

Investigating the relation between tax avoidance and auditor tenure in the listed companies in Tehran stock exchange

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Abstract: The purpose of this research is to examine the relation between tax avoidance and auditor tenure in the listed companies in Tehran stock exchange. 369 companies were selected as final statistical population based on systematic omission among 435 firms and ultimately, 79 firms were selected as the research's sample by Cochran' formula. In this research, to measure tax avoidance according to Car Pellesko (2004) and Desay and Darmapalla (2006), difference form accounting earnings (earnings before tax) and income tax as the index for avoidance from tax payments and for information of income statements to estimate income tax has been used. The results showed that there is a significant relation between tax avoidance and auditor tenure in the listed companies in Tehran stock exchange.

Key words: Firm size; Firm age; Growth rate; Tax avoidance; Auditor tenure

1. Introduction

Regarding to the vast investigation about tax avoidance and accounting, the vital issue of impacting tax avoidance on auditors' behavior has not been addressed (Gaier et al. 2012). Auditors play a major role in accounting operations, so income tax can be influenced by auditors' thinking. The current research deals with the impact of audit or tenure on tax avoidance. Since tax activities have required more proficiency than accounting (Baner et al., 1992), it is expected the long term auditors' tenure to increase the information value related to tax. Therefore, longer the relation between an auditor and its customers, higher the auditors abilities and tendencies to cooperate in tax strategies of his customers and create more intimacy with managers of his customers would be (Yarman et al., 2012). Regarding to the investigations of many researchers such as Frank et al (2009) about tax avoidance, they reported that "tax avoidance means decrease in clear tax through legal and illegal tax planning (Hanlon and Hitsman, 2010). Tax avoidances activities may create opportunities for managers to direct their activities toward hiding bad news and perverse investors (Desay and Darmapalla 2006). Hanlon and Hitsman (2009) defined tax avoidance as decrease in clear tax of accounting earnings or cash flows. It is expected that high levels of a firm's tax avoidances cause financial statements to be lowered, because low quality financial statements has positive relation with tax avoidances planning (Frank et al, 2009). Auditor tenure is considered as one of the indices for quantitative measurement of accounting quality

(Namazi et al., 2011). If auditor tenure is longer, he would have more familiarity with client and his proficiency in the related industry and causes increased accounting quality (Miers, 2003). Of course, there is no consensus about it, as some researches such as David et al. (2000) noted that increased auditor tenure may cause destroying auditor independence which finally leads to decreased accounting quality. Hence, various factors can influence on auditor tenure which the current investigation seeks to examine the impact of tax avoidance on auditor tenure. It is hoped that the results of this research can be useful for investors, shareholders, managers and stakeholders.

2. Research background

Hogan and Noga (2012) examined the relation between changes in auditors' tax services and long-term tax avoidances of a firm. The results indicated that there is a negative long-term between decreased firms in tax services by auditors and paid tax, and also economically and statistically significant relation between them.

Garcia Belandon et al. (2013) investigated the association between auditor tenure and quality of audit assessment in Spain. The research clearly shows the effects of auditors' long-term tenure on auditing independence. Regarding that it is expected auditors tenure have positive impact on auditors' competence, the results demonstrated that there is no significant relation between auditor tenure and quality of auditor assessment. Daliwal et al. (2013) have examined the effectiveness of audit committee on tax plans services provided by auditors. Their results indicated that there is a positive relation

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between non-tax services fee and tax avoidance regarding to tax planning fee of non-audit services. Also, there is a positive relationship among tax planning fee of non-audit services and a firm evaluation.

The investigation notes that auditors and audit committee have vital role in legislators and investors' decisions.

In their research, Jiyong Wo and Ba (2014) examined the relation between a firm's tax avoidance and audit tenure in Korean companies during 2001 to 2010. According to the observations from 2588 companies, tax avoidance increases with audit tenure and tax planning decreases based on managers' interests which decrease tax payment would be more implemented as auditor tenure increases.

