



Ferdowsi University of Mashhad

## Iranian Journal of Accounting, Auditing & Finance

Received: 2021-05-31

Accepted after revision: 2021-06-21

Published online: 2021-07-30

RESEARCH ARTICLE

DOI: 10.22067/IJAAF.2021.40231

# Evaluation of the Relationship between Audit Firm Choice and Cost of Equity

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## Abstract

The cost of equity capital plays a key role in financing and investment decisions. The cost of equity capital is defined conceptually to expected returns. In other words, the is the expected minimum rate of return. Suppose the expected return is less than the cost of equity capital. In that case, the entity's value will decrease, so management must try to maintain the entity's value to bring the expected return to at least the cost of equity capital; the key to success is to reduce the cost of equity capital. The present study aimed to determine the effect of audit firm choice on the variable cost of equity capital. Therefore, the paradigm or philosophical presupposition was positivist and meta-positivist. The statistical population included 99 companies listed on the Tehran Stock Exchange from 2009 to 2019. In addition, data analysis was performed using the R software package. According to the results, the auditor choice variable from the audit firm and the total debt to equity ratio significantly affected the cost of equity capital. Moreover, the variable of lack of auditor change had a significant impact on companies' cost of equity capital. Other variables of the two models were insignificant and did not affect the cost of equity capital.

**Keywords:** Cost of equity capital, Audit firm choice, Tehran Stock Exchange

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Number of Tables: 3  
Number of References: 19  
Pages: 25-33

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## 1. Introduction

Every organization around the world relies on two very important components of accounting and auditing. Accounting follows all company transactions and provides information through statements while the audit is carried out to show the accuracy of the path and ensure the credibility of information. Therefore, accountants play a key role in the audit profession (Kohzadi Tahne, 2020). The audit is a type of provision used in companies to reduce information asymmetry and control managers' freedom to operate in financial statements. The higher the company's quality and accuracy, the lower the risk of information and investment uncertainty. It is argued that high-quality auditing reduces corporate risk, which leads to a lower cost of equity (Hasas Yeganeh, Mohamadi., and Salemi, 2015). The cost of equity is the most important element of the cost of capital, which is a fundamental concept in the field of finance literature and plays a basic role in decisions related to financing and investment. For different reasons, corporate management must determine the financing and its impact on corporate risk and returns. In addition, the cost of equity plays a fundamental role in financing and investment decisions.

In general, the most important goal of auditors is to protect the right of shareholders against considerable deviations and errors in the financial statements. In fact, Auditors seek to increase the quality of audits in order to maintain the credibility of the profession and their own professional reputation and avoid litigation against themselves (Tevdello and Vanstralen, 2008). Therefore, Given the role and importance of choosing an audit institution in the cost of equity of corporations, the present research aimed to evaluate the effect of audit institution selection on the cost of equity capital variable in the form of two models using an R software package.

## 2. Literature Review and Hypothesis Development

The term "audit" often refers to the audit of financial statements. In general, a financial audit is an objective review and evaluation of an organization's financial statements to ensure that the financial statements are the fair and accurate display of claimed transactions (Tuovila, 2020). Generally speaking, the audit is defined as any type of investigation carried out to confirm or express opinions about the accuracy of any financial document by a person independent from the producer(s) of the mentioned document. In addition to analyzing the desired document and matching it with primary documents, such an investigation will include research on how transactions are made and yielded results. The process also takes any action that is necessary to achieve the above goal into consideration.

### 2.1. Audit Institution Size

The increase of competition has led to a higher need for providing quality services to the market by audit institutions. In this regard, audit institutions seek to diversify their services to increase their competitiveness. Large audit institutions will lose huge benefits if they are unable to discover and report important deviations in the financial statements of their employers. In addition, the personnel of large audit institutions is constantly trained, and their audit teams can be used in a specific industry professionally owing to the large number and diversity of their audit works. Moreover, Audit institutions are highly sensitive to maintaining their reputation and have high bargaining power, which can put pressure on employer management. Furthermore, they have high audit quality compared to small audit institutions.

