Tax avoidance and Firms Cost of Equity: The Moderating Role of outside Monitoring

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ABSTRACT

Literature in tax avoidance indicates that the proceeds of tax avoidance can be invested on production affairs, which in turn enhance the future expected cash flow, thereby reducing the cost of equity. Based on this reasoning, the present study aims to examine whether tax avoidance is associated with the cost of equity with emphasis on the moderating effect of outside monitoring. To calculate tax avoidance, the effective tax rate is employed. Using a sample of 420 firm-year observations from 2011 to 2015 and after controlling for the effect of exogenous variables, to test the research hypotheses, multivariate regression model based on panel data was employed; the results indicate that tax avoidance is negatively and significantly associated with the cost of equity. In other words, firms, investing the proceeds of tax avoidance, increase their future expected cash flow and hence reduce the cost of equity. Moreover, outside monitoring moderates the relationship between tax avoidance and cost of equity. The findings of the study not only fill the research gap in the field, but also benefit investors, tax regulators and other stakeholders in decision making process.

Keywords:
tax avoidance, cost of equity, outside monitoring.
1. Introduction

Taxation is the primary means of raising the revenue to finance government spending it on economic and social goals. The development and variety of economic activities, the increasing role of government in developing public services, social security and increased obligations of the government in various economic and social areas as well as attempts made to realize economic growth and equitable distribution of income all have attracted a lot of attention on taxation.

In most countries, the government’s main sources of revenue come from tax. The share of total public revenues differs from country to country. Meanwhile, tax avoidance and evasion has caused tax revenue to be less than estimated. Therefore, tax avoidance and evasion have attracted a lot of attention in the accounting literature. Theoretically, tax avoidance is defined as an attempt to reduce the amount of tax that is payable (Hanlon et al, 2010). Tax evasion is the illegal evasion of taxes, whereas tax avoidance is the exploitation of legal gaps in the tax laws to reduce tax. Hence, since tax avoidance seems to be a legal activity, it has gained more attention than tax evasion.

Therefore, many firms are likely to be engaged in tax avoidance and thus determination of the factors affecting tax avoidance in those firms is of great importance. As mentioned before, the government's main sources of revenue come from tax. Paying tax imposes a cost on the firm, thereby decreasing its income. Every manager aims to increase firm value; the more the firm’s income, the higher its value (Mills, 2001).

To reduce their costs, firms try to avoid taxation. Tax avoidance can make a reduction in the amount of tax one pays to tax authorities. It is a value-creating activity which transfers wealth from government to shareholders and minimize the amount of tax firms pay. Additionally, tax avoidance can pave the way for managerial opportunistic behavior. As such, this study aims to investigate the relationship between tax avoidance and cost of equity in firms listed in Tehran Stock Exchange.

2. Literature Review

Tax avoidance is an attempt to reduce the amount of tax that is payable. In fact, it takes advantage of loopholes in the tax laws for reduction of tax (Hanlon et al, 2010). Tax avoidance is an act of dodging tax without breaking the laws and within the framework of the tax laws (Agrawal, 2007). Following Dyreng et al (2008), tax avoidance is often defined as reducing tax. This definition reflects all transactions affecting corporate tax liability.

Giving the example of Enron Company, Desai (2004) stated that tax avoidance increases the opportunity for earnings manipulation by the company’s directors, which in turn misleads investors.

