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Research Paper

Assessing the Relationship Between Balance Sheet Conservatism And Profit and Loss Conservatism with Cost of Equity Capital

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ABSTRACT

Markets such as Money Market, Labor market, Commodity market along with Capital market are committed to optimal allocation of capital and financial resources. One of the most important sources of information is financial reports. Investors base their decisions on the balance between risk and return and are interested in estimating their expected future returns and investments using information reported by the company and other evidence. The purpose of this study is to investigate the relationship between accounting conservatism and cost of equity capital and evaluate the economic results of accounting conservatism through information perspective. Therefore, in order to achieve the main objective of the research, first the reports and documentation of past performance of the sample member companies have been studied and the required data have been collected. The research hypotheses were then evaluated which consisted of one main hypothesis and two sub-hypotheses, indicating that there is a negative and relatively strong relationship between conservatism and capital cost. Differentiating between several aspects of accounting conservatism and examining the relationship among each aspect and cost of equity capital are new innovation of the present study.

1 Introduction

Preparing conservative financial statements adds to the reliability on accounting information, conservatism show the ability of accounting profit to reflect economic profit (positive return on equity) and economic loss (negative return on equity). Higher quality information is expected to have a desirable effect on investors' expectations of expected returns (capital expenditure). Equity Capital cost is the minimum rate of return that a company must obtain in order to provide the desired return of investors in the company. In fact, if a company's return on investment exceeds its capital expenditure, shareholder wealth will increase. Therefore, if companies experience lower capital expenditure, they can accept more investment projects. Since conservatism is one of the factors affecting the quality of accounting information, it can be concluded that by increasing the level of conservatism, the equity capital cost

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decreases. Therefore, Conservatism can be referred to as a mechanism that, if used correctly, leads to solve many Issues of representation and lack of information symmetry arise from the growing information gap between managers and providers of business finance in today's world. The main purpose of this research is to improve investor decision making to achieve expected future returns as well as to assist managers in maintaining the unit value. Investors base their decisions on the balance between risk and return and are interested in estimating their expected future returns and investments using information reported by the company and other evidence. The equity capital cost is referred to the minimum expected rate of return. If the expected return is lower than the capital expenditure, the value of the firm will decrease [1]. Equity Capital cost is considered to be the center of financial management, because it provides a way to communicate between capital projects and how the company is financed. Therefore, to maintain the value of the firm, strive to bring the expected return to the level of capital expenditure. In the accounting literature two important features of conservatism have been studied.

First, existence of predilection in presenting less the book value of a stock than its real market value [2]. (Balance Sheet view).

Second, the tendency to expedite the identification of losses and to delay the identification of profits as suggested by [3]. (profit and loss perspective).

The conservative balance sheet perspective uses net asset criteria and the book value to value of stock market ratio to evaluate conservatism, which is defined as anticipated conservatism. Predilection in presenting less the book value of a stock than its real market value represents conservatism from a balance sheet viewpoint. The measure of the book value to value of stock market ratio is also taken from this perspective. Evaluation the predicted conservatism is based on simple and logical foundations and has received a public acceptance in the accounting literature. Providing less Net book value of assets than reality in most cases due to failure to recognize and record goodwill in accounting offices.

Examples of anticipated conservatism include real-time R&D costs, advertising costs, and rapid depreciation of long-term tangible assets. The effect of anticipated conservatism on the inflow of earnings may be more stable because investors can assess the impact of this type of conservatism on current and future earnings by disclosing accounting methods. The Conservative Profit and Loss Approach use the criteria of the relationship of profit and return on stock, which is expressed as heppend conservatism (Basu's [3]) interpretation of conservatism suggests a profit and loss perspective. Basu interpreted conservatism as a result of faster reflection of bad news than good news on profit. This interpretation reflects the systematic distinction between good and bad news in both the "on time" and "stability" aspects of profit. Basu used returns on stock to measure news because annual returns on stock contain news that is acquired throughout the year. This interpretation of conservatism influences the profit-return relationship. So, Basso, using a regression between profits and return on stock, found that profit response to bad news (negative return on stock) is more timely than the profit response to good news (positive return on stock). In his research, he also reports that the stability of negative profits changes is less than its positive changes. The purpose of this study is to investigate the relationship between accounting conservatism and equity capital cost and evaluate the economic results of accounting conservatism. In this study, different aspects of accounting conservatism concepts are examined. It also examines whether investors valorize to different aspects of conservatism.

