The cost of capital and accruals quality in companies listed on Tehran Stock Exchange

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Abstract: This study aims at investigating the correlation between the accruals quality (AQ) and cost of capital (CC) in companies listed on Tehran Stock Exchange. In the form of a main hypothesis and four sub-hypotheses, this research investigates the effects of cases such as beta of company, the company’s return on assets, debt ratio of company, firm size, and accrual quality on the cost of capital of company. This research investigates 127 companies from 2009 to 2013. Furthermore, the financial data of companies is considered for 20 years up to 2013 in order to calculate the accruals quality. Furthermore, Eviews 8 software is used to test the hypotheses. The research results indicate that the factors such as the company's beta, the company's return on assets, and the ratio of firm debt have direct correlation with cost of capital and this indicates that the increased risk in the form of beta and debt ratio increases the investors' expected return. However, the firm size is inversely correlated with cost of capital indicating that the increased firm size provides the possibility of borrowing and bargaining at lower costs for companies. Furthermore, the more the number of accruals quality, the less the accruals quality; hence, the less the accruals quality, the more the cost of capital. Accordingly, the result of this research can help the investment managers and creditors in companies to make better estimate of cost of capital through the impact of accruals quality.

Keywords: Accruals quality, cost of capital, beta, return on assets, debt ratio, size

1- Introduction

Given the high diversity in investment options, the investors select from the various options. This choice is based on the characteristics of risk and return. Any logical person invests with the purpose of earning the appropriate return. To reach an estimate of expected return, the investors try to provide the necessary information from various sources: and the accounting earning is also one of the most important information. The accounting earning is measured based on the accrual assumption and in the form of accounting principles and emphasizes on the reported reliability of items. The accruals quality has been always taken into account by financial management due to the impact on the investors' perception of earnings quality in order to reduce the cost of capitals of
company through its improvement (Francis et al. 2005). In fact, the managers try to identify the appropriate tool for minimizing the cost of capital and pay attention to it by identifying the factors affecting the profitability of company. The aim of this study is to identify and explain the relationship between the accruals quality and cost of capital using the data of companies listed on Tehran Stock Exchange. The cost of capital refers to the ordinary shareholders' expected return which is calculated in the form of weighted mean of financing cost through the stock by debt financing.

2- Theoretical principles and research literature

The expected return is influenced by two factors: First, the rate of confidential information (the expected return is increased by enhancing the confidential data) and then the accuracy of public and private information (the expected return is reduced by enhancing the precision and accuracy of data). On the other hand, the value of securities for investors is based on their assessment of future cash flows. Therefore, the criterion associated with the accrual components of earnings is the best criterion which covers the information risk in cash flows. A major part of information about the cash flows is provided by earnings. For instance, the cash flow is equal to the earnings minus the accruals. In general, the earnings accrual is determined with higher uncertainty than its cash component because the accruals are created according to the judgments, estimates, and assignments (from the cash flows generated in other periods), while the cash component of earnings is more objective (Francis et al. 2005)

Taking into account the results of previous studies on the qualitative features of earnings, the accruals quality is more appropriate than the other earnings features to determine the information risk of cash flows (McNichols, 2002).

The financial analysts, managers and investors pay particular attention to reported earnings. The earnings forecasts are quickly spread among the users, and any revision in it is closely followed. Since the retention of managers in the organization and in some cases a part of their compensation are determined based on the earnings figure, thus they try to maintain the good earnings level. The news of firm non-success in achieving the expected earnings reduces the stock price. The companies, which achieve their expectations, are welcomed by investors.

The managers' efforts to use the accrual for earnings improvement reduce the information asymmetry which creates the information risk. Therefore, the risk premium demanded by investors is reduced and the studies indicate that in large case companies, which are studied over the long periods, the management authority leads to the achievement of earnings opportunists. Therefore, the quality of accruals is the combination of increasing and decreasing the information risk (Francis et al, 2005).