Tax avoidance can indirectly affect the firm’s expected future cash flow and decrease its cost of capital. The most important benefit of tax planning is cash saving, which can be interpreted as cash flow appropriated by the firm from the tax authorities, which increases expected future cash flows. Every dollar saved from paying tax can also be spent for more productive uses, thereby leading to increased expected cash flow and reduced cost of equity (Lambert, 2007). In other words, cash saved from tax avoidance can be exploited in production or investment, which in turn can increase the expected cash flow and reduce cost of equity. If investors perceive tax avoidance as a risk-taking activity that has a positive net present value, this can increase the expected future cash flows and reduce the cost of equity. Given this argument, managers’ interests are believed to be in line with those of shareholders, and thus managers do not seek to appropriate all tax savings for themselves or to use tax avoidance to hide other rent extraction activities. Efficient tax planning is usually based on complex structure of transactions like transfer pricing, operational activities in jurisdictions and tax haven to minimize the overall corporate tax burden. Managers who are able to effectively lower the tax burden are likely to make better production and/or investment decisions, thus increasing investors’ expectation of the firm’s future cash flows (Goh et al, 2014). Blaylock (2011) found a positive relationship between tax avoidance and corporate future operational performance. He also suggested that higher levels of tax avoidance is accompanied by more favorable investment policy, and managers of the firms with tax-avoidance activities make better investment decisions. Institutional ownership is one of the corporate governance mechanisms used to monitor managers’ performance. Institutional owners play active roles in controlling managerial decisions and improving informational efficiency in the capital
market (Ferreira et al., 2010). Salehi et al (2016) investigated the relationship between thinking styles of financial managers and tax avoidance in the companies engaging in insurance and banking industries and listed in Tehran Stock Exchange. The required information was collected using Sternberg and Grigorenko’s (1997) theory of thinking styles and financial statements. The results indicate showed a significant relationship between partial and conservative thinking styles and corporate tax avoidance.

Khajavi and kiamehr (2015) examined the association between audit quality and tax avoidance in companies listed in Tehran Stock Exchange. Having considered 130 listed firms between 2003 and 2013 suggested audit quality (audit size) has a significant and positive effect on the listed firms’ tax avoidance with respect to the effective tax rate and book-tax difference, whereas, audit quality (auditor’s tenure) has a positive and significant effect on the listed firms’ tax avoidance based on the effective tax rate. Rezaee and Jafari Niaraki (2015) considered the relation between tax avoidance and accounting fraud in 170 firms listed in Tehran Stock Exchange during the years 2004-2012 using multivariate linear regression model with panel data. Their findings point to a significant and direct link between tax avoidance and accounting fraud, where tax avoidance is calculated via the cash effective tax rate and permanent tax differences. Likewise, when tax avoidance was computed by long-term cash effective tax rate, no significant relationship was observed between tax avoidance and corporate accounting fraud. Mehrani and Sayyedi (2014) examined the relationship between tax avoidance and tax dispute in firms listed in Tehran Stock Exchange. The question raise here is why firms act in this manner and prefer to be more conservative? The results of considering 146 firms listed in Tehran Stock Exchange between 2002 and 2011 using unbalanced panel technique and least square regression revealed that tax avoidance and instrumental and diagnostic tax difference are significantly and positively related to certain and instrumental tax difference. This indicates that government tends to obtain more tax from tax avoidance firms. As mentioned before, conservatism is not related to tax difference. The results of this study reveal that conservatism is a more efficient instrument for corporate tax cost than tax avoidance.

Pourheydari et al (2014) examined the effect of tax avoidance on the cost of common stock with regard to growth opportunities and institutional ownership. The statistics population consists of 75 firms listed in Tehran Stock Exchange. Effective tax rate was used as a proxy of tax avoidance. To test the research hypotheses, least square regression and panel data technique were used. The findings suggested that tax avoidance cause a reduction in the cost of equity. In other words, firms invest the cash from tax avoidance to increase their future cash flow and thus reduce their cost of equity. A stronger negative relationship was expected in firms with stronger outside monitoring and more growth opportunities. However, growth opportunity and institutional ownership have no significant impact on the relationship between tax avoidance and the cost of equity.

Wee Goh et al (2014) considered the relationship between tax avoidance and firm’s cost of equity. To do so, they studied 500 firms listed in Singapore Stock Exchange between 2005 and 2012. They used certain measures like long-term cash effective tax rate and accounting income-taxable income difference to examine the proposed link. They concluded that less tax avoidance can significantly reduce the cost of equity. They also found that firms with better external control, higher marginal benefits from tax savings and better information quality show stronger effect in this regard.

