

The Investigation of Effective Indices on Conservatism in Companies Acquired in Tehran Stock Exchange

Philippe Cutler¹ Ahmad Rasta² Bahman Ebrahimi³ Parshormman⁴
Hossein Paydar Ardakani^{5*}

1.Department of MBA, College of Management, University Evanston, Illinois, USA

2.Department of MBA, College of Science, Tehran University, Tehran, Iran

3.Daniels College of Business, University of Denver, Colorado, USA

4.Department of MBA, College of Management, University of Miami, Florida, USA

5.Department of MA, College of Management, Islamic Azad University of Ardakan, Yazd, Iran

Abstract

In this research, the effect of conservatism on earnings management and capital structure of listed companies in Tehran Stock Exchange has been investigated. The research population consisted of all companies listed in Tehran Stock Exchange during the period of 2005-2015. The research method is descriptive-survey and correlation type. The sample size is 120 companies based on the Cochran formula. The required data from the software was extracted. Datasheet analysis was used to analyze the data. Chow model, Hausman and combined regression were used. In the first model, coefficients of short and long-term debt ratio ratios to capital, and in the second model, the ratio of debt to capital, company size and asset return at a significant level of 5%, the remaining coefficients are not significant, and the amount of the R² (coefficient of determination). The model suggests that 87% of the variations of the dependent variable with the independent and controllable variables can be explained, and the Durbin-Watson statistics reject the assumption of self-correlation between the components of the model. The results showed that conservatism on the structure of capital and the management of the profits of private companies were accepted in Tehran Stock Exchange.

Keywords: Conservatism, Profit, Accepted Companies, Tehran Securities.

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Introduction

The qualitative features of accounting information have an irrefutable role in improving the information quality of financial statements. One of the qualitative features of accounting information is conservatism of accounting. Accounting conservatism is claimed to be important in terms of the usefulness of information for decision making and, in particular, the assessment of the manager's duty. [1] The primary objective of financial accounting is to provide useful information for investors to predict the performance of the economic unit. The necessity of reporting a profit as a primary source for decision making by investors, managers and analysts can be well documented and profit reporting in various ways such as providing a basis for calculating taxes, a criterion for assessing the success of a firm's performance, a criterion for determining the amount of profits Dividing, a criterion for managing profit distribution, helps to measure the economy of a society as a criterion for the management of a single economic unit and other matters. Also, because the value of a company is linked to its current and future profits, profit determination is of great importance. Managers often manage their profits in order to mislead the shareholders as to the real economic performance of the company. This profit management, which is done by manipulating accounting figures or manipulating real activities, reduces the accuracy of messaging, increases the risk and uncertainty of outsiders, and may also lead to information asymmetry and reduced efficiency. Hedge management not only hides the real performance of the company, but also conceals the real growth of company profits and earnings that are useful in predicting future growth of the company. As it is known, the profit management framework of the company's external reports, and since it is responsible for outsourcing reports, senior corporate executives are responsible for managing profits in companies as well as senior executives of companies. In addition, in the theory of "corporate financial disclosure management", the output of disclosure of a company is viewed as a function of several variables, including the internal structure of the company and policies. Capital structure is considered as the most important factor in the valuation of companies, and the rating of companies is dependent on their capital structure in terms of credit. The researchers said that under certain assumptions such as the existence of a complete competition market, the absence of income taxes and the absence of bankruptcy costs, the value of the company is independent of its capital structure. After jund a year, the researchers argued that given the fact that debt for companies creates a tax shield, they prefer to use debt from different sources of finance. Because using more debt will increase the value of the company. P & P assumes that accounting conservatism is due to the requirement for high-proofness to recognize income or the ability to prove and validate for recognition of costs associated with rewards between shareholders and managers. From a theoretical point of view, accounting conservatism delayed the manager's biased behavior in identifying profits. Hence, conservatism leads the manager

and other groups such as shareholders to receive less sums of money. This will increase the value of the company. The increased value of the company increases among all groups of the company's contractors, the division and welfare of each group. Hence, the main question of this study is to what extent accounting conservatism affects corporate profits and capital structure? And whether accounting conservatism can be an effective contractual mechanism for monitoring the performance of the management or not?

Methodology

Most research studies show a method or strategy that is easily recognizable and includes common collaborative procedures such as problem solving, information gathering, and conclusions. The details of these specific procedures are largely determined by the research method. Our method in this research is descriptive-survey and correlation type.

Descriptive-qualitative method is a method based on describing the events and what is happening and considering the conditions, existing relationships, common beliefs, current processes and trends. Its focus is primarily on the present, although it often examines events and past experiences that are relevant to existing conditions (Khaki, 2003, 104). Descriptive research includes a set of methods whose purpose is to describe the conditions or phenomena under investigation. The conduct of descriptive research can only be used to better understand the existing conditions or to assist in the decision-making process (Sarmad, p. 81, 1376). The descriptive research feature is that the researcher does not interfere in the position, status and role of the variables, and does not apply any manipulation or modification, and only studies what is there and describes it (Hafeznia, 1377, p. 61).

Scrolling is also a method of research whose purpose is mainly exploratory and descriptive and mainly uses a questionnaire, although other tools such as structured interview, observation and content analysis are also used.

The research method is post-event (scientific-comparative) and deductive-deductive. In order to test the hypotheses, the correlation analysis method was used to test the hypotheses using the existing and inductive theories in order to test the hypotheses.

Correlation analysis with consistency includes all methods in which it is tried to discover or determine the relationship between different variables using regression model and correlation relationship. The purpose of the correlation analysis method is the companion study (approx.). Changes are one or more variables with variations of one or more other variables.

This research method examines only relationships between variables and is used when the number of actor variables is high in the test position, and on the other hand, in this research method, cause and effect relationships are not necessarily identified. But only the purpose is to determine which other variable is consistently in the positive or negative direction.

Typically, this type of study is the answer to the following questions:

First, is there a relation between the two categories of test data?

The second is the question of this correlation, which may be positive or negative. In a positive correlation mode, the changes in both categories of information in one direction are such that if the increase in the first category is in both categories in the opposite direction, so that if the increase is in the first category, in the second category, the information will be reduced.

The third question is, what is the magnitude and amount of correlation? Therefore, the value of the correlation coefficient commonly expressed as (R) is the precise index that can be calculated by quantifying how much change is related to the variable or other variables.