The accruals consist of two components, the optional components or the items which management can apply control on them, and inherent components which management is not able to impose control on them.
2-1. Cost of capital

In an article entitled "the analysts' earnings forecast error and estimates of cost of capital", Larocque (2012) has investigated the correlation between the analysts' earnings forecast error and estimated cost of capital resulted from the earnings forecasts by analysts and prices. Despite the fact that the analysts' earnings forecast error reduces each of three cost of capital estimates applied in this study and used in available literature, there is no indication that this modification promotes the relationship with realized returns in this study.

Wang (2014) estimated the implied risk premium for companies. This paper represents a new approach to creation of specific measure for implied cost of capital. This criterion uses the estimated net endogenous growth rate of industry-year for current value of future investment. This criterion provides only the one-year forecasts of earnings; and the cash dividends policy is considered irrelevant.

He has found that a growing number of financial and accounting studies use the implied cost of capital as a measure of expected stock returns. His evidence suggests that this alternative provides the capable commitment towards understanding the issues in empirical price of assets.

His research expands the approach by Ashton and Wang (2013) in interpretation of specific firm measures for implicit cost of capital. This approach allows estimating the specific implicit cost of capital of company and the net growth rates of current value of future investment for year-company portfolio. This model needs only the prediction of future years; and the dividend policy is irrelevant. The interpretation of this issue indicates why the book value to price can be useful for describing the expected returns of stock. The prospective stock returns are identified as the eliminated factors in standard pricing models and Fama and French operating model. These results also provide an alternative interpretation for what leads to acceleration premium.

Lambert et al (2011) have studied the information asymmetry, accuracy of information and the cost of capital. They have investigated the relationship between the information differences among the investors (for instance, the information asymmetry) and the cost of capital and raised this issue that in the case of perfect competition, the information asymmetry does not make a difference. In contrast, the cost of capital of company is determined solely based on the investors' mean information accuracy. In the case of imperfect competition, the information asymmetry affects the cost of capital even after controlling the investors' mean accuracy.

According to their analysis, there is an important interaction between the imperfect competition and information asymmetry according to the cost of capital. When the markets are not perfectly competitive, the illiquidity of market affects the amount of information which is reflected in prices and reduces the investors' mean accuracy and increases the cost of capital. In contrast, when the markets are fully competitive, only the average accuracy of
investors' information is considered as the relevant. The information asymmetry does not affect the cost of capital in any way it is defined. They have investigated why there is no effect of information asymmetry and why the less informed investors are not protected compared to the more informed investors.

Their analyses have resulted in the following two results. First, under the perfect competition, the information asymmetry does not lead to separated or additional risk factors and no reward is considered for less information as mentioned in the research by Easley and O'Hara (2004). Second, it is important to distinct between the information asymmetry and accuracy and identifying that the effect of information asymmetry depends on the cost of capital depends on the nature of capital market competition.

Huang and Kang (2014) conducted a research entitled "Information, Investment Adjustment, and the Cost of Capital". They developed the model by Easley and O'Hara (2004) in order to show that the information adjustment has benefit for both informed and uninformed investors, so that its effects on the cost of capital are against its effects on the information risk. The net effect of private information on the cost of capital depends on the fact that which one is more powerful. According to their experimental tests, the value shares with less investment adjustment opportunities lead to the information risk premium, while the value share, which are richer in these opportunities, show the information risk deduction. These results of asset pricing are consistent with the findings which indicate that the growing companies adjust their investment in the form of action towards the information which is in the stock price, not in the value of company.

Using the ratio of book to market value of firm capital as an alternative to flexibility in investment adjustment, they have implemented the empirical tests and found that the information asymmetry affects the growth and value share in different qualitative forms. According to their financial firm tests, the difference in the outcome of pricing the properties of growth and value stocks can be attributed to higher sensitivity of investment in growth companies to stock market data compared to value shares. Furthermore, they have found that the companies, especially the growth ones, show the activism response to information of stock market over time. These findings provide the potential interpretation to undermine the information risk premium in recent years.

Guay et al (2011) have investigated the features of cost of capital through the analysts' forecasts. They have evaluated the impact of measurement by analysts' forecasts on the accuracy of estimated cost of capital through multiple approaches of cost of capital implementation and have applied the modifications on measurement error.