2 Theoretical Basis

2.1 Accounting Conservatism

Defines accounting conservatism as "the way in which, in response to bad news, the recognition of earnings and net assets decrease, while, in response to good news, the recognition of earnings and net

assets will not increase"[3]. Research by Beaver and Ryan considers accounting conservatism as the difference between market value and book value of assets. Watts defines accounting conservatism as: the need to differentiate the verifiability of profits recognition against losses. According to this definition of conservatism, predicting future profits should be more verifiable than future losses [4-5]. In our country, the Audit Committee's Technical Committee, in Iranian Accounting Standards Appendix, recognizes conservatism recognizes conservatism in a different sense namely prudence, and Introduces it as one of the components of reliable quality properties**.**

2.2. Cost of Equity Capital

Cost of equity capital is defined as the opportunity cost of all investments made in an enterprise. In other words, the equity capital COST is the opportunity cost of all the investments made in an enterprise by the management in allocating the resources of the shareholders and creditors. Equity Capital Cost classification:

A) Real capital Cost
B) Implicit capital Cost

The relationship between financial structure and both credit risk and cost of equity capital creates a paradoxical interest in order to reduce the capital ratio and achieve greater returns or increase capital for coping with the default risk [6-7].

3 Literature Review

Conservatism is a basic principle of accounting that has important economic consequences. A lack of conservatism can have serious accounting and economic consequences [19]. The relationship between conservatism and equity capital cost and understanding different dimensions of conservatism and the relationship between each of these dimensions to equity capital cost are critical issues as it can influence investor decision making and thus affect corporate performance. The distinction between the different dimensions of conservatism and their relation to the equity capital cost is one of the topics that received little attention. Important domestic and foreign researches related to the topic of this research are as follows:

In estimating the Conservative Index, [3] examined the relationship between earnings and returns on stocks through regression. He found that in firms whose returns on stock are negative, returns on stocks more correlated with earnings than in firms whose returns on stock are positive. Basu found that conservatism has increased as the US lawsuits have increased. This paper analyses the roles of controlling shareholders as either minority shareholder entrenchers or monitors in the relationship between conservative accounting practices and cash holding value and this essay at the end indicate that accounting conservatism enhanced the value of cash holdings [20]. In this essay examined the relationship between the criterion of conservatism, the depreciation cost, research and development, and the cost of advertising and LIFO of Save stock value Reduction [4]. They found that the depreciation cost in descending order, the cost of research and development, and the cost of advertisement have a negative and reverse effect on conservatism. They, explain that the stocks of the period 1981 to 1993, the period in which companies were in the growth period, are high [4].

Conservative is one of the most controversial principles of financial reporting, which gives conflicting views of financial information about its impact. Therefore, this study examines the concept, operational and empirical findings in the case of conservative accounting. The result of conservative accounting cannot be completely eliminated from financial reporting [8]. The conclusion that conservative views

in financial reporting cannot be generalized by providing other socio-economic variables that are specific to the correspondent's entity. Finally, we recommend that African countries may need to approve or reject findings arising from the developed economy on conservative accounting [8]. In a study that investigated the impact of audit quality on accounting Conservative in Turkey. It has been reported that the quality of audit is a positive relationship with conservatism in terms of brand auditor and industry expert auditor [9]. This paper tries to investigate the economic consequences of different aspect of accounting conservatism: balance sheet or unconditional conservatism and earnings or conditional conservatism. The findings indicate that balance sheet or unconditional conservatism is associated with higher quality of accounting information and lower costs of equity capital and that earnings or conditional conservatism is associated with lower quality of accounting information and higher costs of equity capital [10].

