Corporate Governance and Cost of Equity: Evidence from Tehran Stock Exchange

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Abstract

The purpose of this study was to investigate the impact of corporate governance index on the cost of equity in companies listed on the Tehran Stock Exchange. This study collects data from 975 observations during the period 2012 to 2018 to test the hypotheses using multiple linear regression model for the panel data. In this research, the independent variable of corporate governance index comprises of 27 specific corporate governance attributes. The results of hypothesis testing showed that corporate governance has a negative and significant effect on the rate of capital cost. In other words, the quality of corporate governance can lower the rate of capital cost. This result suggests that, by using a powerful corporate governance system and by declining the information asymmetry (increasing transparency) and agency conflict, we would be able to enhance the quality of financial reports. It would strengthen the capital market, attract financial suppliers and investors, and absorb the required financial resources of the firm by a lower rate. The findings of the study suggest that companies are able to reduce the cost of equity by establishing strong corporate governance. This conclusion suggests the importance and effectiveness of corporate governance in the cost of equity.

Keywords: Corporate Governance, Corporate Governance Index, Equity Cost, Agency Cost, Iran, Agency Theory, Information Asymmetry Theory

JEL Classification Code: G35, G34, G30

1. Introduction

The idea of corporate governance occurs when there is a separation between ownership and control in the business. Owners often include shareholders, government agencies, financial institutions, and other companies and initial founders. The primary reason behind the requirement of corporate governance norms is to protect the interests of the owners and other shareholders of the company. Corporate governance focuses on the need to monitor the management of a company and separate the entity from its ownership, and

ultimately maintain the investors' rights and stakeholders (Hoffmann, 2013). When corporate governance is set up appropriately in the company, managers' behavior is expected to be in line with the interests of the shareholders. In other words, corporate governance leads to improved company operations (Sharma and Singh, 2018; Ammann et al., 2011; Bhagat and Bolton, 2008).

The first thought that establishes corporate governance is the agency theory that reduces information asymmetry. Jensen and Meckling (1976) identified the agency theory and proved the fact that there are some contradictions between management decisions and decisions that can maximize the wealth of the owners of the company. This phenomenon has created a set of features called corporate governance to minimize agency risk. In other words, by establishing a high quality corporate governance, the role of controlling the owners can be strengthened, while retaining the rights of the majority of shareholders (in particular minority shareholders), and the company reduces the entity agency cost (Srivastava et al., 2019; Ararat et al., 2017).

In today's economy, corporate governance is not just about protecting the interests of owners and shareholders,

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but also guaranteeing the survival of a company in a competitive economic environment. The cost of equity is one of the main concepts in the financial literature and plays a crucial role in corporate finance decisions and investment. In order to ascertain the appropriate financial resources, the management of the company must determine the cost of financing and the effects that these resources will have on the risk and returns of the company (Reverte, 2009; Pham et al., 2012). Claessens and Yurtoglu (2013) observed that, in emerging economies, the quality of corporate governance had higher access to finance and lower cost of equity rates. Also, Zhu (2014) states that good governance can positively affect a firm through increased expected cash flows and the reduced cost of capital. In line with this literature, the current research analyzes the effect of corporate governance attributes on the cost of equity for companies listed on the Tehran Stock Exchange.

Corporate governance and internal control emphasizes the transparency and disclosure of information, the elimination of internal information, the attempts to decentralize power in companies, manage problems arising from the separation of management from ownership, and endeavors to respect shareholders' equity and value (Nedyalkova, 2017). On the other hand, all of the company's investment decisions are influenced by the cost of equity. The agency theory has proven that capital structure is determined by the agency cost that results in a conflict of interests. The existence of effective and strong corporate governance reduces the agency problems, information asymmetry, ensures accurate reporting by management, transparency, and stakeholders' confidence, and subsequently lowers the cost of equity (Srivastava et al., 2019).

However, effective corporate governance can also reduce the riskiness, and so the market premium required by investors, and ultimately decrease the cost of equity (Chen et al., 2009). The relationship between corporate governance and the cost of equity has always been at the center of several research studies (Lemmon and Lins, 2003), but this relationship is still questionable, as it depends on how corporate governance differences bring about quantifiable variation in market risk across companies and countries (Chen et al., 2009). The gaps that arise from the actual business practices and the results of extant literature make researchers interested in analyzing the relationship between the implementation of corporate governance and the cost of equity (Situmeang et al., 2018).