The basic research theory should be applied based on the specific characteristics of the research environment. While large international audit institutions (four large audit institutions) are not active in Iran, Iranian researchers have used the audit firm size theory to study the difference in audit quality

between the auditing organization (as a large auditor) and the audit firms that are members of the auditing community (as a small auditor) (Derakhshan Mehr and Karami, 2019). In addition, Audit firm size is one of the audit quality dimensions. Therefore, the presence of large and high-quality audit institutions is expected to affect the relationship between interactions with dependent individuals and the ability to compare financial statements. In addition, In Iran, the auditing organization, which is the largest audit firm and has a government structure, may also adjust this relationship in a way that needs to be examined in terms of further emphasis on the legal aspects of transactions with related parties (Hajiha and Azadzadeh, 2018).

## **2.2. Internal and External Abilities of Audit Firms**

Both qualitative and quantitative abilities of audit firms can reveal the obscure angles of companies' performance and help shareholders and investors, and even compilers of stock exchange regulations in their decision-making by providing better information. Therefore, the existence of the capabilities of audit firms as a decision-making and professional criterion for the economy of countries like ours is necessary. The abilities of audit firms can be defined in the form of an acquired and fixed pattern of collective activity, through which the institution can contribute to the increase of quality of corporations' financial statements.

## **2.3. Internal Capabilities of Audit Firms**

These abilities have been defined to recognize the features and capabilities of firms. In addition, they are a basis to gain a competitive advantage over other audit firms operating in an industry or stock exchange. A public sector commission proposed the internal abilities in order to strengthen accountability and increase the capabilities of financial supervisors and auditors. Moreover, they were suggested as a solution and not a necessity for making audit firms more successful. These capabilities rely on an evolutionary route that increases responsiveness by recognizing capabilities and transforms from a typical level of internal auditing in a less developed firm to a mature institution capable of meeting needs and expectations. The internal audit capabilities' proposition is based on three pivotal and valuable elements: reassurance, insight, and neutrality (Safari Gerayli and Valiyan, 2018).

**Reassurance:** audit firms' capabilities in strategies, risk management, and control processes of companies that assist in achieving strategic objectives and envision a predictable future for companies. In other words, this capability helps companies better to understand social expectations and dimensions of social responsibilities and define their strategies based on them.

**Insight:** insight into audit firms' capabilities is considered a catalyst or action partner, analyst, and evaluative. Improving the effectiveness and efficiency of corporate policies and programs through proposals based on environmental data evaluation and analysis helps improve companies' business processes in a competitive environment.

**Neutrality:** this characteristic and capability of audit firms refer to their commitment, accuracy, and honesty in fair reviews of companies' financial performance, contributing to the company's greater transparency. This feature helps companies improve the level of transparency of their disclosed information as a reference (Safari Gerayli and Valiyan, 2018).

## **2.4. External Capabilities of Audit Firms**

The external capability of audit firms refers to the invisible part of their activities, the part that seeks to increase quality, not just quantity. In other words, the external capabilities of audit firms can be defined as an acquired and consistent pattern of collective action through which firms systematically create and modify day-to-day operational activities to achieve greater effectiveness.

The most important advantage of this type of capability is to achieve success and pre-determined goals. In fact, these capabilities help the audit firms improve the audit firm's reputation, the reputation of the institutions, the number of owners, and the audit fee increase. In other words, these criteria in the field of auditing activities are the same criteria for success and gaining a competitive advantage for an auditing firm (Safari Gerayli and Valiyan, 2018).

## 2.5. Cost of Capital

The cost of capital is one of the uncertain economic consequences of management actions. This concept is important in two dimensions; the first dimension is that all securities valuation models rely on the cost of capital. The second dimension is that determining investment priorities, optimal capital structure, and evaluating the optimal performance of units will not be practical without knowing the cost of capital. The cost of capital affects a company's ability to achieve external assets. In addition, CEO talent and conflict of interest with the cost of capital can affect the company's ability to increase external investment. A high cost of capital, which is caused by poor decisions of managers, might force the company to overlook investment opportunities due to a lack of sufficient assets. This is more tangible for companies with fundamental investment opportunities without a sufficient internal source of capital (Akhgar and Zaheddoost, 2020). In addition, the cost of capital is one of the fundamental concepts in finance literature. The cost of capital plays an important role in financial decisions. To determine financial resources, company managers must determine the cost of financing and the factors affecting it. Cost of equity is the most important element among the components forming the cost of capital since companies supply a higher percentage of their resources from this place. Political relations of economic enterprises are one of the important factors affecting the cost of capital (Salimi, Gorjizadeh, and Safarpour, 2020).