3.1 Research objective

General Purpose: Investigating the Effect of Conservatism on Profit Management and Capital Structure of Listed Companies in Tehran Stock Exchange.

Special Purposes:

- Investigating the effect of conservatism on the capital structure of listed companies in Tehran Stock Exchange
- Investigating the effect of conservatism on earnings management of listed companies in Tehran Stock Exchange

3.2. Research hypotheses:

In the correlation research, in which data for each individual or member are collected from two or more variables, then the amount of correlation of the collected data is calculated. The hypothesis should be expressed directly and with a specific direction. So according to the research topic, the research hypotheses are as follows. In the correlation research, in which data for each individual or member are collected from two or more variables, then the amount of correlation of the collected data is calculated. The hypothesis should be expressed directly and with a specific direction. So according to the research topic, the research hypotheses are as follows. Main hypothesis: conservatism affects earnings management and capital structure of listed companies in Tehran Stock Exchange.

Sub-hypotheses:

1. Conservatism affects the structure of capital in private companies admitted to the Tehran Stock Exchange.

2. Conservatism affects the management of the profits of private companies admitted to the Tehran Stock Exchange.

3.3 Independent and dependent variables:

A variable is a concept that is assigned more than two or more values or numbers. In other words, the variable refers to features that can be viewed or measured, or two or more values or numbers replacing that convention. The variable is divided into two categories based on the role played by the research.

A) independent variable

B) dependent variable.

A. Independent variable (X):

The input variable is a measure measured, manipulated, or chosen by the researcher to determine its impact or relation with another variable. The independent variable is dependent on the default variable. In other words, this variable, the introduction, and the dependent variable of the result. The conservative variable as an independent variable consists of: stock returns, earnings per share, and artificial variables (positive or negative) of the results. In this section, given the appropriate coverage of stock returns, the earnings per share and the artificial variable are ignored and only stock returns are considered as conservatism.

B) Variable (Y):

The variable is the response or criterion, and is the sum of an organism that is stimulated. The dependent variable is observed or measured to determine the effect of the independent variable on it. This variable is predicted through an independent variable. In the study of correlation, because the existence of a dependent variable depends on the independent variable, so we call it the dependent variable or function. Here, according to research hypotheses, efficiency is considered as a function or dependent variable in both hypotheses. In the first hypothesis, the dependent variable is the capital structure, which includes the ratio of short-term debt to total capital and long-term debt ratio to total capital, and in the second hypothesis, the management of earnings includes the ratio of debt to capital, company size and return on assets.

Statistical community:

The problem most researchers face in planning any research is the size or volume required for the sample. The general rule in this case approves the largest possible size. The purpose of the study is to collect information about a community that has been sampled. Therefore, the larger the sample is chosen, the statistical indicators calculated will give a more accurate estimate of the parameters of the community. There is a close relationship between the sample size and the statistical test of the null hypothesis, with the larger sample, the lesser assumption assumes zero in the case that it is not really true. In most research projects, the financial, time and manpower constraints, the sample size that needs to be studied the research population consisted of all companies listed in Tehran Stock Exchange during the period of 1384-1394. Also, one of the foreseeable limitations for this study is the following:

1. The end date of the fiscal year is March 29th.
2. Integration of information in the stock exchange and lack of sufficient information about companies.
3. Failure of the Stock Exchange to respond to newly requested information.
4. The financial statements of many companies do not exist before the year 2008.
5. In most companies there is no continuity of information provision between 2008 and 2015.
6. The maximum company has been accepted in 2008.7 The company has reviewed and approved the financial statements for all years. The number of companies that are within the limits of the specified limit is 196 companies. According to the Morgan table, the number of statistical samples is estimated to be 120.

3.5. Method of data collection

Data collection methods in this research are:

3.5.1. Library method

In this research, information about theoretical literature has been gathered initially by referring to articles, books, researches related to the subject, theses, etc. The information gathering method in this section is library research.

3.5.2. Field method

Also, a part of the information about the variables of the research, referring to the stock indexes, the library of the Stock Exchange, and the financial statements of the members of the stock exchange, the information and data of the accounting software "Tadbir Pardaz" and "New Raider" and the information of the site www.Rdis.ir were extracted and another part of the information was extracted through the bank's financial statements and notes. So the data gathering method in this section is field.

3.6. Data Collection tools

Depending on the type of study, the tool is used to collect and pinch.

3.7. Model and research variables

Below are models and research variables.

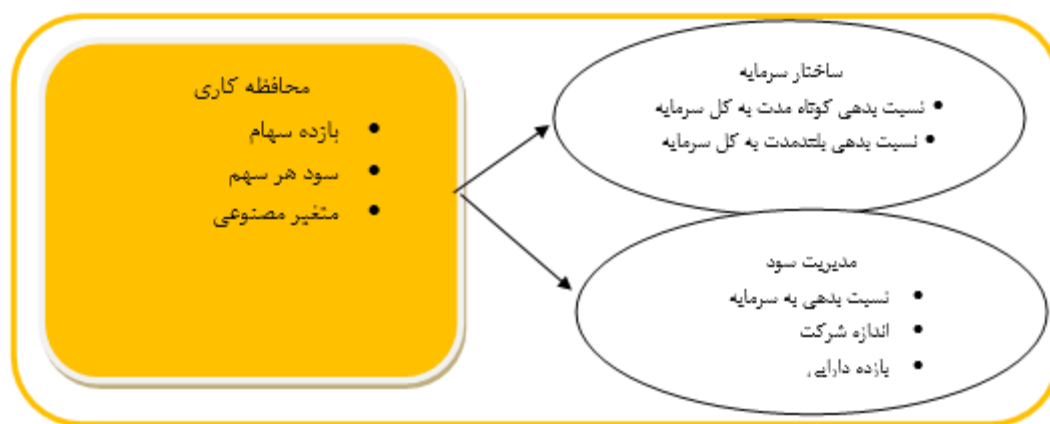


Figure 3-1: Research Model (Alum, 2012) 14 [and Shasta, 2012] 11

Variable Conceptual Definition

Capital structure: The usual capital structure is obtained through ratios through the following ratios: short-term debt ratio to total assets Long-term debt ratio to total assets John and Eugene (1975).