They indicate that relying on the analysts' forecasts leads to a set of different problems for estimating the applied cost of capital estimates. Since, the analysts' forecasts are often associated with the information contained in the slow stock structures, the use of pricing equation for solving the cost of capital issue leads to the predictable bias in estimates of cost of capital. Furthermore, they indicate that before modifying this source of measurement error, the applied cost of capital is inconsistent with achieved future returns.
2.2 Accruals quality

Ogneva (2012) has provided a simple methodology in his article based on the earnings response coefficient (ERC) which makes it possible to divide the realized returns into the cash flow shocks and exception returns of cash flow shocks. He has found that the shocks with weak (strong) quality of accruals have been exposed to lower (higher) shocks of cash flows on average in the past 37 years. These lower (higher) shocks of cash flows exclude the higher expected returns (lower) in companies with lower accruals quality (higher). After excluding the cash flow shocks, the realized future returns also have the negative correlation with accruals quality. These premiums including the accruals quality are statistically and economically significant in standard asset pricing tests when the shocks of cash flows have been excluded from the division of firm specific returns. In general, this research provides the evidence for existence of priced risk of accruals and emphasizes on the importance of cash flow shock control in asset pricing tests which utilize the realized returns.

The evidence indicates that the accruals quality criterion based on Dechow and Dichev (2002) is priced by market and is important due to the theoretical attractiveness of model and its wide application in accounting research. The model is particularly attractive in the context of pricing the assets because it includes the important feature of accruals quality and the quality of earnings, errors in estimation of accruals and the future returns of these items. These errors are associated with the accounting information accuracy concept which plays the theoretical role in linking the cost of capital and quality of information. (Lambert et al, 2007)

This paper also has the untold facts for studies which use the realized returns as the alternatives to cost of capital, and provides the simple way to identify the correlations with future shocks of cash flows and control the effects of these shocks. The results approve the importance of excluding the cash flow shocks to avoid the biased estimates of risk premium.

Paugam and Ramond (2014) have examined the effect of Impairment-Testing Disclosures on the Cost of Equity Capital. According to them, the information risk creates the uncertainty related to the distribution parameters of future cash flows in the company and the evaluation errors and it is costly for investors who need higher returns to compensate for the higher information risk. They believe that the managers disseminate the information which reduces the information risk on average through the disclosure of impairment test. Based on the sample disclosure of 250 accepted companies in France from 2006 to 2009, they have found that there is a negative correlation between the disclosure of impairment tests and the implicit cost of capital. They have found that the future-oriented disclosure of company has a negative correlation with cost of capital, while the descriptive disclosures have no correlation with cost of capital. Furthermore, the companies avoid the registration of impairment when the economic indicators suggest that this impairment should be recorded, they do not indicate any correlation between the impairment-testing disclosure and cost of capital. This indicates that the disclosure of these companies for investors is interpreted as the less accurate disclosure than the prediction errors. Their
study indicates the economic consequences of accounting mechanism for disclosure of impairment-testing in financial reporting, and approves the conservatism of financial reporting.

Francis et al (2004) have studied the earnings quality pricing in the markets. In this study, there is more evidence whether the capital markets and debt markets apply the information of earnings quality. They have examined 8 alternatives for earnings quality (four models based on adjusted Jones model for estimating the abnormal accruals, three criteria based on Dechow and Dichev's approach (2002), which links the working capital accruals to cash flows, and a factor analysis except for the other seven methods). Among these eight criteria, they have found that the companies with lower earnings quality, have higher cost of capital; and their evidence is fully obvious in the form of lower ranking of debt securities, the realized higher costs of debt, the ratios of earnings to higher adjusted price of industry, the higher betas of capital, and positive pressure on pricing regressions of significant statistical one and three-factor assets. The documented effects are statistically and economically meaningful and important: The results indicate that the companies, which have the highest earnings quality, benefit from the lower figures of 80 to 160 hundredths of a percent of debt cost and 150 to 300 hundredths of a percent of cost of capital compared with companies with the lowest earnings quality.

