepsilon_{it}$$

Which:
E_{it} = earnings before unexpected items for company i in year t.
P_{it} = value (price) of capital markets at the beginning period for company i in year t.
R_{it} = annual stock return.
DR = if the annual return is negative its value equal to one and zero otherwise to be.

If the annual return is positive, DR_{it} equals zero and above relationship becomes the following equation:

$$(E_{it}/P_{(it-1)} = a_{it} + \beta R_{it} + \varepsilon_{it}$$

If the annual return is negative DR_{it} equal one and above relationship is becomes the following equation:

$$E_{it}/P_{it-1} = (a_{it} + \eta) + (\beta + \gamma)R_{it} + \varepsilon_{it}$$

β = response and reaction to the earnings yield is a positive measure.
$\gamma + \beta$ = yield response and reaction measures to negative earnings.
Conservatism means is that: $\beta < \gamma + \beta$, or $\gamma > 0$.

In order to answer the research question "how conservative measure", the listed companies on Tehran Stock Exchange from 2004 until 2010 will be studied. We will extract Information about these companies' benefit from their financial statements, information and stock prices will be reviewed for companies listed on Tehran Stock Exchange in this period.

Importance of the Study

Of the important concepts in evaluating and analyzing financial statements, is the concept of conservatism. Therefore, understanding factors that influence on conservatism are greatly contributed to investor in order to choose the correct assets management with more conservative views and lack of financial statements seems unrealistic.

The role of accounting is preparation of information needed for users to decide the host economy. Accounting for these functions first of all, identify and analyzes events and financial deals and after acquiring knowledge, the aforementioned events will be measured and finally the processed data for users in applying their decision, in the form of financial reports, will be tabloid. So, accounting tasks can be classified in three main stages, identifying, measurement, and reporting.

Because plurality and diversity in the number of users in terms of their levels of financial knowledge, the possibility of providing the conditions for supplying documents and information resources in not processed form is not feasible. Hence the role of accounting as a converter and manufacturer of useful information and using these essential stakeholders appears. Due to lack of direct access, without intermediaries all information sources for users to take economic decisions, when and optimized, this information should be provided through the financial reports, they have features that protect the rights of consumers to take steps.
Conservative is financial reporting features, which is has an important role in limiting the behavior of optimistic managers, the status information providers on the one hand and apply a minimum estimate of investment income by investors and creditors in the position of most users, on

other hand, in the form of a limiting principle in the framework of accounting principles and concepts perform.

In Iran and worldwide, often using accounting standards contain requirements for conservative procedures. Including such requirements in the context of standards, caused more by reliance on the ability to attribute information in financial reporting. Debate that always had been in accounting texts, whether it is considering reliability, does not make up for the decreasing relevance of information? Do conservative spending practices; are more than its benefits? To answer questions like these, it is necessary to research on conservatism and its effects to be done. Obviously this requirement, devised ways to make this concept a little and measure value.

Literature review

In recent years, much research in connection with conservatism has been done and each of these investigations has examined conservatism in financial reporting in different areas (Ahmed *et al*., 2001). Using criteria than book value to market value (Beaver and Ryan, 2000) and also measure accruals accumulated Givoly and Hayne, (2000) concluded that due to conflict of interest between shareholders and creditors, conservatism in financial reporting business units will increase and what is more conservative, borrowing costs will reduce.

In other word, what financial statements of business units are more conservative, the company credits for companies borrowing from abroad increases the borrowing interest rates decreases and so the company can provides finance sources through creditors and less financial costs.

Of other research in recent years that examined conservatism in this area, we can note Frankel and Li (2004) showed that with the observation positive relationship between asymmetry measures when profits and financial leverage, the results went confirm previous research (Ahmed *et al*., 2001).

Conflict of interest between shareholders and creditors in debt contracts will increase require the use of conservatism in financial reporting. So in all these investigations it can be seen that due to conflict of interest between shareholders and creditors always borrowing between companies and their conservatism in financial reporting a positive relationship is observed in LaFond and Roychowdhury (2008) study.

Another broad areas have been reviewed with conservative scholars in recent years is concerned with the issue of representation and motivated managers to transfer wealth and value in favor of their own company and hence is used in with whether conservatism can work as an effective

mechanism to strengthen corporate leadership and establishing a balance between the information asymmetry is used. In connection with was the last case, by Lafond and Watts (2008), on this basis they concluded their investigation, conservatism in financial reporting as a balanced response to issues arising from asymmetric information representation is between informed and uninformed investors.

Watts (2003) and Ball (2001) know agency issues mainly due to the when that managers and shareholders' interests are not aligned. Ball (2001) conducted research in this area and he pointed out in his research, the managers often due to limited tenure insights, in order to earn more rewards through increased profits show, are looking to chose the projects which have a negative net present value and are harmful in the long term the company will make. These projects generally early years, brought positive cash for the company and provide increased profits are.

In contrast, projects that have a positive present value, because of their need to do costs such as research and development, advertising and capital expenditures , has no appropriate positive cash flow with in the early years,.

Thus Ball (2001) during his research showed that earlier detection of losses based on conservative makes managers to their decisions. Therefore identifying, when future losses, does not create any incentive for managers to choose projects with negative net present value for purely personal interests.　Representing Matters primarily is due to the separation of ownership and control of company operations, i.e., when managers are separate from the shareholders.

Beekes　*et al*. (2004) by using examples of using UK standards and also with earnings asymmetry, observed companies that have a higher percentage of foreign directors on its board members are has a more stronger corporate leadership, identify the bad news sooner than good news and in other words　are more conservative. So they concluded that the combined state board members are an important factor in determining the quality of earnings reports in English corporate.