## 2.6. Cost of Equity

Cost of equity is one of the basic concepts in the finance literature, playing a fundamental role in financing and investment decisions. Corporate managers should take this issue into account to properly determine the financial resources. The cost of equity is important because it forms the basis for comparing investment opportunities since the cost of equity is based on the rate of return expected by investors and is related to the amount of risk accepted by them and also since a large part of the non-operating costs imposed on the company are financing costs. The conversion of operating profit into losses caused by the company's ongoing activities is due to the imposition of this type of cost. Therefore, a corporation needs to maintain its cost of equity at a rational level. The cost of equity is the percentage return demanded by a company's investors (Qana, 2017). In addition, the cost of equity is the minimum return that a company must attain to meet the return expected by shareholders. Therefore, the cost of equity is recognized as the return expected by shareholders during a financial period. Today, reduced cost of capital and increased corporate value have been identified as one of the most important goals of financial managers. Since a large part of the cost of capital of companies is formed based on the cost of equity, companies are required to identify and use strategies to reduce their cost of equity (Asadi Nahari et al., 2019).

Kohzadi Tahne (2020) evaluated audit materiality: the expectation gap between auditors and users of audit reports. According to the results, there was no significant difference between the two groups regarding the effect of modifications in financial statements on the significance, disclosure of materiality, and how pervasive the effects of sanctions are. In addition, both groups agreed on the importance of materiality in auditing reports and the review of the criteria and coefficients specified in the instructions of materiality. Mohammad Rezaei and Yaghoob Nezhad (2017) evaluated audit firm size and auditing quality: theoretical and methodological issues and suggestions. According to

their results, the Audit Organization of Iran does not possess most of the big audit firms' characteristics in light of the audit firm size view. Moreover, methodological criticism indicates that the issue of endogenous auditor choice has not been taken into account by Iranian researchers. In another study, Salehi et al. (2016) evaluated the factors affecting the cost of capital, emphasizing audit quality in companies listed on the Tehran Stock Exchange. According to the results, while the auditor's size and the auditor's expertise in the industry do not reduce the cost of capital, as the auditor's tenure increases, so does the cost of the company's capital.

Zhou (2019) evaluated the effect of key audit matters on firms' capital cost: evidence from the Chinese market. In the end, it was concluded that the introduction of key audits asymmetrically affects companies in different information environments. Saadatmand and Alavi (2019) evaluated audit committee characteristics and cost of equity capital, reporting a significant negative relationship between the audit committee size and the cost of equity capital. In other words, firms with more committee members have less cost of equity capital. In research entitled auditors' choice and financing decision of selected quoted firms in, Nigeria Okere et al. (2018) mentioned that companies with auditors from four big audit companies have more debt and special value in their capital structure and are less likely to issue debt. In another study, Coffie, Bedi, and Amidu (2018) assessed the effects of audit quality on the costs of capital of firms in Ghana. According to their results, there is evidence to suggest that the cost of debt and the overall cost of capital of firms in Ghana can be explained by the quality of the external auditors. Choi and Lee (2014) evaluated the association between Big 4 auditor choice and cost of equity capital for multiple-segment firms, reporting that the Big 4 play a significant role in reducing the cost of equity capital and more information asymmetry in these companies. Based on the above-mentioned discussions and studies, the research hypotheses are as follow:

**H1:** There is a significant relationship between the audit firm size and the cost of equity capital.

**H2:** There is a significant relationship between the audit firm choice and the cost of equity capital.

### 3. Research Methodology

The scientific research method is a systematic activity where the researcher uses a set of steps that ultimately solve the research problem (Clark, 2010). The researcher chose the positivist or meta-positivist philosophical paradigm or presupposition as a model for his research according to the research problem, which is objective, and the relationship between the researcher and reality, which has relative independence and forms the researcher's epistemological point of view. Then, the researcher must choose his method of reasoning based on Flick's theory. This was applied research, and its results could be beneficial for a wide range of corporate managers, shareholders, investors, creditors, researchers, and standard compilers. Data were collected by the library method, and data analysis was carried out using the R software package.

#### 3.1. Research Variables

The research variables are as follows:

##### 3.1.1. Dependent Variable

Coe: is the equity cost.

##### 3.1.2. Independent Variable

Big: is an indicator variable for audit quality, which will be one when the company uses the auditor of the audit form; otherwise, it will be zero.