This study reports the result of the contracting benefits of accounting conservatism on international debt and equity markets. It shows that firms domiciled in countries with more conservative financial reporting systems have significantly lower cost of debt and equity capital, after controlling for differences in legal institutions and securities regulations. These effects are over and above a series of economy-level factors, including legal origins, judicial systems, securities regulations, and market integration, that have been identified by previous studies to shape international capital markets. Conservatism is estimated the cost of debt and equity capital for 31 countries over the period from 1991 to 2006. it helps to the literature by making special role for accounting information in assisting a country's legal system to determine the performance of its capital markets. [11]. This paper analysis relation between accounting conservatism and bankruptcy risk. In the conclude provide empirical evidence that conservatism's cash enhancing and informational properties help mitigate bankruptcy risk, which is fundamentally a condition of cash insufficiency [12]. In studying the effect of conservative accounting on capital cost, conservative accounting everywhere, and at a fair capital cost is negative, but it has a positive relationship with the cost of equity capital debt. Ownership and management of the primary properties of companies is listed which causes organizational problems. For investors and creditors, conservative accounting information can reduce the risk of asymmetry of information, helping them to understand the development and financial level of companies and make correct decisions for investment and financing. Therefore, Conservative accounting is considered as an important factor affecting capital expenditure. In existing research, when studying the relationship between the two, they usually choose one of the costs of equity in equity or debit capital as the subject [13].

Conservative, through timely detection of profits, is expected to increase the efficiency of the company's investment through three main channels:1- By reducing the negative effect of asymmetry of information between outside equity holders and managers, facilitating the monitoring of management investment decisions, 2- By increasing managerial motives, it will leave weak projects sooner and endure the current value of less negative net in investment and 3- By facilitating access to foreign funds at a lesser cost.[14]. These studies are primarily evaluated how conservative affects the quality of income, including the durability of earnings and the presence of profit management. At the next stage, the impact of conservative accounting on users of financial statements is evaluated. The three main users recognize financial statements:1- Stock market users,2- Debt Market Users,3- Corporate Governance User [15].

They predict that accounting conservatism influences insiders' opportunities to speculate on good and bad news, and thus, insider trading profitability and they find that greater conditional (unconditional) conservatism is associated with lower (greater) insiders' profitability from sales in additional find limited evidence of a positive association between conservatism and insiders' profitability from purchases, although this result is sensitive to model specification[16]. It

empirically tests the association between conditional conservatism and firm cost of equity capital. This paper runs two sets of tests. First if more conditionally conservative firms earn lower expected returns, using asset-pricing tests commonly used in the finance literature. Second, It analyses the association between conditional conservatism and a measure of implied cost of equity capital. Both sets of tests produce corroborative evidence, showing a significant negative relation between conditional conservatism and cost of equity capita[17]. This study contributes to the relationship between CEO gender and accounting conservatism, and find a positive association between the two. o. Consistent with conventional wisdom, this association appears to be stronger in firms with high rather than low litigation and takeover risks [19].

Innovation of Research can be stated as follows:

Distinguish between different dimensions of accounting protection concepts (Balance sheet conservatism and profit and loss conservatism) And examining the relationship between each of them and the cost of equity capital is one of the new aspects that the extent of relationships and their impact on the cost of equity capital, it has not been considered in Iran.

4 Research Methodology

The main hypotheses of the research can be stated as follows. The research hypotheses include one main hypothesis and two sub-hypotheses are defined as follows:

Main hypothesis:

1- There is a relationship between accounting conservatism and capital expenditure.

Sub-hypothesis:

1. There is a relationship between anticipated conservatism and capital expenditure.
2. There is a relationship between happened conservatism and capital expenditure.

Full description of the research method by purpose, inference method and outline of research

Purpose Classification: Because the results of this research can be used in the financial decision-making process, this is an applied research in terms of purpose.

Inference Method Classification: Since the researcher has evaluated the relationship between two or more variables, this research is descriptive-analytical in nature.

Research Outline Classification: According to the research topic, the research method used in this study is retrospective.