Conservatism: Conservatism requires accounting to have a high degree of certification for recognizing good news, such as profit, in the face of knowing bad news as a loss. This accounting defines the conservatism of accounting from the perspective of profit and loss [5].

Profit: The ratio is the net profit to the total assets of each company each year [6].

Earnings management: the process of applying judgments or scheduling and conducting transactions to make changes in financial reports to mislead some users in relation to the results of the company's performance or in order to affect the results of contracts based on reported accounting figures [6]. [.

Variable operational definition

In this study, the logarithm of the financial leverage (book value of total assets / book value of debt) is used as a capital structure, indicating how much the company used the debt to finance its assets.

(3-1)

financial leverage = (total debt of the book value) / (total assets of the book value)

Conservatism: Definition of accounting conservatism from the perspective of the balance sheet. In this research, earnings per share and stock returns are used for conservatism.

Earnings management: In this research, the sum of variables of the ratio of debt to shareholders' equity, company size and return on assets is discussed. The return on assets is: This ratio is obtained by dividing net income by the sum of assets. On the other hand, the debt ratio is the division of total debt into assets. The size of the company is based on past research from the logarithm of the stock market value of the company.

Data Analysis Method

In this research, descriptive and inferential statistics will be used to analyze the information. In descriptive statistics, the descriptive information of the research variables (mean, minimum, maximum, standard deviation, skewness, elongation, etc.) was investigated and inferential statistics were used to explain the relationship between independent and dependent variables using the combined regression method (panel). .

In the following, the above methods are analyzed theoretically and mathematically:

Generally, three types of data are available for empirical analysis:

1. Time series data: In time series data, the value of one or more variables is observed over a period of time.
2. Cross-sectional data: In cross-sectional data, the values of one or more variables for several economic units (sample observations) are collected for a specified time.
3. Combined data: In combined data, there are elements of both categories of time and cross-sectional data. That is, information about cross-sectional data is observed over time. In other words, such data has two dimensions, one dimension of which is related to different units at any given time, and then the other is related to time.

In this research, using the data type and the existing analysis methods, the least squares regression model is used in combination data. Combined data includes elements of both sets of time series data and cross-sectional data. How to arrange this type of data is done in two ways:

In the first type, the data of a cross sectional unit are put together for T year, and then this procedure is repeated for the second section unit and the subsequent units. This kind of data layout is referred to as "Integrated Data", which is considered in this paper.

The second type of compilation of data is the addition of data for cross-sectional units each year. This process is repeated for years to come. The way data is arranged is referred to as "panel data".

The overall statistical framework of the combined data is as follows:

$$Y_{it} = \alpha + X_{it}'\beta + U_{it}$$

$$U_{it} = \mu_i + V_{it}$$

$$i = 1, \dots, N$$

$$t = 1, \dots, T$$

In this regard, the variable is dependent and contains explanatory variables. The number of companies (sample observations) represents time. Scalar and lateral, in which number of explanatory variables is present, and the specific component of the time sections and effects remains. Combined data regression models are estimated using common effects method, fixed effects or random effects. In the joint effect method, it is assumed that the sections are constant for cross sections. The fixed effects model is a model in which the width of the origin varies between units, so that in this model, the width of the source varies from one unit to another, but the width from the source of each unit is constant over time. In the random effects method, it is assumed that the difference between the companies is random, in which case a random component such as the equation is added. In this regard, EViews software will be used to analyze the data and perform relevant statistical tests.

3.1.1. Combined Data Econometric Methodology

Combined data

Combined data in econometrics has a lot of advantages over the use of cross-sectional data or time series. Combined data takes different levels of information and their dynamics simultaneously. Since the non-inclusion of some variables in the structure of models leads to inefficiencies in the estimation of econometric models, the combined data method consisting of time series data and cross-sectional data, the effect of these variables is not considered or irreducible. Better than cross-sectional data in one year or time series data for a cross-section. Combined data takes precedence over the variables and provides assurance in terms of the dynamics of the variables [25]. Baltajigi considers the advantages of using hybrid data as follows:

1. Because the combined data is related to individuals, firms, states, countries and such units at the time, the existence of the variance of variance in these units is limited.
2. By combining time-series and cross-sectional observations, mixed data provides estimates with more information, greater variability, less coherency between variables, higher degrees of freedom, and more efficiency.
3. Study of cross-sectional and repetitive observations, hybrid data, in order to study the dynamics of changes, are more appropriate and better. Hence, unemployment, job rotation, and labor mobility are better evaluated with combined data.
4. Combined data determine the effects that cannot be easily seen in cross-sectional and time series data. For example, the effects of minimum wage laws on employment and earnings can be better studied.
5. Our hybrid data enables us to study complex behavioral models. For example, phenomena such as economies of scale and technological changes can be combined with combined data in comparison with time series and periodic data. Better checked.
6. Combined data, providing data for thousands of units, can minimize inclination that may be achieved, as a result of individuals with firms (collectively and collectively).

• Research tests

- Single root test in panel data

If the time series variables used to estimate the parameters of the non-standard model are false, the regression probability is false, in which case the use of the F and t statistics would be misleading. So, in order to prevent false regression, data is first tested in a stand-alone manner. In the stagnation test, what matters is the strength of the root tests of the unit. Most researchers agree that increasing the size of the samples studied increases the power of the tests and their results can be trusted. Instead of focusing on time series, it is preferable to use panel patterns to combine time series data in different groups. Panel data has many advantages over time or time series data. Increasing trust in estimates, explaining more advanced models and reducing the coherence problem among variables is one of the main advantages of this method. In this study, the Dickey Fuller test is used to examine the static variables. Consider the following generalized Dickey Fuller regression:

$$y_{it} = \rho_i y_{i,t-1} + \sum_{j=1}^{p_i} \phi_{ij} \Delta y_{i,t-j} + z'_{it} \gamma + \varepsilon_{it}$$

A static test requires a hypothesis check $H_0 : \rho_i = 1$ for all i and $H_1 : \rho_i < 1$ for at least one i. With

the assumption of zero, the static of the desired variable can be verified. Taking into account t_{ρ_i} the generalized Dickey Fuller regression t, the mean of t is as follows:

$$\bar{t} = \frac{1}{N} \sum_{i=1}^N t_{pi}$$

In the above relation, the standard distribution is normal [15].