The use of the cost of equity, instead of other variables, generates some advantages. The cost of equity reacts in a more accurate way to annual changes in the corporate governance of the company, and it is not affected by exogenous factors, which instead influence profitability and future growth (Hail and Leuz, 2006). Therefore, the choice of cost of equity appears to be a more appropriate one, as not

biased by variation in growth opportunities (Botosan, 1997; Botosan and Plumlee, 2002; Vo, 20419).

The main purpose of this research is to answer the question of whether corporate governance mechanisms have a significant effect on the company's cost of equity in the Tehran Stock Exchange. The study on the impact of corporate governance mechanisms on the cost of equity is important as it makes three crucial contributions: first, most of the previous studies on the subject focus on the relationship between corporate governance and firm value, rather than the cost of capital; second, previous studies usually focus on a few aspects of corporate governance. Since corporate governance attributes may complements or substitutes; third, this research can provide clear empirical evidence regarding corporate governance mechanisms and their impacts on the cost of equity of listed companies on the Tehran Stock Exchange and also highlight the importance of all aspects of corporate governance in companies. This study can also be considered as a useful ground for future studies in this area. Thus, we fill this gap by analyzing a comprehensive and completely new dataset and specific corporate governance measures designed for Iranian firms through Corporate Governance Index, created for the purpose and based on the financial statements of the analyzed companies. This study mainly presents empirical evidence on the relationship between corporate governance index and the cost of equity of a firm.

The structure of this paper is as follows: Section 2 describes the theoretical background and development of hypothesis; Section 3 describes the methodology of the research which includes the research model and variables description; Section 4 presents the analysis of research data; and Section 5 presents the discussion and conclusion.

2. Theoretical Background and Hypothesis Development

The issue of corporate governance was raised in response to problems related to the efficiency of the board of directors in large companies. The separation of management from ownership raises the agency problem, which results in the conflict of interests between shareholders and managers. This conflict of interest is often associated with agency issues that arise from two factors: first, different participants have different goals and interests, and second, the participants have incomplete information about their performance, knowledge and interests (Gompers et al., 2003; Larcker et al., 2007; Pham et al., 2012).

Zhu (2014) believes that there are two major solutions for agency problems. The first solution is the alignment of interests, and another is monitoring. Under the regulatory decision, directors are monitored and controlled when they are not moving towards the interests of shareholders. This

causes managers to move in a direction that is consistent with maximizing value for shareholders. The first solution involves supervision by the board of directors and supervision by shareholders. The second solution, which reduces the conflict of interests between managers and shareholders is management ownership. This solution, which also involves incentives, includes the ownership of the manager in the stock through purchase options and compensation benefits. Corporate governance creates the necessary incentive in management and provides effective monitoring, thus making companies more resource-efficient.

The board of directors is one of the corporate governance attributes. The responsibility of the board of directors is to create effective corporate governance, in line with the interests of shareholders, and balance the interests of its various stakeholders, including customers, employees, investors and local communities (Chen et al., 2009). Researchers have confirmed that the board structure is a relevant aspect of agency theory (Jensen & Meckling, 1976; Dalton & Dalton, 2011; Bhagat & Bolton, 2008). The external board members play a crucial role in monitoring the firm's activities (Brickley et al., 1994; Shivdasani, 1993). The board of directors' role is to provide independent oversight of management and hold management accountable to shareholders for its actions. A widely held view is that when there is a strong base of independent directors on the board, boards are more effective in their monitoring of management (FitchRatings, 2004).

Board independence is one of the main mechanisms of corporate governance. The presence of non-executive members on the board of directors increases the power of the board of directors as a control mechanism (Kumar and Singh, 2012). Independent directors are more likely to protect shareholders against any self-serving behavior by management. They also act in shareholders' interest in a better way compared to non-independent directors, thus preventing the eventual expropriation of shareholders' wealth (Arosa et al., 2010). Another key attribute of corporate governance is the CEO's duality. If the CEO is the chairman or vice-chairman of the board of directors, then the CEO will potentially have more authority. In addition, the dual structure allows the CEO to efficiently control the information available to other members of the board, thus preventing effective oversight (Claessens and Yurtoglu, 2013).

Institutional ownership and ownership concentration can also be considered as two main attributes of corporate governance. One of the external mechanisms affecting corporate governance is the emergence of institutional investors as capital owners. Institutional shareholders have the potential to influence the director directly through ownership and indirectly through their stock exchanges.