Ahmed and Duellmanl (2005) showed that on the one hand the percentage of foreign managers in combination of board members has the positive relationship with conservatism in on hand, the percentage local managers has a negative relationship with conservative on the other hand.

However, as noted, Ahmed and Duellmanl (2005) some ways with the research Beekes *et al*. (2004) was different. Ahmed and Duellmanl (2005) in the study of American and based on generally accepted accounting America used while (Beekes *et al*., 2004) in his research, based were working on generally accepted accounting principles to the UK.

On other hand (Ahmed and Duellmanl 2005) used three criteria to measure conservatism something used in their study, including (a) criteria accruals accumulated Givoly and Hayn (2000), (b) criteria than market value to book value (Beaver & Ryan (2000 and (c) criteria asymmetry when profits Basu (1997).

Of course, the time asymmetry of their used profits, unlike the Basu's (1997) model were not based on earnings response to stock returns a period, but adjusted them a measure of the model (Basu, 1997) used the Roychowdhury and Watts's (2008) model and based on the time asymmetry of their used profits for asymmetric response time based on interest earnings to stock returns during several periods and were estimated to be accumulated. However (Beekes *et al*., 2004) had used the model asymmetry only when profits (Basu, 1997) estimated that over a period of not a few the terms in their study.

During the same years additional research were done that in all these investigations the positive relationship between the power steering corporate and conservative were observed, including the research conducted by Lim (2006) that his research had done using samples of Australian companies.
In this context, a study by LaFond and Roychowdhury (2008) was conducted that the findings also was totally consistent with past its researches. They believed that what increasing percentage of managers ownership (stock) in company, due to the long vision managers, stronger relationship between wealth management and corporate value will be observed and in fact since interests in these circumstances managers and shareholders are aligned, so there is no need for conservatism. Hence they had expected a negative relation between conservatism and the percentage ownership of managers Company. However, before LaFond and Roychowdhury (2008) was conducted study, which plays a major role in the theory they had expected. The study was performed by Sivakumar and Ball (2005).

Companies have established that provide families with their property which they, less stability show of its earnings for the negative changes. As we know Basu (1997) knew fewer Stability losses and changes in negative earnings as a sign of conservatism.

Also an investigation by Sivakumar and Ball (2005) reviewed difference between the amount of conservatism among the corporate special and general and found the corporate is special conservative than public company. They did the difference in conservatism to differences in structure, leadership and working mechanism of control between corporate special and general than. LaFond and Roychowdhury (2008) from these results Sivakumar and Ball (2005) used, because percent ownership of managers in public company systematically lowers than corporate special.

Thus LaFond and Roychowdhury (2008) as well as Ahmed and Duellmanl (2005) estimated the effect of percentage of directors ownership in the company on financial conservative reporting, using criterion of time asymmetry of the benefits over several periods (not a period), and concluded there is a negative relationship between the percentage of managers ownership and conservatism, which means that for every decreasing property managers in the company, the demand for conservatism increases. fundamental difference research conducted by LaFond and Roychowdhury (2008) with Ahmed and Duellmanl (2005) in the LaFond and Roychowdhury (2008) of total 6075 samples used during 2001-2004. While Ahmed and Duellmanl (2005) examined 750 sample years of 1999-2001, thus LaFond and Roychowdhury (2008) observed the stronger negative relationship between conservatism and the percentage ownership of Internal management by increasing the number of samples examined.

While in Ahmed and Duellmanl (2005) was observed the weak positive relationship between the percentage ownership of overseas management and standards conservatism.

Thus we can say that results of LaFond and Roychowdhury research (2008) confirmed by results related to their previous research, has more certainty.

Beaver and Ryan (2000) specified one couple of sources for fluctuations of market value to book value and then they introduced both sources under the bias and time delay in book value. They showed part of advocacy as a component of sustainable and relevant standards conservatism and remember the component delay time, as only unstable that not associated with the conservatism criteria.

Givoly and Hayn pointed out (2000) in their research that conservative will reduce retained earnings over time. It based on time-series cross-sectional studies have observed that during the years 1956-1998, except for negative accruals of depreciation, retained earnings equal to 16 percent during the same course, be retained.

Hence, they considered the value of accumulated accruals over time as one of the conservative criteria and introduced negative rates of accumulation of accruals for companies over a long period, as a sign of conservatism.
Basu (1997) by using observation of a different reaction to earnings bad news and good news, introduced benefit criteria for time asymmetry for measuring conservatism.
Regarding the subject several studies have been conducted in Iran which briefly introduced as following.

Amir Beigi Langroudi (2007), in his research examined 100 companies listed on Tehran Stock Exchange in the period of 1996-2006 and derived that there is a meaningful negative

relationship between time asymmetry of profit and MTB proportion; the longer the estimation period of time asymmetry of profit, the more negative relationship.

Azad (2008) examined the informative role of conservative financial statements of the listed on Tehran Stock Exchange in a five-year period (2002-2006). According to his results, by increase in informative asymmetry among aware and unaware investors, the demand and motivation for imposing conservatism in financial statements increases and the companies report a more conservative profit. The results of the research demonstrate that conservative financial statements is a tool for decreasing informative asymmetry among investors of companies' shares and change according to change in the informative asymmetry value among investors, the demand and motivation for conservatism in financial statements.