They have found that the shareholders price the securities in a way that it reflects their knowledge of earnings quality: The lower quality earnings are correlated with lower debt ratings, higher realized debt costs, lower prices ratios than the earnings, and higher capital beta. Furthermore, the earnings quality is increased as a separated factor in interpretation of excess changes in returns in one and three-factor models. The results are consistent in securities (debt and capital), estimated procedures (collective and Fama-MacBeth regressions, specification of variable (raw and decile) and model identification (cross-sectional levels against the changes over time) and maintain their power in the case of inclusion of control variables in influencing the hypothesized relationships including the earnings fluctuations. According to their evidence, there is a correlation between the tested earnings quality criteria with accounting/quality earnings applied in previous studies (e.g, the ability of annual earnings to explain the annual returns and the regression reaction coefficients of two-day returns to quarterly earnings news). In general, they have considered these results as the reference under which the consequences of systematic capital markets are correlated with changes in earnings quality.

3- Research methodology

The research is applied in terms of objective and it has the regression and correlation method. The research is conducted within the framework of deductive-priori reasoning; in other words, its background and theoretical framework are inductive and according to the library studies, the Internet and articles, and the data is inductively collect to prove or reject the hypotheses.

This study is correlative and the multiple-regression is applied to test the hypotheses. The necessary information about the accruals and cost of capital and the required data related
to the accruals and cost of capitals, and data of stock market value are extracted from the financial statements of companies listed on Tehran stock exchange, stock exchange reports, the importers of assembly, and websites of capital market information.

4. Research hypotheses

4.1. Main hypothesis

The cost of capital of companies with low accruals quality is different from the companies with high accruals quality.

4.2. Sub-hypotheses

First hypothesis: There is a significant correlation between the beta of company and the cost of capital.

Second hypothesis: There is a significant correlation between the return on assets and cost of capital.

Third hypothesis: There is a significant correlation between the debt ratio and cost of capital.

Fourth hypothesis: There is a significant correlation between the firm size and cost of capital.

4.3. Statistical population and sample

Among the companies listed on Tehran Stock Exchange, the companies with the names listed on the stock exchange rate panel from the beginning of 1994 to the end of 2013 and with no trading interval of more than 6 months and the available information to calculate the research variables in target years, are selected as the samples. Furthermore, the companies, with less than 5% of total shares traded during the financial year of target period, are excluded from the investigated sample. This percentage is estimated according to the stock turnover in Tehran Stock Exchange and it is assumed that the more number of traded shares (with the exception of major trading), the more the prices are creditable. Therefore, 127 companies remained as the samples.

The library method is applied and the research theoretical principles obtained in order to collect the required data. The financial statements and explanatory notes, the volatility of stock price and market index are collected through Rahavard Novin software and based on www.RDIS.ir for the sample companies, and then organized and calculated in Excel spreadsheet. Furthermore, Eviews 8 software is utilized for data analysis.

5. Research variables and their calculation method

5.1. Independent variables

The accruals quality is considered as the independent variable in the main research hypothesis and its impact is investigated on the dependent variable.
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**Accruals:** They are the non-cash accruals included in the calculation of net profits and are identified by company through the accrual accounting methods and then recorded.

### 5-2- Control variables

A) Beta of company (Bit)
It refers to the beta of companies and is calculated through the capital asset pricing model (CAPM).

B) Return on assets ratio (ROA <sub>i</sub>)
This ratio is calculated based on dividing the net profit by assets of company.

C) Company leverage (Lev <sub>i</sub>)
The ratio of debt is used as the leverage of company in this study. This variable is calculated based on dividing the total debt by assets.

D) Firm size (SIZE <sub>i</sub>)
The firm size criterion refers to the natural logarithm of book value of assets and the sales price in this study, and it is formulated as follows.

\[ \text{Size}_{it} = \text{Ln} \left( \frac{\text{AS}_{it} + \text{SA}_{it}}{2} \right) \]

- Size <sub>i</sub> = Firm size in year <sub>t</sub>
- AS <sub>it</sub> = Book value of assets in company <sub>i</sub> per year <sub>t</sub>
- SA <sub>it</sub> = Sales price of company <sub>i</sub> in year <sub>t</sub>

### 5-3- Dependent variables

The dependent variable refers to a variable with the changes influenced by the independent variable. According to the definition above, the cost of capital is considered as the dependent variable in this study.