The indirect impact of institutional stakeholders can be very strong. For example, an institutional shareholder's refusal to invest in a particular company may make it difficult for them to attract capital, which ultimately increases the cost of equity (Black and Khanna, 2007). Miller and Le-Breton Miller (2006) argue that ownership concentration reduces agency costs and lead to more benefits for a company, thereby increasing company value and better monitoring of managers reduce agency costs (Chen and Yur-Austin, 2007), so, contributing to performance and value creation. In addition, pressure-sensitive investors are less likely to act as effective monitors than pressure-resistant investors. By alleviating the free-ride problem, higher levels of ownership concentration and institutional ownership positively reduce the conflict between shareholders' interests and managers (Shleifer and Vishney, 1997; Wang and Deng, 2006).

Jensen (1993) and Shleifer and Vishny (1997) argue that blockholders, who own a relatively large proportion of shares, and institutional investors, have greater incentives to monitor a firm's management and policies in an unbiased way. Ashbaugh et al. (2004) argue that blockholders and institutional investors use their voting power to extract private benefits, thereby increasing agency costs, and a positive relationship between institutional ownership or blockholders and the cost of equity capital is expected. Another attribute of corporate governance is the subsidiary of a company. In general, a subsidiary company is controlled and monitored by a parent company. Hence, membership in business groups can increase the ability of the parent company to actively monitor subsector companies and maintain the interests of small shareholders.

Free-floating stock is part of a company's stock, whose holders are ready to trade shares. Owners of free-floating stocks do not intend to participate in the management of the company. The importance of free-floating stocks is so much that today most countries use this coefficient to adjust market indicators. If the company's free-floating stock is high, its market is potentially more liquid and its price fluctuations are lower and consequently, the investment risk is reduced and the cost of equity is lower (Sloan, 2014). Since the audit committee is to monitor the financial reporting process at the end of the period, it can improve the quality of corporate governance by improving the methods used in financial reporting (Gollakota and Gupta, 2006).

To justify the relationship between corporate governance and cost of equity, the information asymmetry theory and agency theory have been used, which are in line with the need for the establishment of corporate governance in companies. Corporate governance attributes play an important role in eliminating information asymmetry and reducing agency costs. The establishment of optimal corporate governance will increase the transparency of information and reduce

the cost of equity and information asymmetry, which will boost the capital market (Salehi et al., 2019). So, corporate governance attributes increase the quality of financial reporting by management, increase the transparency of information and stakeholders and creditors trust which reduces the cost of equity (Srivastava et al., 2019).

Previous studies have examined the relationship between corporate governance attributes (such as the size of the board, the independence of the board of directors, audit committee, CEO's duality, etc) and the cost of equity (Bozec and Bozec, 2011; Mazzotta and Veltri, 2012; Zhu, 2014; Teti, 2016). Also, various studies which analyzed the causal relationship between corporate governance attributes and certain firm-specific performance parameters (Bhagat and Bolton, 2008; Chen et al. 2009; Balasubramanian et al. 2010; Ammann et al. 2011; Dharmapala and Khanna, 2012; Ararat et al. 2017) have provided mixed results.

In terms of corporate governance's influence on the cost of equity, several studies with relatively similar results have been performed. These studies indicate good enterprise management will reduce the cost of equity. For example, Adnan and Qubbaja (2019), Bozec and Bozec (2011), Mazzotta and Veltri (2012), Srivastava et al. (2019) and Patro & Kanagaraj (2016) showed that there is a negative relationship between corporate governance and cost of equity. Claessens and Yurtoglu (2013) concluded that better-governed firms have easier access to external finance in emerging economies, resulting in a lower cost of equity. These results are consistent with the findings of research by Gupta et al. (2018), which also concluded that financial development strengthens the negative relationship between the corporate governance attributes and the cost of equity. In an international study, the research results of Zhu (2014) show that the establishment of strong corporate governance can be accompanied by a reduction in the cost of equity. Teti et al. (2016) show that the quality of corporate governance has a negative impact on the cost of equity. In contrast, some other studies like Mc Innis (2010) and Juniarti and Natalia (2012) study do not support the conclusion that a good corporate governance increase will decrease the cost of equity.

Huynh (2020) show that corporate governance mechanism has a significant moderation in the positive link between good corporate social responsibility and earnings management. According to the theoretical and historical foundations, the research hypothesis is as follow:

H₁: There is a negative relationship between corporate governance and the cost of equity.