Ezzati (2008) examined the companies being accepted in the stock exchange of Tehran in the time period of 1998 to 2007 aiming at introduction and examining the criterion of time asymmetry of profit and finding the relations of this criterion with proportion of (P/B). He derived that there is a meaningful and negative relationship between profit and loss and balance sheet from the viewpoint of conservatism and the reason of existence of such a negative relationship between the criterion of time asymmetry of profit and the proportion of (P/B) of the first period, is resulted from the items composing the profit, i.e. the liability items and the cash flow resulting from the operation, that is the other liability items cause to create a negative relationship between the criterion of profit and loss and the criterion of conservative balance sheet.

Cheshan (2008) examined the relationship between the long-term debts and accounting conservatism; the examined statistical community of this research was the listed on Tehran Stock Exchange which were traded in the stock exchange from 1998 to 2006. In the mentioned research, the data of 60 companies in each year were used. The results of the research indicate that, with increase in a company's long-term liabilities, the management of the company, to acquire more credit and to meet the requirements due to debt contracts (such as retaining the current ratios and debt level at a specified amount and limitation of dividend to be distributed among the shareholders), by using conservatism methods and increase in company's profit and assets does not cause a conflict upon profit distribution in between the shareholders and creditors.

Kordestani and Beygi (2007) studied the relationship between the qualitative characteristics of the profit and the cost of ordinary share capital. The results of the research confirmed the existence of a reverse relationship between the qualitative characteristics of profit, involving the stability of profit, the predictability of profit, the correlation

between the profit and the share value, timeliness of profit and the cost of the ordinary share capital, and this relationship is statistically meaningful. But no meaningful relationship was observed between conservatism of profit and the cost of ordinary share capital.

Langroudi (2007) examined the time asymmetry of profit as a criterion for measuring conservatism in the financial reporting. The fundamentals of this criterion are based on a profit and loss point of view and its framework is based on a definition of conservatism which is currently discussed in the world. On the basis of this definition, "the conservatism is introduced as the tendency of accountants for higher degree of verifiability to identify the good news of profit comparing to bad news". This signifies that conservatism leads to this point that the profit response respecting bad news is timelier than profit response respecting good news. Therefore, there is always an asymmetry in timely respond in respect of good news and bad news which is used as a criterion to measure conservatism. In order to examine time asymmetry of profit, the relationship between this criterion and "market to book ratio" (MTB) was examined as a known criterion of conservatism. By using the information of financial statements and the shares prices of 100 companies being accepted in the stock exchange of Tehran in the time period of 1996-2006 and by taking advantage of multi-variable linear regression analytical method, the results of the research imply the existence of a negative relationship between time asymmetry of profit and MTB ratio as two criteria of measurement of conservatism which is statistically meaningful. The longer the estimation period of the criterion of time asymmetry of profit, leads the more negative relationship.

Research methodology

The statistical community of this research includes all of companies producing chemicals and pharmaceuticals being accepted in the stock exchange of Tehran and its time scope is from the beginning of 2004-2010. The size of the statistical sample of this study includes 64 companies of chemicals and pharmaceuticals (38 companies producing chemicals and 26 companies producing pharmaceuticals). As all of companies were chosen in the mentioned time period without any condition, therefore the data collection method is by census.

The required information are collected from the available sources on Tehran Stock Exchange and other sources such as the information offered by the institute of Tadbirpardaz. According to the objective of the study as well the importance of the study the following hypotheses are postulated in the study.

1- There is a meaningful relationship between conservatism and share yield.

2- There is a meaningful relationship between conservatism and negative share yield.

3- There is a meaningful relationship between conservatism and positive share yield.

4- The companies producing chemicals and pharmaceuticals conservatively indicate their profits.

So the sub hypotheses are as followings:

1- The chemical and pharmaceutical companies show their profit with conservatism in 2004.

2- The chemical and pharmaceutical companies show their profit with conservatism in 2005.

3- The chemical and pharmaceutical companies show their profit with conservatism in 2006.

4- The chemical and pharmaceutical companies show their profit with conservatism in 2007.

5- The chemical and pharmaceutical companies show their profit with conservatism in 2008.

6- The chemical and pharmaceutical companies show their profit with conservatism in 2009.

The research method of this study is correlation and considering that we have used the old information, it is retrospective. The basic information of this research is related to the financial statements of the companies. Therefore, because of ease of access, clarity of presenting and high reliability in the contents of the information, as well as because of public acceptance from professional users such as investors, experienced analysts and stabilizing the monitoring regulations over the performance of companies, the information of the accepted companies in the stock exchange of Tehran was used. In this respect, the database of Tadbirpardaz software was used to gather the related data. We analyze the information by using the following statistical methods.

The measurement mode of conservatism

Basu's (1997) model is a model of verifiability of asymmetry of profits and losses. In this model, conservatism means the rapid identification and reflection of undesired news (reduction of assets value) compared to desired news (increase of assets and income value). He applied the share yield as an index to determine the type of available news about the commercial unit, because the share yield reflects the information received by market and this information is provided not only from the accounting profit, but also from various sources. Considering the above explanations, one can expect that there would be a strong relationship between the accounting profit and the negative yield compared to the positive yields. Because the accounting profit reflects the undesired news together with the negative yield, but despite the positive yields, it partly postpones the identification and

reflection of desired news to the future periods. Basu (1997) used the following model to test of hypothesis.

$$E\_it/P\_(it-1) = a\_it + \beta R\_it + \eta [DR]\_it + \gamma R\_it [DR]\_it + +\varepsilon\_it$$

In the above model, we have:

E_{it}= profit before the unexpected items for the ith in t[th] year.

P_{it}= value (price) of the capital market at the beginning of the period for the ith in t[th] year.

R_{it}= share annual yield.