Chen et al. (2014) investigates the association among stock liquidity and tax avoidance in U.S. The findings shown that stock liquidity and low tax avoidance has positive relationship. The impact of stock liquidity on tax avoidance is higher in firms with unknown high business levels.

3. Research methodology

3.1. Research method

Research hypotheses

There is a significant relation between tax avoidance and auditor tenure in the listed companies in Tehran stock exchange.

3.2. Research population and statistical sample

To perform the research, the listed companies in Tehran stock exchanged during 2010 to 2013 were selected as statistical population and the statistical sample were extracted. Our sample includes the firms which have the following condition:

- They should be listed in Tehran stock exchange before 2010.
- Their fiscal year ends in 19/3/...
- They should not stop their operations or should not face with change during the studied period.
- They should not be part of Banks and Financial institutions (investment companies, financial intermediary, holding, banks and leasing firms).

369 companies were selected among 435 listed companies in Tehran stock exchange through selection systematic omission, and 74 companies were finally selected through Cochran method.

$$n = \frac{(369)(1.96)^2 \times (0.5)(0.5)}{(369)(0.1)^2 + (1.96)^2(0.5)(0.5)} \cong 79$$

In the above formula, maximum permissible error (d) is 0/1, confidence coefficient is 0/95, t= 1/96, p and q are 0/5 and population volume is N. The amount of P is considered 0/5, because if p=0/5, so m would find his maximum amount and it causes the sample to be big enough.

3.3. Operational definition of the variables

3.3.1. Auditor tenure

For accurate measuring of tenure, we should consider a year in which the auditor is hired in the business unit. Determination of this date is not difficult for companies which have changed their auditors during the research, but this is impossible for those companies with one auditor regarding the availability of their information. Therefore, to minimize the impacts of measurement errors, two secondary samples were provided. The first one includes the firms which have hired one auditor during 2009 to 2013. About those firms, 2009 is regarded as the first year of tenure. However, those firms with more than one auditor the time dates back when a new auditor is hired and the previous observations would have deleted from hypotheses tests. Yet, if auditor tenure continues more than 3 years in a firm, 1 is considered, otherwise 0 (Karami et al., 2011).

3.3.2. Tax avoidance it

The difference between accounting earnings and income tax is the representative of measurement for tax avoidance which is obtained from difference among earnings before tax and income tax. To eliminate the effect of used index, it has been divided into early period assets. There have been used various criteria for measuring tax payment in researches about tax avoidance. In this research followed by Car Pellesko (2004), and Desay and Darmapalla (2006), difference form accounting earnings (earnings before tax) and income tax as the index for avoidance from tax payments and for information of income statements to estimate income tax has been used. Income tax has been calculated through dividing tax cost into legal tax rate (Khadami Pour and Amini Nia, 2013).

3.4. Regression model

$$\begin{aligned} & \text{AUDITOR TENURE}_{it} \\ & = \gamma_0 + \gamma_1 \text{TAX AVOIDANCE}_{it} + \gamma_2 \text{CSH}_{it} + \gamma_3 \text{ADCT}_{it} \\ & + \gamma_4 \text{FOR}_{it} + \gamma_5 \text{OWN}_{it} + \gamma_6 \text{ADT}_{it} + \gamma_7 \text{LEV}_{it} + \varepsilon_{it} \end{aligned}$$

AUDITOR TENURE_{it}: Auditor rotation

TAX AVOIDANCE_{it}: Avoidance from tax payment
CSH_{it}: Cash holdings divided into total assets ratio

ADCT_{it}: Number 1 is dedicated to a firm which has an audit committee, otherwise 0.

FOR_{it}: Percent of shareholdings by external shareholders.

OWN_{it}: Percent of shareholdings by major shareholders.