3. Methodology

The desired statistical population for this research is listed firms on the Tehran Stock Exchange during a seven-

year period, from 2012 to 2018, and the following conditions were applied for selecting the statistical population:

1. Firms should be listed on the Stock Exchange before 2012 and be active in this organization until the end of 2018;
2. Their required information should be available and their shares should be transacted frequently and have sign halt of no more than three months;
3. To increase the comparability, the company financial year-end should be set for March each year and should have no year-end change; and,
4. Due to their different financial structure of some Stock Exchange firms, the selected firms should not be affiliated with banks, investment companies, investment funds, leasing, etc.

3.1. Research Model and Variables

The following regression model is used for testing the research hypotheses:

$$\begin{aligned} \%COE_{it} = & \beta_0 + \beta_1 CGI_{it} + \beta_2 Leverage_{it} + \beta_3 MTBR_{it} \\ & + \beta_4 SIZE_{it} + \beta_5 SaleGrowth_{it} + \beta_6 CFO_{it} \\ & + \beta_7 LOSS_{it} + \beta_8 PPE_{it} + \beta_9 INVENT_{it} \\ & + \beta_{10} REC_{it} + \beta_{11} AGE_{it} + Industry + Year + \varepsilon_{it} \end{aligned}$$

3.1.1. Dependent Variable

In this paper, the capital cost rate (%COE_{it}) is the dependent variable, for the calculation of which the Gorden's method is used as follows:

$$\text{Equation (1)} \quad \%COE_{it} = \frac{DIV_{it}(1 + g_{it})}{P_{it}} + g_{it}$$

COE_{it}: capital cost rate of the firm i in the year t.

DIV_{it}: cash dividend in the current period.

P_{it}: market share price at the end of period.

g_{it}: estimated growth rate of shares that based on the hypotheses of this model is a fixed rate achieved concerning the previous information of the firm. It is assumed that the expected growth rate is ongoing for firms with the dividend growth rate. The dividend growth rate is calculated using the following equation (Teti et al., 2016):

$$\text{Equation (2)} \quad g_{it} = \frac{DIV_{it} - DIV_{it-1}}{DIV_{it-1}}$$

Where DIV_{it} is the cash dividend of the current year, DIV_{it-1} is the cash dividend of the previous year, and g_{it} is the dividend growth rate.

3.1.2. Independent Variable

CGI_{it} : in this paper, the corporate governance index is used for realizing the quality of corporate governance. For this purpose, 27 attributes are used for computing the corporate governance in this study.

Based on the previous studies, the corporate governance index is calculated for scoring as follows.

$$CGI = \left[\sum_{i=1}^m X_i \right] / n$$

CGI: Corporate governance index.

X_i : scoring of this variable is “0” if the variable is existence, otherwise “1”.

n: maximum score that is 27.

3.1.3. Control Variables

Leverage_{it}: is equal to debt to assets ratio of the firm *i* in the year *t*. Generally, the capital structure (debt level) of the firms is under the influence of capital cost rate. In other words, by decreasing the capital cost rate, firms are more willing to foreign financial supply (Bozec and Bozec, 2011).

MTBR_{it}: is firm growth which is equal to the present value of the firm to book value of equity of the firm *i* in the year *t* (Srivastava et al., 2019).

SIZE_{it}: the variable of firm size is equal to the natural logarithm of book value of assets of the firm *i* in the year *t* (Shah and Butt, 2009).

Salesgrowth_{it}: the growth of net sales of the firm *i* in the year *t* and an index for calculating the net sales changes of the firm. Net sales growth is equal to net sales in the year *t* minus net sales in the year *t*-1 divided by net sales in the year *t*-1. Sales growth of a firm is indicative of the suitable profitability of the firm and the enhancement of future performance of that firm.

CFO_{it}: variable of net operational cash flow of the firm which is equal to net operational cash flow of the firm to book value of assets of the firm *i* in the year *t*. Operational cash flows derived from principal and frequent activities of the firm (Dai et al., 2017).

LOSS_{it}: dummy variable for considering the net loss of the firm. If the firm *i* is losing in the year *t*, 1, otherwise, 0 will be assigned. Generally, loss reporting is a reflection of poor performance, which can increase the cost of capital because the lenders' trust for these companies is poor (Zhu, 2014).