DR= if the annual yield is negative, its value is one, otherwise is zero.

If the annual yield is positive, DR_{it} is zero and the above relation becomes:

$$E\_it/P\_(it-1) = a\_it + \beta R\_it + \varepsilon\_it$$

If the annual yield is negative, DR_{it} is one and the above relation becomes:

$$E\_it/P\_(it-1) = (a\_it + \eta) + (\beta + \gamma)R\_it + \varepsilon\_it$$

β= it measures the profit respond to the positive yield.

$\gamma + \beta$= it measures the profit respond to the negative yield.

Conservatism means: $< \gamma + \beta\ or \gamma > 0.$

Correlation analysis: Correlation analysis is a statistical method which is commonly used with regression. It is an index which indicates the relationship between the dependant variable and the independent variable and can assign a value between +1 and -1. Its negative or positive sign indicate the direction of the relationship between the variables, while the sign is positive it shows that by increase of independent, the dependent variable increases and if its sign is negative, it indicates that by increase of independent variable, the dependent variable decreases.

Coefficient of determination:

If we square the correlation coefficient, a useful index is obtained which is named as coefficient of determination. We show it as R^2 and it tells us which ratio of dispersion (variance) of dependent variable is "explained" by the regression model.

The adjusted coefficient of determination $(R^2_{adjusted})$:

this index shows the squared adjusted correlation coefficient where *k* is the number of independent variables of regression model and *n* is the number of sample. This criterion is more exact comparing to R^2, because necessarily does not increase by increase of number of independent

variables. While R^2 is dependent to the number of independent variables.

$$R^2{}_{adjasted} = R^2 - \frac{k(1-R^2)}{n-k-1}$$

Durbin-Watson Test: in order to examine the existence of a relationship between close observations, the Durbin-Watson statistics is used. The amount of this statistics is 0-4 variables. If there is not any correlation between consecutive residuals, the amount of this statistics must be nearly 2. If the amount of this statistics is approximately zero, it indicates the existence of a positive correlation between consecutive residuals and if the amount of this statistics is about 4, it indicates a positive correlation between the consecutive residuals.

As a general rule, if the observed amount of Durbin-Watson statistics is 1.5 – 2.5, there is no concern about applying the linear regression on the observations.

Multiple linear regressions (MLR): MLR is a mathematical method which has a wide application in building models. A multiple regression model is written as follows:

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \ldots + \beta_k x_k + e$$

In the above relation, y is dependent variable or response and x_k are independent variables or predictors or regression variables and β_k are regression coefficients and e is statistical error or residual. In this equation, if only an independent variable has a linear relation with dependent variable, this equation is referred to as simple linear regression model.

Coefficients test of multiple linear regression line:

$$\begin{cases} H_0: \beta_1 = \beta_2 = \cdots = \beta_k = 0 \\ H_A: \text{at least one non} - \text{zero coeffiecient} \end{cases}$$

Test statistics:

$$t_c = \frac{\hat{\beta}}{S_b}$$

Making decision about accepting or rejecting hypothesis:
In order to practically accept or reject the research hypothesis, SPSS statistical software was used. In the output of this statistical software, the value of level of meaningfulness of test, which is shown by Sig, and is referred to as p-value, is seen and if this value is less than the error of 0.05, then the test is meaningful and the research hypothesis is accepted. But if the Sig. value is equal to or more than the level of meaningfulness of 0.05, then the test

is not meaningful and the research hypothesis can't be accepted. Generally;

$$p - \text{value} < 0.05 \Rightarrow \text{The test is meaningful.}$$
$$p - \text{value} \geq 0.05 \Rightarrow \text{The test is no meaningful}$$

Hypotheses testing

First research hypothesis:
There is a relationship between conservatism and share yield of companies.

Table 1 shows the results of linear regression test of the model of Basu (1997) for examining the relationship between conservatism of chemical and pharmaceutical companies and share yield.

Table 1: Results of regression model for the first hypothesis

$E_{it}/P_{it-1} = a_{it} + \beta R_{it} + \eta DR_{it} + \gamma R_{it} DR_{it} + \varepsilon_{it}$			
p-value	T Test Statistics	Variable Coefficient (β)	Independent variables (explanatory)
0.026	2.288	0.167	(a_{it})
0.688	0.403	0.001	βR_{it}
0.283	-1.085	-0.228	ηDR_{it}
0.208	-1.274	-0.020	$\gamma R_{it} DR_{it}$
Adjusted R^2=0.02			
Durbin-Watson=1.814			

In the above table, the results of the regression test are presented to examine the relationship between conservatism. It is observed that the amount of Durbin-Watson statistics is obtained as 1.814 which is in 1.5 – 2.5. Therefore, applying regression on the observations is allowed.

Considering the results of T test related to the coefficient of βR_{it} (T=-0.403 β=0.001, P-value=0.668), we conclude that the test is not meaningful and the research hypothesis is not accepted. In other words, there is no relationship between conservatism and share yield of chemical and pharmaceutical companies during 2004-2010.

Second Hypothesis: there is a relationship between conservatism and negative share yield of companies.
Table 2 shows the results of linear regression test of the model of Basu (1997) for examining the relationship between conservatism of chemical and pharmaceutical companies with negative yield.

Table 2: Results of the second hypothesis

p-value	T Test Statistics	Variable Coefficient (β)	Independent variables (explanatory)	Sign of Annual Yield
$E_{it}/P_{it-1} = (a_{it} + \eta) + (\beta + \gamma)R_{it} + \varepsilon_{it}$				
0.815	-0.240	-0.062	$(a_{it} + \eta)$	Negative Yield DR=1
0.362	-0.951	-0.019	$(\beta + \gamma)R_{it}$	
Adjusted R^2=0.008				
Durbin-Watson=2.012				

The value of Durbin-Watson statistics is obtained as 2.012 which is in 1.5-2.5 and implies the non-prevention of applying regression for data.