- Select a model based on hybrid data

In econometrics, it is necessary to apply the principle of saving in the application of theories, which is an important scientific principle. If we want to explain a phenomenon with many variables or factors, the theory of value will be lost because control and policy making are impossible in practice and, contrary to expectation, the explanatory value of the theory goes down. So we have to choose one of the available models (the static and random effects model).

- Fixed effects model

Consider the following two models.

$y_{it} = \alpha_i + \beta x_{it} + \mu_{it}$, The static-cross-sectional effects model

$y_{it} = \alpha_t + \beta x_{it} + \varepsilon_{it}$, Fixed-time effects model

In the static-cross-sectional effects model, i indicates the width of the source, which, if the model is estimated, estimates for each of the companies a width from a different origin. In the fixed-time effects model, α_t shows the width of the source, which, if the model is estimated, for each year, a width from a different origin is estimated. This difference may be due to the specific characteristics of each of these years, such as the political and economic conditions of that year. In the econometric literature, the above models are called static effects models. Now, using the imaginary variables, we can examine the difference in the width of the source over the years (companies). In this method, the width of the source is only between the sections and the time factor does not affect them [21]. The following equation is estimated using the least squares method, which is known as the least squared estimator with virtual or imaginary variable (LSDV).

$$y_{it} = \sum_{j=1}^N \alpha_j d_{ij} + x_{it} \beta + \varepsilon_{it}$$

- Random effects model

According to Volmo, society consists of an infinite decision, not the infinite number of individuals, in which case the boundaries of the sources should not be considered conditional. That is, it is better to not call them a random sentence. To better understand the subject, consider the following sentence structure in the model $y_{it} = \alpha + \beta x_{it} + \varepsilon_{it}$:

$$u_{it} = \mu_t + v_{it}$$

It assumes that v_{it} is independent of x_{it} . Here, our unknowingness (ie u_{it}) consists of two parts. The first part (μ_t) is firmly established among companies, but changes over time. This section may or may not be independent of x_{it} . The second part (v_{it}) also varies as independently over time and among companies. In the random effects model, μ_t is not correlated with x_{it} , but in the fixed effects model, μ_t is correlated with x_{it} .

- Housman test

According to Housman (1987), the difference between the estimators of the fixed effect method and random effects is considered as a zero hypothesis. In this way, the rejection of the zero hypothesis reflects the fixed effect method. In this test, the hypothesis of zero is based on the assumption that there is no correlation between x_{it} and α_i . The main idea of the Housman test is to compare the two constant effect estimators and random effects, so that one of the estimators shows the compatibility with both the zero hypothesis and the opposite hypothesis, and the other estimator indicates compatibility with only zero hypothesis. The significant difference between these two estimators is the denial of the zero hypothesis. Assuming to be zero for any S and t using the (constant effect method estimator), we can obtain the compatibility results without regard to the existence or absence of a correlation between x_{it} and α_i . However, in the above-mentioned conditions, the correlation between x_{it} and α_i is consistent with the random effects estimator method (only in the absence of existence). The hypotheses are zero and the Housman test is presented as follows:

H0: There is no correlation between individual effects and explanatory variables. \Leftrightarrow Random effects of the model

H1: There is a correlation between individual effects and explanatory variables. \Leftrightarrow The constant effects of the model

The Housman test statistic will be as follows:

$$H = (\hat{\beta}_{FEM} - \hat{\beta}_{REM})' (V_r(\hat{\beta}_{FEM}) - V_r(\hat{\beta}_{REM}))^{-1} (\hat{\beta}_{FEM} - \hat{\beta}_{REM}) \sim \chi^2$$

In which the FEM coefficients of gradient in the fixed effect model, REM, the coefficients of gradient in the model of random effects and Var means the variance. This statistic has a distribution of X^2 .

- Regression model using hybrid data

Using static effect panel data is a good solution for unrecognizing regression, especially when the special effects of each company prevail over its temporal effects. Consider the following regression model:

$$Y_{it} = \beta_{1,t} + \beta_2 X_{i,t} + \varepsilon_{i,t}$$

In this regard, I represents the i-th unit of the section and t represents t of the period of time. Suppose there is a maximum of n and a maximum t of a period of time. Model estimates depend on our assumptions about the width of the origin, the coefficients of the gradient and the sentence of the error. In general, estimates of the above relationship are:

A. Let us assume that the width of the origin and gradient coefficients are constant over time and in space (location) and that the error statement varies over time and for different individuals.

B. Constant gradient coefficients but the width of the source varies from one source to another. The simplest method is to remove the dimension of space from the combined data in a state and to estimate the conventional least squares regular regression. In this case, the above model will be specified as follows.

$$Y_{i,t} = \beta_1 + \beta_2 X_{it} + \varepsilon_{i,t}$$

As you can see, in estimating the relation (*) the width of the origin and the coefficients of gradient will be between all the sections. Estimation of relation (*), which is performed by the least squares ordinary method, is known as the least squares method.

Another method for individual consideration (independent existence) of each section is that the width of the origin is different for each of them. Assuming the constant of the slope coefficients between the sections, the regression equation can be specified as follows.

$$Y_{i,t} = \beta_{1,i} + \beta_2 X_{it} + \varepsilon_{i,t}$$

In the case of (**), the index I in the wording of the width from the origin indicates that the width of the different origin may be due to the specific features of each section. In the economic literature (**), the fixed or minimal effects regression model Smooth variable is famous. The term "constant effects" is due to the fact that, with the difference in width from the origin between the sections, the width of the origin of each section does not change over time. For the width of the origin of each section to remain unchanged, the imaginary variables are used in this method [25]. The F lemmer test is used to select the least squared computing model and the fixed effect model. The specification of this test is as follows:

$$f = \frac{(R_{fe}^2 - R_{pls}^2)/(N - 1)}{1 - R_{fe}^2/(NT - K - N)}$$

In this regard, R_{fe}^2 the coefficient of determination in the fixed effects method, R_{pls}^2 the coefficient of determination in the combined least squares method, N is the number of sections, k is the number of explanatory variables, and T is the length of the time period. If F is a computation of a larger critical mass of F, then the fixed effect method will be selected.