PPE_{it}: the variable of tangible assets of the firm, which is equal to property, plant, and equipment to book value of assets of the firm *i* in the year *t*. One of the reasons for attracting foreign funds is the acquisition of fixed assets,

which are mainly purchased on credit due to the high cost. Therefore, their high purchasing cost can affect the amount of cost of capital (Renderset al., 2010).

INVENT_{it}: the variable of firm inventories, which is equal to the inventory of the firm to book value of assets of the firm *i* in the year *t*. In competitive market, a lack of flexibility in inventory can lead to loss of the company. Therefore, a surplus of inventories can impose a negative signal on the firm by spending on the company and increase or decrease the cost of capital (Mazzotta&Veltri, 2012).

REC_{it}: the variable of accounts receivable of the firm, which is equal to accounts receivable of the firm to book value of assets of the firm *i* in the year *t*. Companies usually sale in cash or credit. Credit Selling can increase the allowance for doubtful accounts and make difficult for the company to obtain the facilities. In other words, high accounts receivable can increase the likelihood of a company facing a future financial crisis and increase its cost of capital rate (Barthet et al., 2013).

AGE_{it}: variable of firm age, which is equal to the natural logarithm of firm age as of the date of establishment to the period under study. In general, absorbing foreign financial resources in the initial years of firm establishment with a lower capital cost rate is much difficult in that these firms usually benefit from less reputation. In other words, as the age goes up, the firm capability is more for receiving facilities with lower capital cost (Chen et al., 2009).

Industry: Dummy variable for the type of industry in this study, first, the firms of the statistical population under study were divided into four active groups (group 1: car, machinery, and metals; group 2: chemicals and drugs; group 3: mines and mineral; group 4: other industries). In the following, a dummy variable (0 and 1) is used for considering the random effects of the type of industry in the research models.

Year: Dummy variable for the year.

4. Results

4.1. Descriptive Statistics

The results of descriptive statistics of research variables are shown in Table 1 and 2, which show that descriptive parameters have a discrete value for each variable. These parameters mainly include information about the central indices, including minimum, maximum, mean, median, as well as information related to dispersion indices including standard deviation. The most important central index is mean which indicates the equilibrium and center of gravity of distribution and is an appropriate index for showing data centrality.

In Table 1, the mean capital cost rate is 0.300 and its median is 0.296 with the standard deviation of 0.467 and respective minimum and maximum values of 0.0002 and

Table 1: Descriptive statistics of main variables of the research models

Variable	Mean	Median	Std. dev.	Min.	Max.
%COE _{it}	0.300	0.296	0.467	0.0002	1.458
CGI _{it}	0.548	0.500	0.122	0.200	0.900
Leverage _{it}	0.644	0.654	0.190	0.186	0.934
MTBR _{it}	2.863	2.275	2.076	0.606	8.158
SIZE _{it}	14.225	14.077	1.348	10.504	19.374
SaleGrowth _{it}	0.168	0.148	0.305	-0.603	0.684
CFO _{it}	0.105	0.095	0.119	-0.219	0.477
PPE _{it}	0.256	0.211	0.177	0.003	0.849
INVENT _{it}	0.241	0.244	0.124	0.044	0.597
REC _{it}	0.304	0.271	0.180	0.018	0.780
AGE _{it}	3.661	3.761	0.346	2.708	4.219

Table 2: Descriptive statistics of dummy variables (1 and 0) of the study

Variable	Condition	Absolute frequency	Frequency percentage
LOSS _{it}	Yes = 1	138	15%
	No = 0	807	85%
	Total	945	100%

1.458. This shows that the mean value of capital cost rate in the firms under study is 30%, on average. The mean corporate governance value is 0.548 and its median is 0.500 with the standard deviation of 0.122 and respective minimum and maximum values of 0.900 and 0.200. Large distance between the mean and standard deviation of corporate governance is indicative of a considerable difference between corporate governance quality in the firms under study. The mean financial leverage is 0.644 and its median is 0.654 with the standard deviation of 0.190 and respective minimum and maximum values of 0.186 and 0.934. This shows that debt values, on average, is 64.4% of the book value of assets. Moreover, the mean net sales growth is 0.168 and its median is 0.148 with the standard deviation of 0.305 and respective minimum and maximum values of -0.603 and -0.684. This shows that net sales are firms that have raised by 16.8%.