Considering the value of the adjusted coefficient of determination obtained as 0.008 which is a low value, we conclude that the above regression models, it undertakes a low percentage of the changes of dependent variable.
The results of *t* test generally indicated (T=-0.951, β=-0.019, P-value=0.362) that there is no meaningful relationship between the negative share yield and conservatism of chemical and pharmaceutical companies during 2002-08.

Third hypothesis:
There is a relationship between conservatism and the positive share yield of companies.
Table 3 shows the results of linear regression test of the model of Basu (1997) for examining the relationship between conservatism of chemical and pharmaceutical companies with positive share yield.

Table 3: Results of the third hypothesis

p-value	T Test Statistics	Variable Coefficient (β)	Independent variables (explanatory)	Sign of Annual Yield
$E_{it}/P_{it-1} = a_{it} + \beta DR_{it} + \varepsilon_{it}$				
0.016	2.507	0.167	a_{it}	Positive Yield DR= 0
0.661	0.442	0.001	βR_{it}	
Adjusted R^2 =0.017				
Durbin-Watson=2.205				

As indicated in the above table, for the state of negative yield, the results of regression analysis are presented. The value of Durbin-Watson statistics is obtained as 2.012 which is in 1.5 – 2.5 and implies the non-prevention of applying regression for data.

The value of the adjusted coefficient of determination obtained as 0.017 which is a low value, means that the above regression models undertake a low percentage of changes in dependent variable. The results of *t* test for positive yield indicated (T=-0.951, β=-0.019, P-value=0.661) that there is no meaningful relationship between the positive share yield and conservatism of chemical and pharmaceutical companies during 2004-2010.

Fourth Research hypothesis:
The companies producing chemicals and pharmaceuticals conservatively indicate their profits.

Table 4 illustrates the results of linear regression test of the model of Basu (1997) for calculating conservatism of chemical and pharmaceutical companies.

In order to calculate conservatism for all years, initially in Excel software, the average of each variables of E_{it} (profit), P_{it} (value or price), R_{it} (annual share yield) was calculated and after calculating E_{it}/P_{it} for each company, their average for years of 2004-2010 were calculated and applied as the new variables in SPSS software to analyze regression.

The coefficient of $(\beta + \gamma)$ in the related regression model (negative yield) was obtained as 0.006 and the coefficient of β in the regression model in the state of positive yield was obtained as 0.001 and this amount for the regression model in the negative state was obtained as -0.019. Therefore, considering the relation presented by Basu (1997) we have: $\beta > \gamma + \beta$, in other words, $\gamma < 0$, therefore the research hypothesis is not accepted. In other words, the chemical companies being accepted in the stock exchange of Tehran do not show their profit with conservatism during 2004-2010.

The first sub-hypothesis testing:

The chemical and pharmaceutical companies show their profit with conservatism in 2004.

Table 5 shows results of linear regression test of the model of Basu (1997) for calculating conservatism in 2004.

Table 4: The results of fourth hypothesis

The Predicted Sign	p-value	T Test Statistics	Variable Coefficient (β)	Independent variables (explanatory)	Sign of Annual Yield
	$E_{it}/P_{it-1_{it}}/= (a_{it} + \eta) + (\beta + \gamma)R_{it} + \varepsilon_{it}$				
	0.815	-0.240	-0.062	$(a_{it} + \eta)$	Negative Yield DR=1
	0.362	-0.951	-0.019	$(\beta + \gamma)R_{it}$	
	Adjusted R^2=0.008				
	Durbin-Watson=2.012				
(-) or $\gamma < 0$	$E_{it}/P_{it-1} = a_{it} + \beta DR_{it} + \varepsilon_{it}$				
	0.016	2.507	0.167	a_{it}	Positive Yield DR=0
	0.661	0.442	0.001	βR_{it}	
	Adjusted R^2 =0.017				
	Durbin-Watson=2.205				

Table 5: Results of the first sub-hypothesis

The Predicted Sign	p-value	T Test Statistics	Variable Coefficient (β)	Independent variables (explanatory)	Sign of Annual Yield
	$E_{it}/P_{it-1_{it}} = (a_{it} + \eta) + (\beta + \gamma)R_{it} + \varepsilon_{it}$				
	0.174	1.413	0.107	$(a_{it} + \eta)$	Negative Yield DR=1
	0.000	5.319	0.008	$(\beta + \gamma)R_{it}$	
	Adjusted R^2=0.577				
	Durbin-Watson=2.108				
(+)or γ>0	$E_{it}/P_{it-1_{it}} = a_{it} + \beta R_{it} + \varepsilon_{it}$				
	.012	2.651	.346	a_{it}	Positive Yield DR=0
	0.841	-.202	0.000	βR_{it}	
	Adjusted R^2=.026				
	Durbin-Watson=1.924				

In the above table, it is seen that the value of Durbin-Watson statistics for both regression models in the state of negative and positive yield is obtained as 2.108 and 1.924, respectively which is in 1.5 – 2.5 and is an acceptable value. In other words, applying the regression model on these observations is allowed.

The value of the adjusted coefficient of determination for two models (negative and positive) is obtained as 0.557 and 0.026, respectively that for the regression model in the negative state is better than the model in the positive state.