Choice: choosing an audit firm, which will be one when the same equity firm is selected in the current year; otherwise, it will be zero.

Discaq: estimates of the quality of accruals are optional.

Size: natural logarithms are total assets.

Mtb: is the ratio of book value to market value.

Db: Is the ratio of total debt to equity.

In this study, data analysis was carried out using Choi and Lee's (2014) regression model and panel data.

- first model of the research:

$$coe = \beta_0 + \beta_1 big + \beta_2 disaq + \beta_3 size + \beta_4 mtb + \beta_5 db + \varepsilon_0$$

- second model of the research

$$coe = \beta_0 + \beta_1 big + \beta_2 disaq + \beta_3 size + \beta_4 mtb + \beta_5 db + \beta_6 choise + \varepsilon_0$$

#### 4. Findings

In this section, the reliability of variables and their tests in composite data are discussed. In this study, the Dickey-Fuller test was used to perform this test.

**Table 1.** Unit Root Test by Dickey-Fuller Test

Variable	Measurement Error	Dickey-Fuller Test	Result
Big	0.01	-7.41	At a Stable level
Choice	0.01	-10.56	At a Stable level
Coe	0.01	-12.21	At a Stable level
Db	0.01	-17.42	At a Stable level
Discaq	0.01	-21.22	At a Stable level
Mtb	0.01	-8.22	At a Stable level
Size	0.01	-12.82	At a Stable level

The significance level of all tests was less than 0.05. Therefore, the assumption that a single root in the series was rejected and the variables were stable (without differentiation). Since the data used in the present research was a combination of cross-sectional data (99 companies) and a time series (2009-2019), the researcher determined the type of estimation of the two research models using Hausman and F-Limer tests so that it could be determined which fixed effects, random effects or money model tests are suitable for each equation. In this regard, the results are presented in Table 2.

**Table 2.** Determining the type of Estimation of the Integrated Data Model

Model	F Test	Hausman Test	Model Selection Result
First Model	0.00	0.0004	Fixed Effects
Second Model	0.0000	0.001	Fixed Effects

Since the measurement error for the two F-Limer and Hausman tests was below 0.05%, the use of the random effects estimator was rejected, and we used only the fixed effects estimator. The coefficient was estimated and analyzed by the researcher in R software after determining the type of estimator to calculate the coefficients of two research models, as shown in Table 3.

**Table 3.** Estimation of Coefficients of Research Models

	First Model	Second Model
Big	0.002 (0.00)*	0.002 (0.00)*
Db	-0.0003 (0.01)*	-0.0004 (0.004)*
Discaq	-0.0005 (0.85)	-0.0001 (0.71)
Mtb	-0.0004 (0.45)	-0.0003 (0.50)
Size	0.001 (0.45)	0.001 (0.40)
Choice	--	-0.002 (0.00)*
Durbin-Watson Test	1.7	1.85
Coefficient of Determination	0.73	0.79
F Regression Measurement Error	0.00	0.00

According to the results obtained from the model estimation table, there was no autocorrelation between the disorder statements in the models due to the closeness of the numbers obtained from the Watson-Durbin test to the number two. In addition, the measurement error rate of the F statistic was calculated at below 0.05 for both models, which showed the existence of a significant linear correlation between independent and dependent variables. The coefficient of determination represents the percentage of changes in the dependent variable, explained by the model's independent variables. In the first and second models, the coefficient of determination was estimated at 73% and 0.79%, respectively, meaning that the independent variables explained 73% and 0.79% of the dependent variable changes in the first model of the dependent variable changes (cost of equity capital) and the second model, respectively, which was a considerable and suitable value.

## 5. Conclusion

According to the present study results, the variable of auditor selection from the big audit firm was completely significant and had a positive effect on the variable of cost of equity capital. Therefore, the cost of equity capital of companies will increase with the continuation of the selection of the auditor from the audit organization. In addition, the db variable had a significant negative impact on coe, meaning that the higher the increase in db to equity ratio, the lower the coe of the company. Similarly, the variables of audit selection from the big auditor firm and variable of db had a significant effect on the variable of coe and were equal in terms of positivity and negativity. However, the variable had a significant negative effect on the cost of equity capital with the entrance of the variable of audit firm choice (lack of auditor change) in the second model. The other variables of both models were not significant and did not affect the variable of cost of equity capital.

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