In a study entitled “Managerial Ability and Tax Avoidance”, Francis et al (2014) investigated the relationship between management ability and tax avoidance. They employed effective tax rate and cash effective tax rate to measure tax avoidance. Management ability, on the other hand, was computed by an approach by Demerjian et al’s (2012). The results of their study revealed that more capable managers engage in less tax avoidance, and management ability is negatively related to tax avoidance.

Amini Nia et al (2013) studied the relationship between tax avoidance and cost of debt with respect to the type of payment ownership. The primary concern of this research was to verify the relationship between tax avoidance and cost of debt in firms listed in Tehran Stock Exchange and examine whether level of ownership can adjust this relationship or not. To do so, accounting income-taxable income difference was used as a proxy for tax avoidance. To test the research
hypotheses, Generalized Least Square Regression and panel data technique were employed. The results of conducting the research on 67 firms listed during the years 2001-2010 suggested a negative relationship between tax avoidance and cost of debt, implying that appropriate tax effect of tax avoidance can bring about a kind of corporate financing; therefore, tax avoidance can replace cost of debt. Additionally, the results indicate that institutional ownership has no significant influence on the relationship between tax avoidance and cost of debt.

Kholbadalov (2012) examined the relationship between tax avoidance, cost of debt and institutional ownership in Malaysia. The researcher pointed to a significant and negative relationship between tax avoidance and cost of debt. He also reported that institutional ownership has no significant effect on the proposed relationship.

Hutchens and Rego (2012) examined the association between tax risk and the cost of equity. They examined a number of 300 firms listed in Taiwan Stock Exchange during the years 2006-2011. They stated that certain measures of tax avoidance can be employed as proxies of corporate risk tax as tax avoidance mechanisms can impose significant costs on firms. Their results indicate that the level of corporate tax savings is significantly related to the cost of equity, implying that tax saving is a sign of corporate tax risk. They also found that lower effective tax rate can reduce the cost of equity.

Haribar and Jenkins (2011) examined the effect of accounting restatements on the cost of equity. Their findings suggested that, on average, accounting restatements lead to an increase in the expected future earnings, thereby increasing firm’s cost of equity. They also suggested that accounting restatement can reduce the earnings quality of firms and decrease investors’ expected rate of return.

Hoopes et al (2011) investigated whether IRS auditors discover corporate tax avoidance. They examined 173231 American year-firm between 1992 and 2008 and found that tax avoidance decreases when IRS monitoring increases.

Kravet and Shevlin (2010) examined the association between accounting restatements and the pricing of information risk for a sample of 26 firms and 330 restatements for years 1997-2001. Using the Fama and French three-factor model, they found a significant increase in the factor loadings on the discretionary information risk factor for restatement firms after a restatement announcement. They also reported that the rise in factor loadings results in an increase in the estimated cost of equity.

Chen et al (2010) compared tax avoidance rate between family and non-family firms. They revealed that family firms commit tax avoidance less than their non-family counterparts. Family firms are characterized as firms where members of the founding family continue to hold positions in top management or on the board, or are blockholders of the company.

Desai and Dharmapala (2009) examined the relation between tax avoidance and firm value. To do so, they examined a number of 328 firms listed in India Stock Exchange during the years 1999-2009. They used the difference between accounting income and taxable income as a criterion for tax avoidance: the greater the difference, the more tax avoidance activities. An estimation of the least square regression indicates that tax avoidance has no significant effect on firm value. Nevertheless, a significant and positive effect was observed in firms with appropriate corporate governance mechanisms and high institutional ownership.