The basic assumption in the random effects model is that the studied sections belong to a larger society and have a common average for the width from the origin. The difference in the width values ε_i from the origin of each section is reflected in the error statement. Based on the random effects model, relation (***) will be:

$$Y_{i,t} = \beta_{1,i} + \beta_2 X_{it} + \varepsilon_i + u_{i,t}$$

$$Y_{i,t} = \beta_{1,i} + \beta_2 X_{it} + w_{i,t}$$

$$w_{i,t} = \varepsilon_i + u_{i,t}$$

Combination error statement $w_{i,t}$ consists of two components ε_i (cross sectional error) and $u_{i,t}$ (combined error). The error component model $w_{i,t}$ is called a combination of two or more error components. The structure of the error sentence in the random effects method is such that it should be estimated with the help of generalized least squares. In the method of random effects, there should be no relationship between the cross-sectional error statement and the explanatory variables of the pattern. While there can be a constant effect method, this relationship can exist. Also, in the static effects method, the width of the source should be within the fixed time, while in the random effects method, the width of the origin can be changed over time. The main assumption in the static effects

pattern is that the error component can be correlated with the explanatory variables, however, with the constant error component in time, but in the random effects pattern it is assumed that there is no correlation between the error component and the explanatory variables.

Regression Trend with Watson Camera Statistics

The third option of the classic linear regression model states that there is no correlation between regression disturbance sentences. If this assumption is violated, the covariance between the two sentences i and j will not be zero.

To test the existence of self-correlation, there are different tests between the sentences of the disruption of the model, the most common of which is the Watson's d-camera test, which is calculated as follows:

$$d = \frac{\sum_{t=2}^n (e_t - e_{t-1})^2}{\sum_{t=1}^n e_t^2}$$

Since self-correlation is more likely to occur in time-series data, the index t is the years of the series concerned. The value of the computational value varies between 0 and 4; however, this estimate for a model around 2 indicates a lack of self-correlation in the model. To find out more about the existence or absence of self-correlation in the model, you can refer to the Watson camera table.

The use of the Watson camera statistic can be used in the case of a set of hypotheses in the model, which is one of these hypotheses that there is no interruption of the dependent variable as the independent variable in the model. In this case, for correlation analysis in the model, we should use h of Watson's camera. This statement is calculated as follows:

$$h = \rho \sqrt{\frac{n}{1 - n \text{var}(\alpha)}} \quad , \rho = 1 - 1/2 d$$

In this case, n is the number of observations and α is the interrupt variable of the dependent variable in the model. If h is calculated in the distance $(-96/1$ and $96/1)$ then there is no first-order correlation in the model.

3.1. Method of data collection

In this research, information about theoretical literature has been gathered by referring to articles, books, researches related to the subject, theses, etc. The information gathering method in this research is library. Also, a part of the information about the variables of the research, referring to the stock indexes, the library of the Stock Exchange, and the financial statements of the members of the stock exchange, the information and data of the accounting software "Tadbir Pardaz" and "New Raider" and the information of the site [www .Rdis.ir](http://www.Rdis.ir) were extracted and another part of the information was extracted through the bank's financial statements and notes. Therefore, data collection method is a library of documentary branches.

Statistical community

The research population consisted of all companies listed in Tehran Stock Exchange during the period of 1384-1394. Also, one of the foreseeable limitations for this study is the following:

1. The end date of the fiscal year is March 29th.
2. Integration of information in the stock exchange and lack of sufficient information about companies
3. Failure of the Stock Exchange to respond to newly requested information.
4. The financial statements of many companies do not exist before the year 2005.
5. In most companies there is no coherence in the provision of information between the years 2005 to 2010.
6. The maximum company has been accepted in 1384.
7. The company has been approved and approved in all financial statements.

3.3. Sampling volume

The number of companies that are within the limits of the specified limit is 196 companies. So the sample number is 196 companies.

3.4. Analysis of data

In this research, descriptive and inferential statistics will be used to analyze the data. In descriptive statistics, the descriptive information of the research variables (mean, minimum, maximum, standard deviation, skewness, stretching, etc.) has been investigated and inferential statistics are used to explain the relationship between independent and dependent variables using the combined regression (panel) method. . In this regard, EViews software will be used to analyze the data and perform relevant statistical tests.

3.5. Test Method Research Hypotheses

The most important statistical analysis is that it has a wide application in estimating and predicting relationships between variables and is used to determine the nature of the dependence between two or more variables.

In the stage of diagnosis and modeling, the model is based on the logical arguments of the type of communication that exists in the society between the dependent variable and the independent variable.

This relation is expressed in the form of the following mathematical model.

Capital structure: The usual capital structure is obtained through ratios through the following ratios: short-term debt ratio to total assets Long-term debt ratio to total assets John and Eugene (1975).

Operational Definition of Capital Structure:

In this research, the logarithm of the financial leverage (book value of the total asset / book value of debt) is used as a capital structure, indicating how much the company has used for debt relief.

$$\text{financial leverage} = \frac{\text{Total debt of the value of the book}}{\text{total value of the book value}}$$

Conservatism: Conservatism requires accounting to have a high degree of certification for recognizing good news, such as profit, in the face of knowing bad news as a loss. This accounting conservatism describes this definition of profit and loss perspective. Good news is for conservatism in this research.

Conservative operational definition: Definition of accounting conservatism from the perspective of the balance sheet. In this research, earnings per share and stock returns are used for conservatism.

Profit: The ratio of net profit to the total assets of each company per year.

Earnings management: The process of judging or scheduling transactions and conducting transactions to make changes in financial reports in order to mislead some users in relation to the results of the company's economic performance or to affect the results of contracts based on reported accounting figures.

Operational definition of profit management: In this research, the sum of variables of the ratio of debt to shareholders' equity, company size and return on assets is discussed. The return on assets is: This ratio is obtained by dividing net income by the sum of assets. On the other hand, the debt ratio is the division of total debt into assets. The size of the company is based on past research from the logarithm of the stock market value of the company.