Statistical Population: The specific conditions and limitations that are the basis of the definition of statistical population in this study are as follows:

1- Companies whose financial year ends on March 29th.
2- Companies that have been listed on the stock exchange before 2002.
3- For the 8-year period (2002-2009) have provided the basic information and data needed for the research to the stock exchange.
4- Companies belonging to the selected statistical community should not be part of banks, credit institutions and other monetary institutions, financial intermediaries and financial investments, since their activities are different from those of other industries.
5- Access to their essential financial statements and other required information is possible.
6- Corporate financial statements should be audited and non-consolidated.

Sampling Method can be stated as follows:

A. Library Studies

In this research, theses, researches, reports, journals, books, etc. are used to gather information and data to complete the theoretical bases and required data.
B. Internet exploration
C. Studying corporate documents to collect performance information
In this research, past performance reports and documentation of sample member firms (including financial statements, performance reports and other positive documentation) have been studied and part of the data required for the research has been collected.

5 Research Model

5.1 Dependent Variable (cost of equity capital)

The minimum return that investors expect to earn from investing in an institution, usually expressed as an annual rate (shows as percent). The cost of equity capital is defined conceptually in relation to the expected return in other words, the cost of equity capital is the minimum rate of return expected If the expected return is less than the cost of equity capital, the value of the economic unit will decrease [1]. Capital-based cost is considered financial management, because it provides a way to connect capital projects and how the company is financed. Therefore, in order to maintain the value of the economic unit, management should try to bring the expected return to the level of capital cost at least.

5.2 The Method for Measurement of the Dependent Variable

In this research use Ohlson model [21] for measurement of capital cost. Accounting input variables in ohlson model are less than other stock assessment models so it is main reason for use this model. Recent empirical researches have shown that Ohlson's model estimates the cost of corporate capital well [22]. Assumption 1 for using ohlson model: The current stock price is equal to the current dividend value expected per share:

$$P_0 = \sum_{t=1}^{\infty} \frac{dps_t}{(1+r_e)} \tag{1}$$

P_0: The current price is stock.

dps_t Divided profit that expected to per share in period t

r_e cost of equity capital.

Ohlson's model links the price to next year's earnings and revenue growth**:**

$$P_0 = \frac{eps_1}{r} + \sum_{t=1}^{\infty} \frac{Z_t}{(1+r_e)} \tag{2}$$

$$Zt = \frac{1}{r_e}\{eps_{t+1} - [(1+r_e) * eps_t - r_e * dps_t]\} \tag{3}$$

eps_t: Earnings are expected per share in the period and Z_t is merely for an evaluation.
Assumption 2 for using ohlson model is mention to $(eps_t / eps_{t-1}) \to \gamma$ is γ that $t \to \infty$ و

The rate of income growth is long-term. Hypotheses 1 and 2 present the following pricing equation**:**

$$Z_1 = (1/r_e)[eps_2 + r_e * dps_1 - (1+r_e) * eps_1] \tag{4}$$

As a result, the capital cost formulas based on the Ohlson model are as follows:

$$re = A + \sqrt{A^2 + \frac{eps_1}{p_0}[g_2 - (\gamma - 1)]} \tag{5}$$

$$g_2 = \Delta eps_2 / eps_1 \text{ and } A = 1/2[\gamma - 1 + (dps_1 / p_0)].$$

The cost of equity capital shown here is a function of distributable returns, returns, and long-term growth rates. The following assumptions are empirically used to apply the Ohlson model**:**
in this study, it is assumed that the dividend per share in the following year is equal to the dividend per share in the current year**.** Also short-term growth rate (g_2) It is measured by changes in earnings per share forecast in the next two years divided by the projected earnings per share in the following year. To have practical examples of the model, it is assumed that the long-term revenue growth rate (γ)is the same for all companies each year. Although these assumptions may be problematic, they do not in fact have a significant effect on the interpretation of the practical results of the relationship between capital cost and accounting conservatism in this study because measurement errors in estimating capital cost appear in the regression error coefficient. Numerous findings suggest that the rate of sustainable income growth tends toward inflation in the long run, In this study, the growth rate of stable income is equal to the inflation rate announced by the Central Bank for the year of t.
Due to the fact that in Iran there are no reliable independent sources that predict the future profit and cash profits of companies, so by attention to research of Jahan khani and safariyan [23] Based on the fact that the information content of the estimated earnings per share affects the price and volume of stock transactions and There is a strong relationship between projected profits and real profits Also, the fact that the first forecast of the company's management profit for the next year affects the stock price on the eve of the assembly related to the performance of the previous year, an alternative variable has been used as follows:

$$j = 2,3 \quad eps_{(t+j)} = eps_{(t+j-1)} * (1 + growth) \tag{6}$$

$eps_{(t+j)}$ is Forecast the company's earnings per share for the fiscal year of t+j.
Which is based on the first profit forecast by the company's management for the first year and its generalization based on the growth rate expected by investors for the second and third years of the three-year forecast period. growth in relation (7) shows the growth rate of the company that Is based on the geometric average of its sales growth rates during the research period.

$$growth = \sqrt[10]{\frac{sales(1387)}{sales(1377)}} - 1 \tag{7}$$

5.3 Defining the variables

General Relationship is defined in (8) and meaning of variables are in Table1:

$$COST_{it} = a_0 + a_1 BETA_{it} + a_2 LEV_{it} + a_{3SIZE_{it}} + a_4 EVAR_{it} + a_5 CON\_RANK_{it} + \varepsilon_{it} \tag{8}$$

Table 1: Defining Variables

$COST_{it}$	Company Capital Expenditure
company$BETA_{it}$	β CAPM
LEV_{it}	Leverage ratio of the company
$SIZE_{it}$	Natural Logarithm of Company Stock Market Value
$EVAR_{it}$	Changes in reported company earnings
CON_RANK_{it}	A tenfold distribution of measuring the company's conservatism

5.4 Descriptive Statistics

The following table calculates the central indices including mean and median and the scattering indices including standard deviation, elongation and skewness for the various variables. Larger mean than median indicate large points in the data because the mean is affected by these values. In these cases, the data distribution is skewed to the right. For example, the variables BETA, LEV, EVAR, M / B1 and SIZE are skewed to the right distribution. In some cases, it is skewed to the left The distribution of no variables is skewed to the left, and if the mean and median values of the variables are close to each other, the distribution of the variables is symmetric. This feature is important because symmetry is one of the normal distribution features that will be discussed in the next section. (The elongation and skewness of the normal distribution is zero). Descriptive statistics for the research variables in Table 2.

Table 2: Descriptive Statistics

variables	Number	mean	median	Standard deviation	Skewness	elongation	minimum	maximum
COST	856	0.19	0.15	0.14	0.78	1.71	0.09	0.99
BETA	856	0.42	0.00	1.62	3.37	24.58	-4.94	14.91
LEV	856	1.20	0.00	3.74	3.56	21.11	-9.09	33.93
SIZE	856	0.00	0.00	0.01	6.81	55.85	0.00	0.06
EVAR	856	0.17	0.09	0.37	4.44	20.28	0.00	2.83
B1	856	0.00	0.00	0.01	-0.01	0.87	-0.04	0.03
M/B1	856	0.55	0.00	1.57	3.85	17.46	0.00	12.01

The skewness for the dependent variable is 0.78 which is similar to the normal distribution. Also the variable B1 has a nearly symmetric distribution.

5.5 Investigating the Normality of the Distribution of Dependent Variables

The null hypothesis and the opposite hypothesis in this test are written as follows.

$$\begin{cases} H_0 & The\ data\ follows\ the\ normal\ distribution\ for\ the\ dependent\ variable \\ H_1 & The\ data\ for\ the\ dependent\ variable\ does\ not\ follow\ the\ normal\ distribution \end{cases}$$

The probability value for the dependent variable is greater than 0.05 (equal to 0.88). Therefore, the null hypothesis (normality of the variable) for this variable cannot be rejected, ie the distribution of this variable for different years is normal, as predicted (skewness and elongation indices near to zero).