Muino et al (2009) investigated whether graph disclosure bias is correlated with the cost of equity. In fact, they aimed to find whether managers are able to affect users’ decisions via distorted graphs. They concluded that real stock return is not influenced by distorted graphs, whereas graph disclosure bias has a significant, yet temporal impact on the cost of equity. In other words, graph disclosure bias is negatively associated with the cost of equity.

3. Methodology

As an applied, quasi-experimental, ex-post facto study, this research employs multivariate regression model and econometric models to analyze the collected data. The statistical population is composed of firms listed in Tehran Stock Exchange during the years 2011-2015, among which certain firms meeting the following conditions were selected:

1) Firms should be listed in Tehran Stock Exchange since 2011 and hold their membership until 2015.
2) To increase their comparability, their fiscal year should end in final March.
3) They have remained in the same business since 2011.
They should not be an investment company or financial intermediary.

Having applied these conditions, the researchers selected 84 firms. To answer the research questions, the following hypotheses were formulated based on the theoretical framework of the study:

**First hypotheses**: There is a significant relationship between tax avoidance and the cost of equity.

**Second hypotheses**: Outside monitoring moderates the relationship between tax avoidance and the cost of equity.

**Variables and Models**

**Independent variable**: Tax avoidance is the independent variable of this study. To test it (according to Wee Goh et al, 2014; Lisowsky, 2012; Hanolon and Heitzman, 2010), book-tax difference, which can be calculated through accounting income (before tax income) and taxable income difference was used. The latter is computed via dividing tax cost by legal tax rate.

**Dependent variable**: The cost of equity is the dependent variable of this research. According to Wee Goh et al (2014), capital asset pricing model is used to compute the cost of equity as follows:

\[
COEC_{i,t} = R_{f,t} + \beta_i (R_{m,t} - R_{f,t})
\]

where

- \(COEC_{i,t}\): cost of equity capital (expected stock return rate) of firm \(i\) in year \(t\).
- \(R_{f,t}\): risk-free rate of return, which equals interest rate on government bonds in year \(t\).
- \(R_{m,t}\): market return rate, which equals changes in total market index in year \(t\).
- \(\beta_i\): the sensitivity of the stock return of firm \(i\) to the market return in year \(t\).

**Moderating variable**: Outside monitoring is the moderating variable employed in this study. Previous studies (Chen, 2010; Denis and Sibilkov, 2010) suggested various advantages for outside monitoring implemented by institutional investors, of which reducing opportunistic management and firing weak managers are the most important. Therefore, the current research uses the percentage of institutional ownership by investors as a measure of outside monitoring. To calculate this percentage, the total of shares owned by banks, insurance companies, investment companies, pension funds, financing firms and governmental agencies is divided by the total of shares issued.

**Control variable**

**Firm size**: Firm size, calculated through natural logarithm of firm’s net sales, is used as a control variable in this study.

**Financial leverage**: Financial leverage is another control variable used in this study, which is computed by dividing total debt by book value of the firm’s assets. It is calculated as follows:

**Growth opportunity**: Market-to-book ratio, as a measure of growth opportunity, is used as another control variable in this study.

**Beta**: To calculate beta, the covariance of stock return and market return is calculated based on the data collected for the last 36 months. This control variable indicates firm risk, and it is expected that greater beta leads to higher cost of equity (Kordestani and Ghasemi Kheirabadi, 2010).

To test the research hypotheses, the following multivariate regression models are used:

**The model for testing the first hypothesis**

\[
COEC_{i,t} = \beta_0 + \beta_1 TAXAGG_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 LEV_{i,t} + \beta_4 GWTH_{i,t} + \beta_5 BETA_{i,t} + \epsilon_{i,t}
\]