In order to test the hypotheses and estimate the regression model using Eviews software, the following steps are taken:

At first, the pre-tests for the regression model are examined and tested and described in the sample. Then, the combined regression model is used to test the hypothesis testing of the research using the panel regression method and its results are analyzed. The accuracy of the estimated model will be finalized. For data analysis, the following regression model is used:

Research Model

$$Y(Y_1, Y_2) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Y: The dependent variable = Capital Structure

Y₁: The ratio of short-term debt to total capital

Y₂: Long-term debt ratio to total capital

β₀ : Fixed coefficient

β₁·β₂· β₃... :Regression coefficients

X₁: Stock returns

X₂: Earnings per share

X₃ : Artificial variable

e: Error

$$Y(Y_1, Y_2, Y_3) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Y : Dependent variable = profit management

Y₁ : Debt ratio to capital

Y₂ : size of the company

Y₃ : Asset returns

β₀: Fixed coefficient

β₁·β₂· β₃... :Regression coefficients

X₁: X₁: Stock returns

X₂: Earnings per share

X₃: Artificial variable

e : Error

On the other hand, Giulli and Hein used non-operational accountability (optional) for measuring conservatism. In their view, conservatism is sometimes applied to the identification and reporting of financial events. Firstly, management faces uncertainty and uncertainty and inevitably choosing an option consists of two or more choices;

Secondly, a method is chosen and executed which minimizes the potential for accumulated profit. For this reason, Giulli and Hein use discretionary (non-operational) accruals, which, on the one hand, Accrual accounting is a conduit for conservatism, and, on the other hand, the exercise of authority from the managing directors in the absence of reliable, field emergence provides conservative. Total accruals and discretionary accruals) non-operational (to be calculated as follows:

$$\begin{aligned} ACC_{it} &= (NI_{it} + DEP_{it}) - CFO_{it} \\ OACC_{it} &= \Delta (AR_{it} + I_{it} + P_{it}) - \Delta (AP_{it} + TP_{it}) \\ NOACC_{it} &= ACC_{it} - OACC_{it} \end{aligned}$$

The results of this model based on Giulli and Haine's model indicated that the more non-operational accountability items are lower, conservatism will be higher. In order to homogenize the values of independent variables with dependent variable and reduce the scattering of regression coefficients, the conservative index is calculated as ratio and as follows:

$$CON = 1 - \frac{NOACC}{ACC}$$

In the data obtained from the above formula, the higher the indicator, the higher the conservatism (Con) of conservatism.

Therefore, the model changes as follows:

Modified research model:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + e \quad [11]$$

Y = Conservatism

$\beta_1, \beta_2, \beta_3$ Regression coefficients:...

X1 : The ratio of short-term debt to total capital

X2 : Long-term debt ratio to total capital

e: Error

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e \quad [14]$$

Y = محافظه کاری

$\beta_1, \beta_2, \beta_3$:... Regression Coefficient

X₁ : Debt ratio to capital

X₂ : size of the company

X₃ : Asset returns

e: Error

Results

3.1 Pre-tests for estimating the combined regression model

3-1-1. Static test of research variables

Before estimating and estimating the model, first, the reliability of the research variables should be checked. So in this section, using the unit root test, we examine the variance of the research variables. If a variable is not mana, it should be done using techniques to manipulate it or remove the variable from the model in order not to have a negative effect on the estimate. The Root Dickey Fuller unit root test has been performed for the ROEA dependent variable. The results are presented in the following table:

Table 1: Results of the unit root reliability test for the dependent variable at the level

Pool unit root test: Summary
 Series: X1,X2
 Date: 02/27/17 Time: 10:05
 Sample: 1387 1394.
 Exogenous variables: Individual effects
 Automatic selection of maximum lags
 Automatic selection of lags based on SIC: 0
 Newey-West bandwidth selection using Bartlett kernel
 Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	3.78979	0.9999	120	840
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	1.42939	0.9236	120	840
ADF - Fisher Chi-square	13.6480	0.3237	120	840
PP - Fisher Chi-square	16.5260	0.1683	120	840

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

As it is seen, the Prob value of the statistical Extended Dickey Fuller (ADF) and other statistics is less than the significant level of 5% and 10%, so the static test in the first order is to be checked:

Table 2: Results of the unit root reliability test for the dependent variable in the first order difference

Pool unit root test: Summary
 Series: X1,X2,X'1,X'2,X'3
 Date: 02/27/17 Time: 10:35
 Sample: 1387 1394.
 Exogenous variables: Individual effects
 Automatic selection of maximum lags
 Automatic selection of lags based on SIC: 0
 Newey-West bandwidth selection using Bartlett kernel
 Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-6.60361	0.0000	120	720
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-3.09399	0.0010	120	720
ADF - Fisher Chi-square	25.2425	0.0137	120	720
PP - Fisher Chi-square	27.0843	0.0075	120	720

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

As you can see, the Prob value of the Extended Dickey Fuller (ADF) and other statistics is less than the significant level of 5% and 10%, so it can be concluded that the assumption of the variable's non-compliance is rejected and this variable (At a significant level of 5% and 10%). The summary of the static test results using the Root Dickey Fuller unit root test for model variables for the research variables is presented in the following tables:

Table 3: IPS test results Reliability of the research variables

Degree	Result	Prob*	ADF	Variable
I(1)	Static	0.0452	21.890	X1
I(1)	Static	0.0379	25.446	X2
I(1)	Static	0.0443	21.758	X'1
I(1)	Static	0.038	25.2409	X'2
I(1)	Static	0.0341	23.3810	X'3

Testing the first hypothesis

3-1-1. Chow model test

To see the latitude of the originals provided for each year, we have statistically significant differences, we use this test. In Chow's theory, the hypothesis H0 is the same as the width of the originals (the combined method), in contrast to the hypothesis H1, the origin of the origin, and the method of panel data. Therefore, in the case of the rejection of the H0 hypothesis, the method of the fixed effect model is accepted. The Chow test results are as follows:

Table 4: Chaw test results for research variables

Effects Test	Statistic	Df	Prob
Period F	1.09408	5,30	0.3840
Period Chi-square	6.030075	5	0.3033

As can be seen, the Prob value is greater than 0.05 and the assumption of the width difference from the originals is not rejected. Therefore, at this stage, the same width of the origin (the combination method) is accepted.

Housman test

According to the Housman test, the difference between the estimators of the fixed effect method and the random effects is considered as a zero hypothesis. The hypotheses are zero and the Housman test is presented as follows:

H0: There is no correlation between individual effects and explanatory variables. Random effects model

H1: There is a correlation between individual effects and explanatory variables. Fixed effect model

Given that in the Chaw test, the same width of origin (combined) was accepted, then there is no need for Housman's test and we estimate the model in a hybrid method (regardless of constant and random effects).