Table 3: Kolmogorov-Smirnov Test for Normality of the Dependent Variable

Cost							
Number	Normal parameters		The biggest difference			Z value of Kolmogorov - Smirnov	The probability value
	Mean	Standard Deviation	Absolute Magnitude	Positive	Negative		
856	0.19	0/14	0.47	0.47	-0.34	0.59	0.88

5.6 Variance Stability Test

The homogeneity of variances is evaluated using the residuals versus predicted values .The residual diagrams against the estimated values contain very important information, such as the lack of a regular pattern in the distribution of these points can confirm the variance homogeneity, which is one of the regression modeling assumptions.

5.6.1 Linear Data Independence (Independent Variables)

Correlation analysis is a tool by which we can measure the amount and degree to which a variable depends on another variable. Correlation analysis is usually used by regression analysis in [18]. The correlation coefficient can be calculated from the second root of the determination coefficient. Testing linear independence or lack of autocorrelation among independent variables (x) is another basic assumption in applying multivariate regression.

Correlations

Spearman's rho

		Cost	BETA	LEV	SIZE	EVAR	B1	M/B1
Correlation Coefficient	Cost	1.000	.055	.095**	.098**	.243**	-.084*	-.066
	BETA	.055	1.000	-.024	.189**	.036	-.132**	.144**
	LEV	.095**	-.024	1.000	-.039	-.004	-.017	-.008
	SIZE	.098**	.189**	-.039	1.000	.045	-.085*	.777**
	EVAR	.243**	.036	-.004	.045	1.000	.019	-.053
	B1	-.084*	-.132**	-.017	-.085*	.019	1.000	-.044
	M/B1	-.066	.144**	-.008	.777**	-.053	-.044	1.000
Sig. (2-tailed)	Cost	.	.106	.005	.004	.000	.014	.053
	BETA	.106	.	.482	.000	.295	.000	.000
	LEV	.005	.482	.	.255	.915	.627	.820
	SIZE	.004	.000	.255	.	.187	.013	.000
	EVAR	.000	.295	.915	.187	.	.580	.123
	B1	.014	.000	.627	.013	.580	.	.201
	M/B1	.053	.000	.820	.000	.123	.201	.
N	Cost	856	856	856	856	856	856	856
	BETA	856	856	856	856	856	856	856
	LEV	856	856	856	856	856	856	856
	SIZE	856	856	856	856	856	856	856
	EVAR	856	856	856	856	856	856	856
	B1	856	856	856	856	856	856	856
	M/B1	856	856	856	856	856	856	856

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Fig 1: correlation between the individual variables

Multivariate regression is used with the assumption that there is no autocorrelation between independent variables. In this regard, auto-regression and correlation tests can be used to measure this property. The correlation between the variables has a range from zero to 1 and the sign of the correlation coefficient indicates the slope of the regression line. The higher the correlation coefficient between the two variables indicates the stronger correlation between them. In this study, we used Spearman rank correlation coefficient to perform the independence test. Therefore, the correlation between the individual variables was evaluated in paired form, which is presented as follow in Fig 1. According to the results of Spear-

man test, there was no autocorrelation between independent variables, so the hypothesis of lack of autocorrelation (linear independence) between independent research variables (x) is confirmed as the fifth main assumption of regression.

5.7 Regression Analysis

We used data analysis for merged data from panel analysis with no fixed effects, with fixed effects, and with random effects. To determine the suitability of the model with fixed or random effects, the Limerick test and the Hausman test were used. Panel analysis has many advantages over cross-sectional or time series data such as:

1) This dataset can identify and measure effects that cannot be identified in pure cross-sectional or time series data. It is sometimes argued that cross-sectional data represent long-term behaviors (because data collected over a period of time reflects long-term behaviors or is influenced by long-term habits and attitudes), while in the time series data, the short-term effects are emphasized (because movement from year to year is affected by things that are emphasized in the short term), therefore represents midterm dynamics rather than static or dynamic trends in cross-sectional data.
2) The advantage of using this method is in increasing the statistical power of the coefficients over the use of time series or cross-sectional statistical analysis. In this method, the observation error is reduced by considering the variations of variables at each cross section and at each time.