The results of T test for negative yield indicated (T=1.413 with p-value=0.000<0.05) that is to say there is a positive meaningful relationship between the negative share yield and conservatism. But for the positive share yield (t=-0.202 ,P-value=0.841>0.05) there is no meaningful relationship between share yield and conservatism.

The coefficient of $(\beta + \gamma)$ in the related regression model (negative yield) was obtained as 0.008 and the coefficient of β in the regression model in the state of positive yield was obtained as zero. Considering the $\beta < \gamma + \beta$ Relation, we conclude: γ>0, in other words, the chemical companies indicated their profit with conservatism in 2004.

The second sub-hypothesis testing:
The chemical and pharmaceutical companies show their profit with conservatism in 2005.

Table 6 illustrates the results of linear regression test of the model of Basu (1997) for calculating conservatism in 2005.

Table 6: Results of the second sub-hypothesis

The Predicted Sign	p-value	T -Test Statistics	Variable Coefficient (β)	Independent variables (explanatory)	Sign of Annual Yield
(-) or $\gamma<0$					
	$E_{it}/P_{it-1_{it}} = (a_{it} + \eta) + (\beta + \gamma)R_{it} + \varepsilon_{it}$				Negative Yield DR=1
	0.304	1.057	2.031	$(a_{it} + \eta)$	
	0.841	-.091	0.000	$(\beta + \gamma)R_{it}$	
	Adjusted R^2=0.052				
	Durbin-Watson=2.119				
	$E_{it}/P_{it-1_{it}} = a_{it} + \beta R_{it} + \varepsilon_{it}$				Positive Yield DR=0
	0.029	2.276	17.973	a_{it}	
	0.115	1.611	31.965	βR_{it}	
	Adjusted R^2 =0.039				
	Durbin-Watson=1.757				

The results of linear regression test for determining conservatism of companies are presented in the above table. The value of Durbin-Watson statistics for both regression models in the states of negative and positive yield is obtained as 2.119 and 1.757, respectively, and is an acceptable value. Therefore, applying the regression model on these observations in 2005 is allowed.

The value of the adjusted coefficient of determination for two regression models (negative and positive) is obtained as 0.052 and 0.039, respectively that for the regression model in the negative state is better than the model in the positive state.

The results of *T* test for negative yield indicated (T=1.057or p-value=0.841>0.05) that is to say there is no meaningful relationship between the negative share yield and conservatism. For the positive share yield (t=1.611, P-value=0.115>0.05) there is no meaningful relationship between positive share yield and conservatism.

For the regression model in the state of negative yield, the value of $(\beta + \gamma)$ in the negative yield was obtained as 0.000 and for the regression model in the state of positive $\beta < \gamma + \beta$ yield was obtained as 31.965. Considering the relation, we observe: $\gamma<0$, in other words, the chemical companies did not indicate their profit with conservatism in 2005.

The third sub-hypothesis testing:
The chemical and pharmaceutical companies being accepted in the stock exchange of Tehran in 2006 show their profit with conservatism.
Table 7 shows results of linear regression test of the model of Basu (1997) for calculating conservatism in 2006.

Table 7: Results of the third sub-hypothesis

The Predicted Sign	p-value	T -Test Statistics	Variable Coefficient (β)	Independent variables (explanatory)	Sign of Annual Yield
(-) or $\gamma<0$	$E_{it}/P_{it-1_{it}} = (a_{it} + \eta) + (\beta + \gamma)R_{it} + \varepsilon_{it}$				Negative Yield DR=1
	0.220	1.274	o.212	$(a_{it} + \eta)$	
	0.663	0.444	0.001	$(\beta + \gamma)R_{it}$	
	Adjusted $R^2 = 0$.047				
	Durbin-Watson=2.826				
	$E_{it}/P_{it-1_{it}} = a_{it} + \beta R_{it} + \varepsilon_{it}$				Positive Yield DR=0
	0.947	-0.067	-1.018	a_{it}	
	0.014	2.584	116.689	βR_{it}	
	Adjusted $R^2 = 0. 407$				
	Durbin-Watson=1.625				

The results of linear regression test for determining conservatism of companies are presented in the above table. The value of Durbin-Watson statistics for both regression models in the states of negative and positive yield is obtained as 2.826 and 1.625, respectively, and is an acceptable value. Therefore, applying the regression model on these observations in 2006 is allowed.

For the adjusted coefficient of determination for two models (negative and positive), the obtained values were 0.047 and 0.407, respectively that for the regression model in the positive state is better than the model in the negative state.

The results of T test for negative yield indicated (t=1.274 ↳ p-value=0.663>0.05) that is to say there is no meaningful relationship between share yield and conservatism. For the positive share yield (T=1.350, P-value=0.014>0.05) there is no meaningful relationship between share yield and conservatism.

For the regression model in the state of negative yield, the value of $(\beta + \gamma)$ in the negative yield was obtained as 0.001 and for the regression model in the state of positive yield was obtained as 116.689. Considering relation presented by Basu (1997), we have: $\beta > \gamma + \beta$ or $\gamma < 0$. In other words, the chemical companies have not shown their profit with conservatism in 2006.

The fourth sub-hypothesis testing:
The chemical and pharmaceutical companies show their profit with conservatism in 2007.

Table 8 portrays the results of linear regression test of the model of Basu (1997) for calculating conservatism in 2007. In the above table, it is observed that the value of Durbin-Watson statistics for both regression models in the state of negative and positive yields is obtained as 1.781 and 1.942, respectively which is in 1.5 – 2.5 and is an acceptable value. In other words, applying the regression model on these observations is allowed.