**The model for testing the second hypothesis**

\[
COEC_{i,t} = \beta_0 + \beta_1 TAXAGG_{i,t} + \beta_2 MONITORING_{i,t} + \beta_3 TAXAGG_{i,t} * MONITORING_{i,t} + \beta_4 SIZE_{i,t} + \beta_5 LEV_{i,t} + \beta_6 GWTH_{i,t} + \beta_7 BETA_{i,t} + \epsilon_{i,t}
\]

where

- \(COEC_{i,t}\): cost of equity in firm \(i\) and year \(t\);
- \(TAXAGG_{i,t}\): tax avoidance in firm \(i\) and year \(t\);
- \(MONITORING_{i,t}\): outside monitoring (The percentage of ownership by institutional investors) in firm \(i\) and year \(t\);
- \(GWTH_{i,t}\): financial leverage, which equals total debt-to-total assets ratio in firm \(i\) and year \(t\);
- \(SIZE_{i,t}\): firm size, The natural logarithm of annual sale in firm \(i\) and year \(t\);
firm i and year t; $BETA_{i,t}$: the beta coefficient of firm i in year t; $\epsilon_{i,t}$: error of regression model

4. Results
Central and distributive indices are presented in the following table:
The results of testing the first research hypotheses are presented in table 2.

The coefficient of tax avoidance is -0.499 at 0.05 level of significance and thus points to a significant relationship. Therefore, it can concluded that tax avoidance is significantly associated with the cost of equity in firms listed in Tehran Stock Exchange at 95% level of significance, thereby confirming the first hypothesis.
The results of testing the second research model is presented in table 3.

The coefficient of tax avoidance was obtained -0.0847 at less than 0.05 level of significance. Therefore, a significant relationship between tax avoidance and the cost of equity in firms listed in Tehran Stock Exchange was confirmed at 95% level of significance. The coefficient of institutional ownership was 0.117 at less than 0.05 level of significance; indicating a significant relationship between institutional ownership and the cost of equity in firms listed in Tehran Stock Exchange at 95% level of significance.
The coefficient for TAXAGG * MONITORING is 0.445 at 0.05 level of significance. This confirms the moderating role of outside monitoring in the relationship between tax avoidance and the cost of equity. This result confirms the second hypothesis of the research.

Table 1: descriptive statistics of the research variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Median</th>
<th>Max</th>
<th>Min</th>
<th>SD</th>
<th>Skewness C</th>
<th>Slenderness C</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>COEC</td>
<td>0.238</td>
<td>0.2091</td>
<td>0.825</td>
<td>0.0017</td>
<td>0.155</td>
<td>0.857</td>
<td>3.258</td>
<td>420</td>
</tr>
<tr>
<td>TAXAGG</td>
<td>0.092</td>
<td>0.0416</td>
<td>0.876</td>
<td>-0.0917</td>
<td>0.142</td>
<td>2.663</td>
<td>11.165</td>
<td>420</td>
</tr>
<tr>
<td>SIZE</td>
<td>6.130</td>
<td>5.981</td>
<td>8.564</td>
<td>3.912</td>
<td>0.696</td>
<td>0.923</td>
<td>4.227</td>
<td>420</td>
</tr>
<tr>
<td>LEV</td>
<td>0.587</td>
<td>0.607</td>
<td>1.195</td>
<td>0.067</td>
<td>0.195</td>
<td>-0.297</td>
<td>2.755</td>
<td>420</td>
</tr>
<tr>
<td>GWTH</td>
<td>2.225</td>
<td>1.945</td>
<td>7.760</td>
<td>-2.213</td>
<td>1.3799</td>
<td>1.0195</td>
<td>4.486</td>
<td>420</td>
</tr>
<tr>
<td>BETA</td>
<td>0.836</td>
<td>0.80</td>
<td>9.08</td>
<td>-2.76</td>
<td>0.973</td>
<td>1.520</td>
<td>16.283</td>
<td>420</td>
</tr>
<tr>
<td>MONITORING</td>
<td>0.768</td>
<td>0.851</td>
<td>1.000</td>
<td>0.0026</td>
<td>0.234</td>
<td>-1.843</td>
<td>5.749</td>
<td>420</td>
</tr>
</tbody>
</table>