3-1-1. Estimated Regression Model

The results of estimating the model in combination with Eviews software are as follows:

Table 5: Model Estimation Results

Prob	t-stattisric	Std.Error	Coefficient	Variable
0.8001	0.256056	2264.934	579.9501	X1
0.9007	0.1126059	841.9876	106.1404	X2

Research Model

$$Y_1 = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Therefore, the estimated model for j is as follows:

$$Y_1 = 0 + 579.95 * X_1 + 106.14 * X_2$$

that

$$R^2 = 0.876368, \quad D.W = 1.534570$$

The results of model estimation indicate that:

- The variable coefficient of short-term debt ratio and long-term debt ratio at a significant level of 5%, and coefficient of significance.
- The value of R2 (R-squared), the coefficient of determination of the model, suggests that 87% of the variations of the dependent variable with the independent and controllable variables can be explained.
- Given the sign of the estimated coefficients, the relationship of the variable dependent on the variables has a direct relationship.

Of all the above results, the first hypothesis is confirmed.

3.1 Testing the second hypothesis

3.1.1. Chow model test

To see the latitude of the originals provided for each year, we have statistically significant differences, we use this test.

In Chow's theory, the hypothesis H0 is the same as the width of the originals (the combined method), in contrast to the hypothesis H1, the origin of the origin, and the method of panel data. Therefore, in the case of the rejection of the H0 hypothesis, the method of the fixed effect model is accepted. The Chow test results are as follows:

Table 6: Chaw test results for research variables

Effects Test	Statistic	df	Prob
Period F	1.2359	5,30	0.3170
Period Chi-square	6.74300	5	0.2405

As can be seen, the Prob value is greater than 0.05 and the assumption of the width difference from the originals is not rejected. Therefore, at this stage, the same width of the origin (the combination method) is accepted.

Housman test

According to the Housman test, the difference between the estimators of the fixed effect method and the random effects is considered as a zero hypothesis.

The hypotheses are zero and the Hausman test is presented as follows:

H0: There is no correlation between individual effects and explanatory variables. Random effects model

H1: There is a correlation between individual effects and explanatory variables. Fixed effect model

Given that in the Chaw test, the same width of origin (combined) was accepted, then there is no need for Housman's test and we estimate the model in a hybrid method (regardless of constant and random effects).

3.1.1. Estimated regression model

The results of estimating the model in combination with Eviews software are as follows.

Table 6: Results of model estimation

Prob	t-stattisric	Std.Error	Coefficient	Variable
0.0001	4.811	29822136	1.44	X1
0.6921	0.400	17.87657	7.16	X2
0.1834	1.37	64270560	880	X3

Research Model

$$Y_2 = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Therefore, the estimated model for j is as follows:

$$Y_2 = 1.44E+08 * X_1 + 7.16432 * X_2 + 88054434 * X_3$$

That

$$R^2 = 0.842035 \quad , \quad D.W = 1.595777$$

The results of model estimation indicate that:

- The coefficients X'1, X'2 and X'3 have a meaningful level of 5%.
- The value of R2 (R-squared), the coefficient of determination of the model, suggests that 84% of the variations of the dependent variable with independent and controllable variables can be explained.
- Given the sign of the estimated coefficients, the relationship of the dependent variable with the independent variables is a direct relation.

Of all the above results, the second hypothesis is confirmed.

3.1. Post-test related to the estimation of regression model

3-1-1. Regression realty test

This test is accomplished in two ways: "Residual sentence test and Watson Camera Cluster Regression (CRDW)" (D.Begg, 2003):

In this study, we use the Watson Camera Coagent Regression test to investigate the existence or non-existence of a long-term relationship between fitted variables. Simply compare this test with Watson's camera results from the initial regression with the critical values provided by Sargan and Bargawa. If the sum of the DW test statistic for the co-regression is less than the critical values, then the zero assumption (the remainder sentence is not applicable) is accepted. The method used for this test is to use the Watson camera statistics statistic for collective regression for this test, which is a camera-Watson equation of zero. The zero hypothesis is written as follows:

$$H_0: d = 0$$

And its opposite is:

$$H_1: d > 0$$

If the quantity of the D.W test statistic for the aggregate regression is less than the critical values, the zero hypothesis is accepted. That is, the words are disruptive, unsuccessful and the step is random. As a result, the model variables are not aggregated and there is no equilibrium or conceptual relation between them in the long run. If the D.W test statistic for the coherent regression is greater than the critical values, the zero hypothesis is rejected. The words of disturbance, unsteadiness and step, are not accidental. As a result, the variables of the model are coherent and there is an equilibrium relation between them in the long run.

The comparison of this statistics with the camera-Watson value in three models of this study is as follows:

Table 7 Watson Camera Statistics and CRDW Critical Quantity

Result	Critical quantity at 10% level	Critical quantity at 5% level	The amount of Durbin Watson generated by regression	Model
The Rejection of Zero	0/323	0/386	1/53457	The First Model
The Rejection of Zero	0/323	0/386	1/5957	The Second Model

According to the obtained result, it can be said that the combination (long-run relationship) between the variables in the two models is confirmed. Therefore, it is clear that the simple regressions performed above represent the long-run equilibrium relationship between the model variables. In other words, estimation coefficients do not apply only in the short term, and they can also be used in long-term relationships analysis.

Conclusion

The results of the model estimation indicate that the hypotheses of the model are approved. In the first model, the coefficients of the variables X1, X2 are meaningful at a significant level of 5%, the remaining coefficients are not significant, and the value of the R2 (R-squared) statistic, the coefficient of determination of the model, suggests that 87% of the variations of the dependent variable with the independent variables And the control is explicable, and the camera-Watson statistic rejects the assumption of correlation between the components of the model.

In the second model, the coefficients of the variables X'1, X'2, X'3 mean at a significant level of 5%, and the rest of the coefficients are not significant, and the value of the R2 (R-squared) stochastic model indicates that 84% The variation of the dependent variable with independent and controllable variables can be explained, and the camera-Watson statistics reject the assumption of self-correlation between the components of the model.