LEV_{it}: Total debt to total assets ratio

3.5. Data analysis method

This paper uses combined data to test the hypothesis. Firstly, to determine whether time series x_t is stationary process (zero accumulation times) and/or divergent (one accumulation times), Augmented Dicky Fuller (ADF) is used. We use modified Wald statistics to examine group heteroscedasticity among remaining of fixed effects regression model. As well, F and Hausman test are used to determine of fixed effects or random effects model. To illustrate the explanatory power of the explanatory variables, coefficient of adjusted determination (adjusted R²) will be used to evaluate significant variables, t-statistics and to assess the overall adequacy of the model, Fisher statistical. The statistical analyses will be performed using EXCEL and EVIEWS 7 software.

4. Results

4.1. Examination of heteroskedasticity

To examine heteroskedasticity, Arch error terms test (LM) is performed. The obtained results are as follow:

Regarding Table 1, due to the significance level of f-statistics is not significant in 5% error level,

homogeneity of variance is confirmed and heteroskedasticity of error terms are rejected.

Table 1: The results of Arch error term test (LM)

Description	Statistics amount	Probability
F-statistic	1.512662	0.096
Obs*R-squared	1.714115	0.096

* 5% error level

4.2. Significance test of fixed effects method

Table 2: F-Limer and Hausman test

F-Limer test			
Description	Statistics amount	Freedom degree	Probability
Cross-section F	1.521924	78	*0.000
Cross-section Chi-square	162.458226	78	*0.013
Hausman test			
Description	Statistics amount	Freedom degree	Probability
Cross-section F	9.625417	18	*0.028

* 5% error level

Regarding the results of both table (F and Hausman), the obtained probability were less than 5% in each tests, so fixed effects method should be used in the related regression model.

4.3. Research hypothesis test

Table 1-3: regression and model significance test

Variable	Estimated coefficients	Estimation of deviation	t-statistics	Significance level
Fixed	3.782	0.421	8.984	*0.000
Tax avoidance	0.765	0.069	110.86	*0.006
Financial leverage	1.002	0.251	3.992	0.133
Auditor size	-0.287	0.119	-2.411	0.185
Institutional shareholders	-12.625	0.821	-15.377	*0.000
External shareholders	0.419	0.269	1.557	0.285
Audit committee	-9.676	0.715	-13.532	*0.000
Cash holdings	1.235	0.562	2.917	0.192
Durbin-Watson	1.996			
F-statistics	82.036			
Significance level	**0.000			
Adjusted coefficient of determination	0.653			

* 5% error level, ** 1% error level

Regarding the table 1-3, since Durbin-Watson statistic test value is determined among 1.5 to 2.5, lack of correlation between errors is not rejected and regression can be used. Independent variable of tax avoidance has positive and direct impact on auditor tenure regarding estimated coefficient 0.765. If tax avoidance is increased in a firm, the auditor tenure would be longer. Regarding significance level of t-statistics in 5% error level, the relation is significant. Therefore, there is a significant relation between tax

avoidance and auditor tenure in the listed companies in Tehran stock exchange. The independent and dependent variables of the research can predict 65.3% of changes, and significance level of F-statistic indicates that the research's model is significant in 1% error level. The research's empirical model is defined as:

$$\begin{aligned}
 & \text{AUDITOR TENURE}_{it} \\
 & = 3.782 + 0.765\text{TAX AVOIDANCE}_{it} + 1.235\text{CSH}_{it} \\
 & - 9.676\text{ADCT}_{it} + 0.419\text{FOR}_{it} - 12.625\text{OWN}_{it} - 0.287\text{ADT}_{it} \\
 & + 1.002\text{LEV}_{it} + \varepsilon_{it}
 \end{aligned}$$

5. Conclusion and recommendations

The research's result showed that there is a significant relation between tax avoidance and auditor tenure in the listed companies in Tehran stock exchange. Hence, the results of Jiyong Woo and Ba (2014) indicated that tax avoidance increases with audit tenure and tax planning decreases based on managers' interests which decrease tax payment would be more implemented as auditor tenure increases. The results of Daliwal et al, (2013) indicated that there is a positive relation between non-tax services fee and tax avoidance regarding to tax planning fee of non-audit services. Khani et al, (2011) demonstrated that a significant association is existed among auditor expert specialty in an industry and its tax avoidance. In other words, the firms with expert auditors have effective rate of low tax, effective rate of lower cash tax and higher book-tax differences than the firms which their auditors are not expert in an industry. According to the National Tax Affairs Organization and other related organizations, it is recommended that tax avoidance is increased with auditor tenure and their managers are eager to pay lower tax. Therefore, we can require the firms using regulations and necessary standards to change their auditors in special periods.