### 5-4- Calculation of cost of capital (CC)

The total cost of capital of company is equal to the weighted mean cost of different sources of funds used by the company and the (weight) factor of each source towards the capital structure of company. The weighted mean cost of capital is calculated according to the following formula:

\[ \text{CC} = K_c \frac{S}{D_i + S_i} + kd \frac{D_i}{D_i + S_i} \]

- CC= Weighted mean cost of capital of company during the target period
- K<sub>d</sub>= Effective debt rate of company during the target period
- K<sub>e</sub>= The common stock cost of company during the target period
- D= Total financing of companies (book value) during the target period
- S= Common stock equity (book value) of company during the target period
5-5· Calculating the cost of debt (KD)

The cost of debt is a part of cost of capital which is paid for funding from outside the company. This cost in fact includes the interest paid for interest-bearing liabilities such as the short-term and long-term loans. In the case of companies, which have issued the bonds, the cost of bonds is also added to them. Given the number of loans received by companies, a mean can be considered as their cost of interest and debt.

5-6· Calculating the cost of equity (Ke)

In this study, the capital assets pricing model (CAPM) is used to calculate the cost of equity. The capital assets pricing model is one of the most important innovations in the theory of portfolio. This model is simple, but powerful. This single-factor model has still a lot of uses. The CAPM is provided by Sharp (1978), Lintner (1956) and follows the theory of portfolio and diversification by Markowitz (1952). This model provides a linear relationship between the expected returns and beta. This model has changed the total risk to systematic risk in order to determine the expected rate of return; its equation is as follows:

\[ E(R_i) = R_f + \beta_i [E(R_m) - R_f] \]

According to the CAPM, the expected return of an asset is only affected by its systematic risk; and beta is the criterion of systematic risk. Two assets with the same beta will have the equal expected return; and the nature of asset will have no effect on this issue.

5-7· Measurement of accruals quality (AQ)

This study focuses on a specific structure under which the managers make decisions. Therefore, the accruals quality is considered as an alternative to information risk. According to the provided definitions in the literature, the accruals quality is defined as follows: The accruals quality is defined as the standard error time series of regression residuals of working capital accruals for cash flows of past, present and future due to the operation as well as the changes in earnings, assets, installments and equipment. (Francis et al, 2005). This criterion is defined as the AQ in this study. The mentioned regression equation is applied for estimating the accruals quality of company j in the year t. This equation is as follows (Equation 1):

\[
TCA_{jt} = C + \phi_{t,j} CFO_{j-t} + \phi_{t,j} CFO_{j,t} + \phi_{t,j} CFO_{j+t} + \phi_{t,j} \Delta REV_{j,t} + \phi_{t,j} PPE_{j,t} + \epsilon_{j,t}
\]

\[ \Delta REV_{j,t} \] Changes in sales of company

\[ PPE_{j,t} \] Gross property, machinery, equipment

\[ TCA_{j,t} \] Total current accruals

\[ TCA_{j,t} \] is calculated according to (2):
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\[ TCA_{it} = (\Delta CA_{it} - \Delta Cash_{it}) - (\Delta CL_{it} - \Delta STDEBT_{it}) \]

\[ \Delta CA_{it} : \text{Changes in current assets} \]
\[ \Delta Cash_{it} : \text{Changes in cash flow,} \quad \Delta CL_{it} : \text{Changes in current liabilities} \]
\[ \Delta STDEBT_{it} : \text{Changes in payables or other short-term interest-bearing debt} \]
\[ CFO_{it} : \text{Operating cash flows in each year.} \]

Based on the model by Francis et al (2005), the accruals quality in year \( t \) is equal to the standard deviation of residuals in the company in equation (1) from the years \( t \) to \( t-4 \), and it is calculated according to the equation (2):

\[
AQ = \sigma = \sqrt{\frac{\sum_{n=t-4}^{t} (\varepsilon_{j,n} - \bar{\varepsilon})^2}{4}}
\]

\( \bar{\varepsilon} \): The mean residuals during the years \( t \) to \( t-4 \).