Analyzing the Results of the Research

In the present study, we conclude that as the level of conservatism increases, the overall level of profit management increases. In fact, conservatism through managing earnings opportunities leads to more reliable, more quality earnings reports. Reporting Relevant Benefits And Offering Individual Leadership, Helps Users Use Financial Information to Make Correct Orders.

In fact, managers still motivate companies to adjust the company's profits, but since the level of conservatism makes it possible to manipulate accounting numbers and figures, administrators will take on real business to make profit management. In fact, with increased conservatism, profit management increases.

Also, given the direct relationship between the variables of financial structure and conservatism, it can be concluded that the ratio of long-term and short-term debt to total debt is directly related to conservatism. Therefore, managing debt opportunities offers more accurate reporting. In fact, this conservatism reduces the excessive display of debt.

Comparing the results of the research with the research carried out in this area

Based on the results of the first hypothesis, there is a direct relationship between capital structure and conservatism and based on the results of the second hypothesis, there is a direct relationship between conservatism and earnings management. Therefore, according to Bani Mahdi and others (1393), the results of the research show that there is a negative relationship between accounting conservatism and management reward. Also, research evidence shows that management reward has a positive relationship with company size and profitability ratio. The results of this study are in line with their viewpoints. According to Valizadeh Oghani and others (2013), his research results indicate that conservatism does not affect the relevance and reliability of accounting information. Which is not consistent with the results of this research. Also, regarding Etemadi and Farajzadeh (2012), the researchers state that profit management, regardless of its increase or decrease, affects the conservatism and increases conservatism. Therefore, they strengthen the results of the current research. On the other hand, Bani Mahd et al. (2011) investigated the relationship between accounting conservatism and the financial crisis of the companies listed on the Tehran Stock Exchange. They found that the conservative index of financial corporations has a meaningful and direct relationship. They also found that accounting conservatism was a good tool to exit from the crisis over the long term. Which is consistent with the current research results.

In foreign research, Maxi Milliam et al. (2016) investigated the relationship between conservatism and standard financial reports in a study. The results indicate that conservatism represents a more realistic representation of earnings and debt. On the other hand, Panayetes and others (2015) showed that the value of conservative (decreasing or incremental) conservative increases the value of European banks, which is consistent with the results of the research. Adet et al. (2013) confirmed in the research that management rewards have a direct relationship with the view of profitability management. They showed that management, in order to receive more rewards, manages profits based on an operational view rather than on an opportunistic perspective. The results of this study are also consistent with the results of the current research. Atomassa et al. (2012) in Japan concluded that accounting conservatism had a negative relationship with the amount of directors' remuneration. They also found that the relationship was higher in institutions with a large reward of profits. The results of their research showed that accounting conservatism reduces managers' rewards. The results of this research are consistent with the results of the current research. Romalindo and Yu (2012) showed that institutional stakeholders to use conservative accounting procedures to control the company's managers in increasing the profit profile and reducing conflicts of interest between shareholders and managers. The results of this study are also consistent with the results of the current research. O'Reilly (2011), his findings show that companies with higher disclosure quality, profitability and higher liquidity also have. The results of this study are also consistent with the results of the current research. Aynar and Zumpley (2010) concluded that conservatism significantly increased the relationship between changes in profits and changes in rewards. The results of this study are also consistent with the results of the current research.

References

1. Mohammad Dervish, Ehsan; Barzegar, Power of God; Kamyabi Y. (1394). "The study of the effect of accounting conservatism on the behavior of investment companies (companies accepted in the Tehran Stock Exchange)", the termination of the name of the master's degree, the science branch, research and Technology - University of Mazandaran - Faculty of Administrative Sciences and Economics.
2. Bani Mahd, Bahman; Moradzadeh Fard, Mehdi; Velikhani, Mohammad Jafar (1393). "Accounting Conservatism and Management Bonus", *Management Accounting*: 22 شماره 7, دوره 1393, پاییز; Pages 21-34.
3. Valizadeh Oghani, Faza, Badavouri Badini, Bounces: Bardaran Hasanzadeh, Rasool (1392). "The Effect of Conservatism on the Quality of Information Sensitivity of Listed Companies in Tehran Stock Exchange." *Economics and Business Journal*, Vol. 5, No. 7, Summer 93, pp. 51-54.
4. Ramalingegowda, S., and Yu, Y., (2012) Institutional ownership and conservatism, *Journal of Accounting and Economics* Vol. 53, PP. 98-114
5. Alam, P., and Petruska (2012) Conservatism, SEC investigation, and fraud, *J. Account. Public Policy* 31 PP. 399-431.
6. Iyengar, R., and E. Zampelli. 2010. Does accounting conservatism pay? *Accounting and Finance* 50 (1) (Mar): 121-125.
7. Iatridis, G. 2011. Accounting disclosures, accounting quality and conditional and unconditional conservatism. *International Review of Financial Analysis*. 20(2)(Apr):88-96.
8. Kung, F.H., Cheng, CH.L. (2010). The Effects of Corporate Ownership Structure on Earnings Conservatism: Evidence from China, *Asian Journal of Finance & Accounting*, Vol. 2, No. 1.
9. Firth, M. Fung, M.Y., Rui, M. (2007). Ownership, two-tier board structure, and the informativeness of earnings - Evidence from China, *Journal of Accounting and Public Policy* 26, 463-496.
10. Al-Dhamari, R. Ismail. K. (2013). Relationship of corporate governance mechanisms to earnings management or earnings informativeness, *ASIAN ACADEMY of MANAGEMENT JOURNAL of ACCOUNTING and FINANCE*, Vol, 9. No1. PP. 1-23.
11. Beaver, W.H. and S.G. Ryan. 2005. Conditional and unconditional conservatism: Concepts and modeling. *Review of Accounting Studies* 10: 269-309.
12. Callen, J.L., and D. Segal. (2010). A Variance Decomposition Primer for Accounting Research. *Journal of Accounting, Auditing & Finance* 25 (1): 121-142.
13. Zang, A. Y. (2012). Evidence on the trade off between real activities manipulation and accrual based earnings management. *The Accounting Review* 87 (2): 675-703.
14. Zhang, J. (2008). The contracting benefits of accounting conservatism to lenders and borrowers. *Journal of*