References

Bedertscher, B, Katz, S, & Rego, S. (2011). The impact of private equity ownership on portfolio firms' corporate tax avoidance. Working paper.

Balakrishnan, K, Blouin, W & Guay, W. (2011). Does tax aggressiveness reduce financial reporting transparency? Working paper.

Chen, S., Chen, X., Cheng, Q., & Shevlin, T. (2010). Are family firms more tax aggressive than non-family firms? *Journal of financial economics*, vol 95, pp 41-61

Chen, Y., & Zolotoy, L. (2014). Stock Liquidity and Corporate Tax Avoidance. *The journal of American Accounting association*

Davis, L, Soo, G & Trompeter, G. (2005). Auditor tenure and the ability to meet or beat earnings forecasts. Working paper. Boston College, Boston, MA.

Desai, M., & Dharmapala, D. (2006). Corporate tax avoidance and high-powered incentives. *Journal of financial economics*, vol 79, pp 145-179

Dhaliwal, D, GalOr, R, Naiker, V & Sharma, D. (2013). The influence of the audit committee on auditor

provided tax planning services. Available at www.ssrn.com

Dhaliwal, D, Huang, S, Moser, W, & Pereira, R. (2011). Corporate tax avoidance and the level and valuation of firm cash holdings. Working paper.

Dyregang, S, Hanlon, M, & Maydew, E. (2010). The effects of executives on executives on corporate tax avoidance. *The accounting journal*, vol 85. No 4, pp 1163-1189

Frank, M, Lynch, L, & Rego, S. (2009). Tax reporting aggressiveness and its relation to aggressive financial reporting. *The accounting review*, vol 84, pp 467-796.

Garcia Blandon, J, & Josep Maria Argilés Bosch. (2013). Audit firm tenure and qualified opinions. *Revista de Contabilidad*. Vol 16, Issue 2, pp 118-125

Geiger, M, & Raghunandan, K. (2002). Auditor tenure and audit reporting failures. *Auditing: a journal of practice and theory*, vol 21. No 1, pp 67-78

Hanlon, M & Heitzman, S. (2010). A review of tax research. *Journal of accounting and economics*, vol 50, pp 127-178

Hogan, B & Noga, T. (2012). The association between changes in auditor provided tax services and long term corporate tax avoidance. *University of Pittsburgh accounting group*.

Johnson, V, Khurana, J & Reynolds, K. (2002). Audit firm tenure and the quality of financial reports. *Contemporary accounting research*, vol 19. No 4, pp 637-660

Jeong Woo, S, & Bae, S. (2014). The Association between Corporate Tax Avoidance and Auditor Tenure, Evidence from Korea

Kim, J, Li, Y, & Zhang, L. (2011). Corporate tax avoidance and stock price crash risk: firm - level analysis. *Journal of financial economics*, vol 100, pp 639-662

Maydew, E & Shackelford, D. (2005). The changing role of auditors in corporate tax planning. Available at www.ssrn.com

McGuire, S, Omer, T, & Wang, D. (2012). Tax avoidance: does tax - specific industry expertise make a difference? *The accounting review*, vol 87. No 3, pp 975-1003

Myers, J, Myers, L & Omer, T. (2003). Exporting the term of the auditor - client relationship and the quality of earnings. *a case fore mandatory*

auditor rotation? *The accounting review*, vol 73.
No 3, pp 779-799

Shafie, R, Hussin,W,Yusof,M& Hussain, H. (2009).
Audit firm tenure and auditor reporting quality:
evidence in Malaysia. *International business
research*. Vol 2. No 2