The value of the adjusted coefficient of determination for two models (negative and positive) is obtained as 1.781 and 0.130, respectively. Both values of coefficients of determination are low, that is, the above regression models undertake low percentage of changes of dependent variable and this state in the regression model in the negative state is better than positive state. The results of T test for negative yield indicated (t=2.298 ↳ p-value=0.033>0.05) that is to say there is no meaningful relationship between share yield and conservatism. For the positive share yield (T=1.350, P-value=0.185>0.05) there is no meaningful relationship between share yield and conservatism. The value of $(\beta + \gamma)$ in the related regression model (negative yield) was obtained as 26.159 and the value of β in the regression model in the state of positive yield is obtained as 0.002 which is a small value compared to the coefficient of negative model, we have: $\beta > \gamma + \beta$ or $\gamma < 0$. In other words, the chemical companies have not shown their profit with conservatism in 2007. Considering the relation presented by Basu (1997), we have: $\beta < \gamma + \beta$, in other words, $\gamma > 0$. Therefore, the chemical companies show their profit with conservatism in 2007.

Table 8: Results of the fourth sub-hypothesis

The Predicted Sign	p-value	T- Test Statistics	Variable Coefficient (β)	Independent variables (explanatory)	Sign of Annual Yield
(+) or $\gamma > 0$	\multicolumn{4}{c}{$E_{it}/P_{it-1_{it}} = (a_{it} + \eta) + (\beta + \gamma)R_{it} + \varepsilon_{it}$}	Negative Yield DR=1
	0.641	0.474	0.040	$(a_{it} + \eta)$	
	0.033	2.298	26.159	$(\beta + \gamma)R_{it}$	
	Adjusted R^2=0.176	
	Durbin-Watson=1.781	
	\multicolumn{4}{c}{$E_{it}/P_{it-1_{it}} = a_{it} + \beta R_{it} + \varepsilon_{it}$}	Positive Yield DR=0
	0.655	0.450	2.924	a_{it}	
	0.185	1.350	0.002	βR_{it}	
	Adjusted $R^2 = 0.130$	
	Durbin-Watson=1.942	

The fifth sub-hypothesis testing:

The chemical and pharmaceutical companies show their profit with conservatism in 2008.

Table 9 shows the results of linear regression test of the model of Basu (1997) for calculating conservatism in 2008. The value of Durbin-Watson statistics for both regression models in the states of negative and positive yields is obtained as 2.322 and 2.259s, respectively which is in 1.5 – 2.5 and is an acceptable value and therefore, applying the regression model on these observations in 2008 is allowed.

On the other hand, the value of the adjusted coefficient of determination for two models (negative and positive) is

obtained as 0.043 and 0.017, respectively. Both values of coefficients of determination are low, that is, the above regression models undertake low percentage of changes of dependent variable and this state in the regression model in the negative state is better than positive state.

The value of $(\beta + \gamma)$ in the related regression model (negative yield) was obtained as 0.006 and the value of β in the regression model in the state of positive yield is obtained as 5.148 which is a big value compared to the coefficient of negative model. Considering the relation presented by Basu (1997), we have: $\beta < \gamma + \beta$, in other words, $\gamma < 0$, and we conclude that the chemical companies did not show their profit with conservatism in 2008.

Table 9: Results of the fifth sub-hypothesis

The Predicted Sign	p-value	T -Test Statistics	Variable Coefficient (β)	Independent variables (explanatory)	Sign of Annual Yield
(-)or γ<0	$E_{it}/P_{it-1it} = (a_{it} + \eta) + (\beta + \gamma)R_{it} + \varepsilon_{it}$				Negative Yield DR=1
	0.859	0.180	0.028	$(a_{it} + \eta)$	
	0.111	1.669	0.006	$(\beta + \gamma)R_{it}$	
	Adjusted R^2 = 0.043				
	Durbin-Watson=2.322				
	$E_{it}/P_{it-1it} = a_{it} + \beta R_{it} + \varepsilon_{it}$				Positive Yield DR=0
	0.020	2.438	19.407	a_{it}	
	0.206	1.287	5.148	βR_{it}	
	Adjusted R^2 =0.017				
	Durbin-Watson=2.259				

The sixth sub-hypothesis testing:
The chemical and pharmaceutical companies did not show their profit with conservatism in 2009. Table 10 portrays the results of linear regression test of the model of Basu (1997) for calculating conservatism in 2009.

Table 10: Results of the sixth sub-hypothesis

The Predicted Sign	p-value	T -Test Statistics	Variable Coefficient (β)	Independent variables (explanatory)	Sign of Annual Yield
(-)or γ<0	$E_{it}/P_{it} = (a_{it} + \eta) + (\beta + \gamma)R_{it} + \varepsilon_{it}$				Negative Yield DR=1
	0.418		0.006	$(a_{it} + \eta)$	
	0.140		0.000	$(\beta + \gamma)R_{it}$	
	Adjusted R^2=0.064				
	Durbin-Watson=1.227				
	$E_{it}/P_{it} = a_{it} + \beta R_{it} + \varepsilon_{it}$				Positive Yield DR=0
	0.061	1.933	0.058	a_{it}	
	0.415	0.825	0.001	βR_{it}	
	Adjusted R^2 =0.009				
	Durbin-Watson=1.809				

The value of Durbin-Watson statistics for both regression models in the states of negative and positive yields is

obtained as 1.227 and 1.809, respectively; however the value of Durbin-Watson statistics related to regression in the

negative state is somewhat low, but there values are acceptable, therefore, applying the regression model on these observations in 2009 for both of them is allowed.