5.8. The correlation between the accruals quality and cost of capital:

According to the study of accounting and financial literature and the defining scope of beta for company, the ratio of return on assets, the ratio of debt to assets, and firm size are selected as the moderator variables in order to examine the primary hypotheses of research along with cost of capital variable in a multiple regression model. The multi-factor analysis is done by investigating the correlation between the accruals quality and cost of capital. The following regression model (Equation 3) is estimated on this basis:

\[
CC_{it} = C + \alpha_1 B_{it} + \alpha_2 ROA_{it} + \alpha_3 Lev_{it} + \alpha_4 LNS_{it} + B_{it} AQ_{it} + \varepsilon_{it}
\]

\[ CC_{it} : \text{Cost of capital} \]
\[ B_{it} : \text{Beta of pricing model for capital assets} \]
\[ ROA_{it} : \text{Return on assets} \]
\[ Lev_{it} : \text{Ratio of leverage to assets} \]
\[ LNS_{it} : \text{Firm size} \]
\[ \varepsilon_{it} : \text{Error term (residual) in estimation of regression} \]
\[ AQ_{it} : \text{Accruals quality} \]

The researcher's main focus is the \( AQ_{it} \) correlation coefficient or \( B_{it} \) which is expected to be positive.
6- Model estimation and its analysis

6-1- Model estimation

We start the model estimation by relying on the static panel models and the use of estimators of fixed and random effects. To estimate the equations (1) and (3), we should first determine the type of estimation method for a particular type of panel-sectional data. Therefore, we first utilize two tests by Chow and Hausman in order to determine the presence (or absence) of separated intercepts for each company. Based on these tests and obtained F statistic and $\chi^2$, the hypothesis based on the use of random effect method is rejected with probability of more than 99%. Therefore, the fixed effect method is approved for estimating the models. This information is provided in Appendix 2.

6-2- Implementation of regression model and investigation of research hypotheses:

$$CC_{it} = C + \alpha_1 B_{it} + \alpha_2 ROA_{it} + \alpha_3 LeV_{it} + \alpha_4 LNS_{it} + B_i A_Q_{it} + \epsilon_{it}$$

<table>
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<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
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<td>C</td>
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<td>4.434611</td>
<td>0.0000</td>
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<tr>
<td>B</td>
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<td>0.003485</td>
<td>13.47739</td>
<td>0.0000</td>
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<td>ROA</td>
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<td>0.0034</td>
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<tr>
<td>LEV</td>
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<td>0.010745</td>
<td>3.880931</td>
<td>0.0001</td>
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<tr>
<td>LNS</td>
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<td>0.005852</td>
<td>-3.574398</td>
<td>0.0004</td>
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<tr>
<td>A_Q</td>
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<td>1.05E-08</td>
<td>2.486438</td>
<td>0.0132</td>
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Effects Specification

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<th>Cross-section fixed (dummy variables)</th>
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</thead>
<tbody>
<tr>
<td>Period fixed (dummy variables)</td>
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| R-squared | 0.801111 | Mean dependent var | 0.125204 |
| Adjusted R-squared | 0.747303 | S.D. dependent var | 0.056333 |
| S.E. of regression | 0.028318 | Akaike info criterion | -4.103311 |
| Sum squared resid | 0.400152 | Schwarz criterion | -3.149464 |
| Log likelihood | 1435.801 | Hannan-Quinn crier. | -3.732945 |
| F-statistic | 14.88838 | Durbin-Watson stat | 1.889265 |
| Prob(F-statistic) | 0.000000 |                      |          |
The significance level of F is equal to 0.0000 which is less than 0.05, thus the null hypothesis is rejected at the confidence level of 95%; in other words, there is a significant model at the confidence level of 95%.