Table 4: Chau Test for Choosing the Right Model (model with effects or model without effects)

Effects test	Statistics	Degrees of freedom	The probability value
F value	2.324	106.724	0.000
Chi-square value	244.864	106	0.000

The probability value is 0.000, so the null hypothesis based on using the merged model is rejected and the model with effects is appropriate.

Table 5: Hausman Test to Select the Appropriate Model (fixed effects model or random effects model)

Pool: Farhadi & Farjam far			
Effects test	Chi-square statistics	Degrees of freedom	The probability value
Random effects of sections	0.00	5	1.000

For the Hausman test, the probability value is 1,000, so the null hypothesis is not rejected, so the random-effects model is the most appropriate one (ie, the random-effects model is preferable to the fixed-effects model).

5.8 Testing the First Hypothesis

In hypothesis 1, There is a relationship between happened conservatism and capital expenditure.
Multivariate regression model was used to analyze the data and test the first hypothesis. In this regression we set CON_RANK equal to the value of B1, which is the happened conservative index.

5.8.1 Fitting Model with Random Effects

In this section, panel analysis is used to evaluate and estimate the general model .The reason for using this method is because of the nature of the data. Because, in panel analysis the data are collected in cross-sectional/temporal form. In the data collected like this, the independence of observation is not

maintained because there are several observations from each company over the years that are interdependent. In other words, in this analysis the number of data is the number of companies multiplied by the number of years. The null hypothesis and the opposite assumption in this model are as follows:

$$\begin{cases} H_0 : \beta_1 = \beta_2 = ... = \beta_5 = 0 \\ H_1 : \beta_i \neq 0 \;\; i = 1,2,...,5 \end{cases}$$

$$\begin{cases} H_0 : & \text{There is no significant model.} \\ H_1 : & \text{There is a meaningful model.} \end{cases}$$

In the the panel analysis random-effects model is estimated to have a significance value of F equal to 0.000. This value is less than 0.05, so the null assumption is rejected at the 95% confidence level, meaning there is a significant model in 95% confidence level. The coefficient of determination is 0.58, ie about 58% of the dependent variable variations is expressed by independent variables. Watson's camera statistic value is 2.02. Values close to 2 represent the lack of autocorrelation of residuals, which is another regression assumption. The following assumptions can be made for estimating the coefficients using partial t-statistics. The null hypothesis and the null hypothesis for the y-intercept or constant value are as follows:

$$\begin{cases} H_0 : \beta_0 = 0 \\ H_1 : \beta_0 \neq 0 \end{cases}$$

And for the degree of correlation between the independent and control variables is written as follow:

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

$$\begin{cases} H_0 : \beta_5 = 0 \\ H_1 : \beta_5 \neq 0 \end{cases}$$

And test statistic value is calculated as follow in (2):

$$t_{\beta_i} = \frac{\beta_i - 0}{S_{\beta_i}} \tag{9}$$

The above statistic distribution is standard for large samples of normal distribution, so the rejection and non-rejection zones are as follows: The way to judge is that if t is in the reject area, the null hypothesis is rejected. According to the above, it can be said that there is a significant negative relationship between conservatism and capital expenditure. Chau test for choosing the appropriate model (model with effects or model without effects) The probability value is 0.000, so the null hypothesis of using the merged model is rejected and the model with effects is appropriate. For the Hausman test, the probability value is 1,000, so the null hypothesis cannot be rejected, so the random-effects model is the most appropriate one.

5.9 Testing the Second Hypothesis

In hypothesis 2 There is a relationship between anticipated conservatism and the capital expenditure.

Multivariate regression model was used to analyze the data and test the second hypothesis. In the regression we set CON_RANK equal to M/B1 value, ie the value of the expected conservative index. The following Table6 presents the results of the panel analysis.