The values of the adjusted coefficient of determination for two models (negative and positive) are obtained as 0.064 and 0.009, respectively which are low for both values of coefficients of determination, that is, the above regression models undertake low percentage of changes of dependent variable and this state in the regression model in the negative state is better than positive state.

The value of $(\beta + \gamma)$ in the related regression model (negative yield) was obtained as 0.006 and the value of β in the regression model in the state of positive yield is obtained as 0.001. Therefore, considering the relation presented by Basu (1997), we have: $0 > \gamma + \beta$, in other words, $\gamma < 0$, and the chemical and pharmaceutical companies did not show their profit with conservatism in 2009.

Conclusion
Using multiple linear regression models and year-by-year analysis indicated that there is no meaningful relationship between profit conservatism and share yield.

In the year-to-year examination, it has been specified that companies (chemical and pharmaceutical) in 2005 and 2008, have shown their profits with conservatism.

Considering the results of research, we can conclude that there is no relationship between profit conservatism and share yield, but with more researches in this field, the results may be different. For instance, with change in time period and statistical sample, different results may be obtained. It is suggested that in order to evaluate conservatism in financial reporting, the criterion of market value to book value, will be independently used.

References

Ahmed, A and S. Duellman (2005). Evidence on the role of accounting conservatism in corporate governance Journal of Accounting and Economics. 43: 411-437.

Ahmed, A. B. Bilings R. Morton M. Stanford-Harris (2002). The Role of Accounting Conservatism in Mitigating Bondholder Shareholder Conflict Over Dividend Policy and in Reducing Debt Cost The Accounting Review. 77: 867–890.

Azad, A (2008). The role of financial statement on conservatism master's thesis, Emam University, Iran.

Ball R. (2001). The Effect of International Institutional Factors on Properties of Accounting Earnings Journal of Accounting and Economics. 29 :1-51.

Basu S. (1997). The conservatism principle and the asymmetric Timeliness of Earning" Journal of Accounting & Economics. 24:3-37.

Beaver, W. and S. Ryan, (2000). Conditional and Unconditional Conservatism: Concepts and Modeling Review of Accounting Studies. 1: 127-148.

Beekes, W., P. Pope and S. Young (2004). The link between earnings timeliness, earnings conservatism and board composition: evidence from the UK Corporate Governance: An International Review. 12: 47-59.

Cheshan, M (2008). Long-term liabilities and conservatism master's thesis, Tehran Branch, Islamic Azad University, Iran.

Ezzati, J (2008). The relationship of balance sheet and income statement with conservatism master's thesis, Tehran Branch, Islamic Azad University, Iran.

Frankel, R and X, Li (2004). Characteristics of a Firm's Information Environment and the Information Asymmetry between Insiders and Outsiders Journal of Accounting and Economics, 37: 229–259.

Givoly, D. and C. Hayn (2000). The Changing Time-series Properties of Earning, Cash Flows and Accruals Financial Reporting and Economics. 29(3): 287-320.

Kordestani G and H Beygi (2007). Conservatism in financial reporting, Iranian Accounting Review. 52: 89-106 (In Persian).

LaFond R. and S. Roychowdhury (2008). Managerial Ownership and Accounting Conservatism Journal of Accounting Research. 46: 101-135.

LaFond, R. and R. Watts (2008). The Information Role of Conservatism The Accounting Review. 83: 443-478.

Langroudi, A (2007). Asymmetric information and conservatism master's thesis, Emam University, Iran.

Lim, R. (2006). The relation between corporate governance and accounting conservatism: Australian evidence Working Paper, Australian School of Business.

Moradi, M, M. Salehi and Z Erfanian (2010). A Study of the Effect of Financial Leverage on Earnings Response Coefficient throughout Income Approach: Iranian Evidence International Review of Accounting, Banking, and Finance (IRABF). 2: 76-84.

Namazi M, and M Salehi (2010). The Role of Inflation in Financial Repression: Evidence of Iran World Applied Sciences Journal. 11(6): 653-661.

Rostami V, and M Salehi (2011). Necessity for Reengineering Qualitative Characteristics of Financial Reporting arrangement to Reduce Information Asymmetry: Evidence of Iran African Journal of Business and Management. 5(8): 3274-3288.

Salehi, M (2009). Tobin's Q Model and Cash Flows from Operating and Investing Activities Evaluating in Listed Companies in Iran Zagreb International Review of Economic and Business. 7(2): 71-82.

Salehi M, and V Rostami (2011). Different Perceptions in Financial Reporting: Empirical Evidence of Iran African Journal of Business and Management. 5(8): 3330-3336.

Salehi M, and K Biglar (2009). Study of the Relationship between Capital Structure Measures and Performance: Evidence from Iran International Journal of Business and Management. 4(1): 97-103.

Salehi M, and V Rostami (2009). Relationship between Going Concern Concept and P/E Ratio in Emerging Market: Case of Iran Journal of Management Research. 1(1): 1-22.

Salehi M, M,Alavian, and M Hematfar (2011). A Study of Relationship between Share and Criterion of Companies Performance by using Profit and Cash flows: Some Iranian Evidence African Journal of Business and Management. 5(5): 1896-1903.

Sivakumar, K., and R. Ball (2005). Enforceable accounting rules and income measurement by early 20th century railroads Journal of Accounting Research. (41): 397-43.

Sterling, R. R. (1970). The Theory of the Measurement of Enterprise Income Lawrence, KS: University of Kansas Press.

Watts, RL. (2003). Conservatism in Accounting Part i: Explanations and Implications Accounting Horizons. 17: 207-221.