As shown on Table 1, the mean operational cash to assets is 0.105 and its median is 0.095 with the standard deviation of 0.119 and respective minimum and maximum values of -0.219 and -0.477. This shows that the value of operational cash, on average, is about 10.5% of the book value of assets, besides, the mean fixed assets to book value of assets is 0.256 and its median is 0.211 with the standard deviation of 0.177 and respective minimum and maximum values of 0.003 and 0.849. This shows that the value of fixed assets, on average, is equal to 25.6% of the book value of assets.

Further, the mean goods inventory to book value of assets is 0.241 and its median is 0.224 with the standard deviation of 0.124 and respective minimum and maximum values of 0.044 and 0.597. This shows that the value of inventories, on average, is equal to 24.1% of the book value of assets. The mean of accounts receivable to assets is equal to 0.304 and its median is 0.271 with the standard deviation of 0.180 and respective minimum and maximum values of 0.018 and 0.780. This shows that the value of total accounts receivable on average, is equal to 30.4% of the book value of assets.

In Table 2, the relative frequency percentage of the dummy variable of loss is 15% that shows about 15% (138 year-company) of year-companies under study were losing.

4.2. Inferential Statistics

In order to test the research hypotheses, the multivariate linear regression is used for the panel data. Initially, before the model fitting, the amount of linearity among independent variables of the study is examined via variance inflation test. The practical experiences show that in case variance inflation factor is larger than 5, a probable error exists and in case it is larger than 10, a serious error is obvious, reflecting that the related regression coefficients are estimated weakly due to multivariate collinearity. The results of this test are indicative of the lack of serious collinearity among

independent variables. Durbin-Watson statistic is used for assessing the absence of autocorrelation of independent variables. The value of this statistic vacillates between 0 and 4. Provided that there is no correlation among frequent residuals, the value of this statistic should be close to 2. In case the statistic value is close to 0, it is indicative of a positive correlation among residuals and in case it is close to 4, we can accept the assumption that there is no correlation among model errors. The results of this test also reveal no autocorrelation problem.

To select a method for data analysis, data can be time-series, cross-sectional or pooled. Since the data of this paper are pooled (panel), it should be specified whether they are panel or pooled. The Chow test is used for this purpose, such that for those observations with test probability of more than

5% or test statistic of less than that of the table statistic, the pooled method is used and for those observations with test probability of less than 5%, panel method is used for model estimation. The panel method is carried out using the two models of random effects and fixed effects. To determine the type of model, Hausman test will be used, such that for those observations with test probability of less than 5%, fixed effects model is used and for those observations with test probability of more than 5%, random-effects model is used for model estimation. Table 3 depicts the results of this test, according to which the panel method with fixed effects should be used.

In Table 3, the coefficient of corporate governance (CGI_{it}) is -0.158 and the t statistic is -4.540, which is significant at 0.000 level less than prediction error of 5%, so the significance

Table 3: The results of statistical test of research hypothesis

$\%COE_{it} = \beta_0 + \beta_1 CGI_{it} + \beta_2 Leverage_{it} + \beta_3 MTBR_{it} + \beta_4 SIZE_{it} + \beta_5 SaleGrowth_{it} + \beta_6 CFO_{it} + \beta_7 LOSS_{it} + \beta_8 PPE_{it} + \beta_9 INVENT_{it} + \beta_{10} REC_{it} + \beta_{11} AGE_{it} + Industry + Year + \varepsilon_{it}$						
Dependent variable: rate of capital cost (COEit%)						
Independent variables: (CGIit)						
Variable definition	Variable	Coefficient	Std. dev.	T statistic	Significance level	VIF
Constant		-1.363	0.096	-14.193	0.000	-
Corporate governance index	CGI_{it}	-0.158	0.034	-4.540	0.000	1.206
Leverage	$Leverage_{it}$	-0.444	0.038	-11.399	0.000	1.603
Firm growth	$MTBR_{it}$	-0.003	0.002	-1.448	0.147	1.322
Firm size	$SIZE_{it}$	0.130	0.007	17.786	0.000	1.542
Net sales growth	$SaleGrowth_{it}$	-0.036	0.018	-1.996	0.046	1.244
Operational cash flow	CFO_{it}	0.338	0.052	6.426	0.000	1.204
Firm's loss	$LOSS_{it}$	-0.014	0.016	-0.871	0.384	1.474
Property, plant, and equipment	PPE_{it}	0.025	0.055	0.461	0.644	2.150
Inventory	$INVENT_{it}$	0.151	0.057	2.633	0.008	1.923
Accounts receivable	REC_{it}	-0.041	0.047	-0.872	0.383	2.523
Firm age	AGE_{it}	-0.011	0.015	-0.713	0.475	1.150
Industry Dummy	Industry	Controlled	Controlled	Controlled	Controlled	Controlled
Year Dummy	Year	Controlled	Controlled	Controlled	Controlled	Controlled
Adjusted coefficient of determination	0.313		F statistic		64.720	
Durbin-Watson statistic	1.713		F test level of significance		0.000	
Chow test statistic (F-Limer)	7.613		Chow test level of significance		0.000	
Hausman test statistic	54.536		Hausman test level of significance		0.000	