Table 2: Summary of the results of testing the first model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-0.187</td>
<td>0.214</td>
<td>-0.872</td>
<td>0.383</td>
</tr>
<tr>
<td>TAXAGG</td>
<td>-0.499</td>
<td>0.064</td>
<td>-7.807</td>
<td>0.000</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.074</td>
<td>0.035</td>
<td>2.137</td>
<td>0.033</td>
</tr>
<tr>
<td>LEV</td>
<td>-0.158</td>
<td>0.049</td>
<td>-3.166</td>
<td>0.002</td>
</tr>
<tr>
<td>GWTH</td>
<td>0.002</td>
<td>0.0008</td>
<td>-3.166</td>
<td>0.003</td>
</tr>
<tr>
<td>BETA</td>
<td>0.012</td>
<td>0.005</td>
<td>2.058</td>
<td>0.040</td>
</tr>
<tr>
<td>(prob) F-statistic</td>
<td>13.869 (0.000)</td>
<td>Durbin-Watson stat</td>
<td>2.190</td>
<td></td>
</tr>
</tbody>
</table>
Table 3: Summary of the results of testing the second research model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.294</td>
<td>0.215</td>
<td>-1.366</td>
<td>0.173</td>
</tr>
<tr>
<td>TAXAG</td>
<td>0.847</td>
<td>0.122</td>
<td>-6.947</td>
<td>0.000</td>
</tr>
<tr>
<td>MONITORING</td>
<td>0.117</td>
<td>0.039</td>
<td>2.992</td>
<td>0.003</td>
</tr>
<tr>
<td>TAXAGG * MONITORING</td>
<td>0.445</td>
<td>0.130</td>
<td>3.419</td>
<td>0.000</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.077</td>
<td>0.035</td>
<td>2.212</td>
<td>0.027</td>
</tr>
<tr>
<td>LEV</td>
<td>-0.158</td>
<td>0.058</td>
<td>-2.700</td>
<td>0.007</td>
</tr>
<tr>
<td>GWTH</td>
<td>0.003</td>
<td>0.009</td>
<td>2.711</td>
<td>0.007</td>
</tr>
<tr>
<td>BETA</td>
<td>0.012</td>
<td>0.009</td>
<td>1.416</td>
<td>0.158</td>
</tr>
</tbody>
</table>

\( (\text{prob}) F\)-statistic \(13.751 (0.000) \)

Durbin-Watson stat \(2.157 \)

R-squared \(0.79 \)

Adjusted R-squared \(0.73 \)

5. Conclusion and Discussion

This research is primarily concerned with exploring whether tax avoidance is associated with the cost of equity with regard to the moderating effect of outside monitoring. To do so, a sample of 84 firms listed in Tehran stock exchange during the years 2011-2015.

The results of testing the first hypothesis point to a significant and negative relationship between tax avoidance and the cost of equity: implying that cash saving from tax avoidance can be invested in the production processes, thereby improving the investment and operational decisions of firms. Therefore, investors expect higher cash flows for tax avoidance firms and thus demand less cost of equity. The results of testing this hypothesis conform to those of Pourheydari and Amini nia (2014), Amini nia and Khodamipour (2013) and Wee Goh et al (2014).

The results of testing the second hypothesis showed the significant effect of outside monitoring on the relationship between tax avoidance and the cost of equity, implying that outside monitoring minimizes managerial distortion. Given the presented discussions, increased level of institutional ownership can decrease the likelihood of opportunistic behaviors by managers. Therefore, the cost of equity is expected to decrease in this situation. The marginal benefit of tax avoidance for investors tends to depend on the use of every dollars saved from tax avoidance. The obtained results conform to those of Wee Goh et al (2014).

Following the results of this study, managers are recommended to lower the taxable income via tax planning. Moreover, institutional owners are also suggested to permanently monitor tax planning activities to minimize risk of managerial opportunistic behavior.

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