Table 6 : Presents the Results of the Panel Analysis for Hypothesis 2

Dependent Variable: Cost				
Method: Pooled EGLS (Cross-section random effects)				
Sample: 1381 1388				
Included observations: 8				
Cross-sections included: 107				
Total pool (balanced) observations: 856				
Swamy and Arora estimator of component variances				
White cross-section standard errors & covariance (d.f. corrected)				
Variables	Coefficients	Standard deviation	t value	probability value
C	0.138	0.012	11.721	0.000
BETA	0.107	0.003	5.661	0.000
LEV	-0.845	0.001	-0.845	0.398
SIZE	-2.785	1.466	-2.785	0.006
EVAR	9.171	0.032	9.171	0.000
M/B1	-2.008	0.002	-2.008	0.045
Weight Statistics				
Coefficient of determination value	0.583	Mean dependent variable		0.154
Adjusted coefficient of determination	0.580	Dependent variable standard deviation		0.139
Standard deviation of regression	0.090	Sum of residual squares		6.911
F Value	237.430	Watson's camera		2.025
probability value	0.000			
Non- weight Statistics				
Coefficient determination value	0.576	Mean dependent variable		0.186
Sum of residual squares	7.462	Watson's camera		1.875

In the Table 6 the model with random effects was estimated. Significance probability F is 0.000. This value is less than 0.05, so the null hypothesis rejected at 95% confidence level. That is, 95% confidence level is significant. By comparing the calculated Watson camera statistic (2.02) with the critical value in the table, it was found that the above model does not have autocorrelation.

The obtained R^2 indicates that the model's independent variables are able to account for 58% of the relationship with the dependent variable. The t-statistic for BETA is 5.66 (positive and significant), for LEV is -0.84 (non-significant), for SIZE is -2.78 (negative and significant), for EVAR is 9.17 (positive and significant) and for M / B1 is -2.01 (significant and negative). The value of the t-statistic for the y-intercept is 11.72 which is at the 95% confidence level in the null hypothesis rejection area. In view of the above, it can be said that there is a significant negative relationship between predicted conservatism and capital expenditure.

6 Conclusion

6.1 Results and Discussion

According to the estimated model, there is an inverse (negative) relationship between the happened conservatism variable and the Cost of equity cost variable with a factor of 1.86, this means that for each unit of change in independent variable, we will see 1.86 units of change in the dependent variable. Also, there is a reverse (negative) relationship between the predicted conservatism variable and the capital cost variable with a coefficient of 0.01 which means that for each change in the independent variable, we will see the equivalent of 0.01 unit of change in the dependent variable. The most important parameter in analysing the relationships between variables and the final decision making about research hypotheses is the coefficient of determination of estimated model (value of 0.58), which means that 0.58 of the dependent variable changes through independent variables can be explained. After the research regression model is estimated based on the selected samples and the assumption of a linear relationship between the variables within and in the model structure (among the research samples) was showed, an important issue was to be considered as "feasibility of extending the estimated model to the statistical community", This was done based on the significance level of test F (according to coefficient of determination). Based on the coefficient of determination (0.58) and significance level f (0.000), it was concluded that relatively strong linear relationship between independent and dependent variables was significant at 5% error level.

6.2 Suggestions for Future Research

1- Despite extensive abroad research on conservatism and its relation to other accounting assumptions, not much research has been done domestically, Topics like exploring the relationship between conservatism and corporate governance, growth opportunities, information asymmetry, size of companies, type of corporation, the cost of debt, information risk, profit sharing policy and reducing debt contracts, disclosure level, profitability of investments, etc. can be the subject of research**.**

2- Comparative Study of Accounting Conservatism in private joint-stock company and public private joint-stock company with state and non-state ownership

3- Investigate the relationship between accounting conservatism and bankruptcy

4- It is suggested that future research examines the relationship between conservatism and other corporate governance mechanisms such as directors' ownership, board characteristics, internal controls, and so on.

5- Conducting comparative studies on the conservatism of companies in the capital market of countries with different economies (in terms of economies of constant growth and variable growth) with the aim of being aware of the impact of economic growth on companies' conservatism in the capital market.

6- Since conservatism in companies is related to their financing policies, research on the relationship between conservatism and capital structure can be useful for information users.

7- Feasibility of presenting a comprehensive model on the cost of equity capital in the Iranian capital market

8- Conduct comparative studies of the conservatism of companies in the capital markets of countries with developed, less developed and underdeveloped economies with the aim of being aware of the Impact of economic development variables on conservatism.

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