The adjusted coefficient of determination is equal to 0.801111; in order words, about 80% of variance in dependent variable is explained by independent variables. The value of Durbin-Watson is equal to 1.889. The values close to 2 indicate the lack of autocorrelation of residuals which is another regression assumption.

6-3- Hypothesis test

Main hypothesis test

The cost of capital of companies with low accruals quality is different from the companies with high accruals quality.

H0: There is no significant correlation between the accruals quality and cost of capital of companies listed on Tehran Stock Exchange.

\[ H_0 : \beta_1 = 0 \]

H1: There is a significant correlation between the accruals quality and cost of capital of companies listed on Tehran Stock Exchange.

\[ H_1 : \beta_1 \neq 0 \]

According to the table (1), the accruals quality coefficient is equal to 2.60E-08 (0.00000003). According to t statistic which is equal to 2.486438 and p-Value of 0.0132, which is less than 5% (0.05>0.0132), the results of this variable indicate the significant indicator of this coefficient at the error level of 5%. Therefore, the H0 (research hypothesis) is rejected and there is a correlation between the accruals quality and cost of capital; in other words, the less the accruals quality, the more the cost of capital of companies.

First sub-hypothesis: There is a significant correlation between the beta of company and cost of capital of companies listed on Tehran Stock Exchange.

According to the table (1), the beta coefficient is equal to 0.046975. According to the t statistic, which is equal to 13.47739 and the p-Value of 0.000 which is less than 5% (0.05>0.000), the results of this variable indicate that this coefficient is significant at the error level of 5%. These findings suggest that the beta of companies has a significant positive correlation with cost of capital of companies.

Second sub-hypothesis: There is a significant correlation between the return on assets and cost of capital of companies listed on Tehran Stock Exchange.

According to the table (1), the return on assets coefficient is equal to 0.047377. According to the t statistic, which is equal to 2.947422 and the p-Value of 0.0004 which is less than 5% (0.05>0.0004), the results of this variable indicate that this coefficient is significant at the error level of 5%. These findings suggest that the return on assets has a significant positive correlation with cost of capital of companies.
Third sub-hypothesis: There is a significant correlation between the debt ratio and cost of capital of companies listed on Tehran Stock Exchange.

According to the table (1), the debt ratio coefficient is equal to 0.041699. According to the t statistic, which is equal to 3.880931 and the p-Value of 0.0001 which is less than 5% (0.05>0.0001), the results of this variable indicate that this coefficient is significant at the error level of 5%. These findings suggest that the debt ratio has a significant positive correlation with cost of capital of companies.

Fourth sub-hypothesis: There is a significant correlation between the firm size and cost of capital of companies listed on Tehran Stock Exchange.

According to the table (1), the firm size coefficient is equal to -0.020916. According to the t statistic, which is equal to -3.574398 and the p-Value of 0.0001 which is less than 5% (0.05>0.0001), the results of this variable indicate that this coefficient is significant at the error level of 5%. These findings suggest that the firm size has a significant inverse correlation with cost of capital of companies.

7- Conclusion

Considering that the aim of this study is to investigate the effect of changes in accruals quality and its components on the cost of capital of companies listed on stock exchange, the results of statistical test are as follows: 1- The beta of companies has a significant and positive correlation with the cost of capital of companies. 2- The return on assets has a significant and positive correlation with the cost of capital of companies. 3- The debt ratio has a significant and positive correlation with the cost of capital of companies. 4- The firm size has a significant and negative correlation with the cost of capital of companies.

The results of this research also indicate that the accruals quality has a significant and negative correlation with the cost of capital. These results are consistent with the studies by Francis et al (2005). They have found that the accruals quality has a negative and significant correlation with the cost of capital. According to them, the accruals quality due to the economic bases and operating environment (intrinsic component) is separately investigated compared to the management choices (management component). They have concluded that both components of corporate governance have important impact on the cost of capital, but the impact of involuntary component of accruals is more than the optional one. These results are also consistent with the research by Francis et al (2004). They have found that the companies with higher earnings quality, which refers to higher accruals quality, have lower cost of debt and equity.

References