of independent variable is confirmed at a confidence level of more than 95%. Hence, the research hypothesis is confirmed in an inverse direction (negatively), which means corporate governance contributes negatively to the rate of capital cost. This indicates that the presence of a powerful and high-quality corporate governance system would cause the decline of agency problems and information asymmetry and guarantees an accurate reporting by the management, more transparency, and the trust of beneficiaries and creditors and consequently the decline of capital cost.

The results of control variables of the study show that financial leverage ($Leverage_{it}$) and sales growth of the firm ($SaleGrowth_{it}$) have a negative and significant impact on capital cost ($\%COE_{it}$). In fact, by increasing the debts, the rate of financial supply (capital) is declined. Moreover, sales increase caused a decline in the rate of capital cost. The results of the study illustrate that firm size ($SIZE_{it}$), operational cash flow (CFO_{it}), and inventories ($INVENT_{it}$) have a positive and significant impact on capital cost. In fact, in larger firms, the rate of the capital cost is higher and by increasing the operational cash, the rate of capital cost is reduced. In addition, an increase in goods inventory can have a negative effect on the rate of capital cost. The results of this study showed no significant relationship between other control variables and the rate of capital cost.

5. Discussion and Conclusion

Economic firms have always attempted to lower their rate of capital cost. Capital cost is the rate of return the firm should obtain in proportion to its investments to be able to satisfy the needs of those investors who supplied the long-terms cash of the firm. Firms should lower their capital cost to increase their value, hence, firms should be familiar enough with the contributing factors to the capital cost.

The results of hypothesis testing showed that corporate governance has a negative and significant effect on the rate of capital cost. In other words, the quality of corporate governance can lower the rate of capital cost. This result suggests that by using a powerful corporate governance system, by declining the information asymmetry (increasing transparency) and agency conflict, we would be able to enhance the quality of financial reports and by strengthening the capital market and attracting financial suppliers and investors, absorb the required financial resources of the firm by a lower rate. These results are in line with those of Adnan and Qubbaja (2019), Bozec and Bozec (2011), Mazzotta and Veltri (2012), Teti et al. (2016), Gupta et al. (2018), Zhu (2014), Srivastava et al. (2019) and Patro & Kanagaraj (2016), but are in contrast with those of McInnis (2010) and Juniarti and Natalia (2012).

Although the result of this study show governance can contribute to the cost of equity, it further provides

some opportunities for the realization and improvement of operational inefficiencies, financial risks, and reputation (Ng and Rezaee, 2015). Corporate governance is effective when its internal and external mechanisms are implemented appropriately in line with the objectives of the organization (Brockett and Rezaee, 2013), while firms change their corporate governance structure when facing environmental changes (Kole and Lehn, 1999). According to the results of the present study concerning the significance of the role of corporate governance mechanisms for the rate of capital cost, we recommend to managers and board members of the firms to mind the negative effect of corporate governance on the rate of capital cost. Hence, we recommend them that in case they intend to lower the rate of capital cost, they should take some powerful steps to establish a corporate governance system.

Moreover, given the favorable effects of corporate governance on the financial supply of firms, we recommend the Tehran Stock Exchange creates a sound index for measuring corporate governance of the firms. There are numerous weaknesses in this area, and firms are somehow in complete fallibility and most of the financial staff of the firms are even not fully acquainted with the concept of corporate governance. Thus, in order to exert pressure on firms for correct implementation of corporate governance features, we recommend the national accounting standards compilation organizations to propose practical strategies for supervising this issue. Moreover, we recommend the firms to train their staff to make them aware of the mechanisms of corporate governance to be able to lower their rate of capital cost. As future recommendations, this paper suggests that the impact of corporate governance features on capital cost may be studied as an individual attribute to be able to eliminate the unrelated factors from the corporate governance index.

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