
Auditor Selection in Borsa Istanbul

Aree Saeed MUSTAFA,
University of Duhok, Nawroz University,
Visiting Lecturer,
e-mail: areealamedi@gmail.com

Luqman Muhammed SAEED,
Erbil Polytechnic University, Cihan University Erbil

Nishtiman Hashim MOHAMMED,
University of Duhok

Abstract

The objective of this study is to examine the effect of firms' characteristics and audit quality in Turkey. This study provides additional insights for audit quality literature by examining how firms characteristic effect on clients' incentives and abilities to demand high audit quality in Turkey. Turkey is one of the less developed and most under-researched capital markets in the world. This study used the data of 146 firms listed in Borsa Istanbul (BIST) over the period from 2011 to 2015. Using logistic regression, the findings explained that clients' incentives and abilities to demand high audit quality weaken because of control-ownership wedge, which an unfavourable outcome for minority shareholders. Thus, this study proposes that regulators, particularly the Capital Market Board of Turkey (CMBT), should increase law enforcement to enhance good corporate governance in Turkey to accommodate the unique features of wedge firms and provide a protected environment for minority shareholders.

Keywords: statutory audit, audit quality, listed firms, Turkey

JEL Classification: M42, G15

To cite this article:

Mustafa, A.S., Saeed, L.M., Mohammed, N.H. (2018), Auditor Selection in Borsa Istanbul, Audit Financiar, vol. XVI, no. 4(152)/2018, pp. 599-609,
DOI: 10.20869/AUDITF/2018/152/027

To link this article:

<http://dx.doi.org/10.20869/AUDITF/2018/152/027>
Received: 27.09.2018
Revised: 05.10.2018
Accepted: 08.10.2018

1. Introduction

Recently, audit market competition leads to increase the need to acknowledge the issues that affect client's decision in term of auditor selection. Previous literature addressed auditor selection decision extensively. DeFond & Zhang (2014) argue that auditor selection is encouraged from three potential bases are client characteristics, firms' characteristics and audit environment. Previous studies addressed auditor choice came from developed countries and particularly US and some in other developed markets for instance New Zealand (Firth & Smith, 1992a), Australia (Craswell, 1988) and the UK (Beattie & Fearnley, 1995). This study going to be among few exceptions for instance, auditor selection study conducted in the context of Turkey by Onder, Aksu, & Balci (n.d.) that addresses auditor choice process in Borsa Istanbul (BIST). It is the first study to focus on the auditor choice process in Turkey after the communique on independent Auditing Standards in Capital market (Serial: X, No: 22). Client's demand for external auditor have been changed as a result of new communique from CMB in 2006 which defines the legal requirements and auditor independency, regulates audit quality services by determining audit scope, identify the audit tenure and introduces local auditing standard in line with the audit international standards (Karaibrahimoglu, 2013; Mustafa, Che-Ahmad, & Chandren, 2018). Based on the Communiqué, firms listed in BIST are required to engage with independent auditor in order to audit the financial statements. Consequently, the Turkish commercial code has been delivered from 2012 in order to enhance the effectiveness of corporate governance, audit service and financial reporting quality.

This study aims is to examine the empirical relationship between auditor choice and auditees characteristics for the Turkish listed in BIST for 2011 to 2015. The basis of this research is derived upon the different levels of client's demand for audit quality. This study concentrates on determining the strength of the relationship between auditor selection and clients' characteristics. Furthermore, this study examines the credibility of audit firms measured by Big4 and Non-Big4 in the perspective of firms listed in BIST. The process of auditor choice is a worldwide issue because of different levels of client's demand for high audit quality. This would encourage audit firms to make better markets targeting decisions. Similarly, firms might select high quality auditor or a

particular kind of auditor as a sign of the quality of the firms.

2. Demand for audit quality

The elements influencing the demand for financial statement audits have been addressed in auditing literature for many years. The demand for different levels of audit quality rely upon different levels of conflicts between managers and owners (Jensen & Meckling, 1976). Agency conflicts levels illustrates the quality of audit services required to enhance management credibility. Previous studies argued that agency conflicts might be decreased by increasing managerial ownership of the firms (Jensen & Meckling, 1976). This indicates that the preference for audit quality decrease since managerial ownership increase. As *managerial ownership* increases in a firm, the need for higher quality audits decrease since the self-interest of the management would not diverge from that of outside stockholders. Using management share ownership as a proxy for agency costs, Simunic and Stein (1987) study the relationship between the percentage of non-management ownership of the firm and the choice of auditor quality as proxies by brand-name reputation in firms making an initial public offering. They observe a significant positive relationship between the percentage of non-management ownership and the choice of Big-Eight auditor. DeFond (1992) also finds that changes in managerial ownership are associated with changes in audit quality. Moreover, clients demand for high audit quality differ depend on the degree of conflict between owners–managers and owners–debt-holders (Jensen & Meckling, 1976). Thus, *client firm leverage* represents as another driver of agency conflicts. Managers might expropriate debt holders' wealth since they favor the interests of stockholders (Jensen & Meckling, 1976). Therefore, independent external auditor and restricted debt contracts are required as a monitoring mechanism. This is because audit function increases the credibility of accounting and financial information utilized to verify compliance with debt agreements.

The strength of the agency conflict determines extend to which the quality of audit is required to enhance management credibility. Demand for the external monitoring increases as a result of increase in the percentage of debt in the capital structure of the firm (Mustafa, Che Ahmad, & Chandren, 2017). Palmrose

(1984) suggest that the existence of long-term debt agreements enhance client demand for audit quality. Defond (1992) report a significant positive relationship between the existence of debt in the capital structure and clients tendency to demand high audit quality and this view is align with that provided by Firth and Smith (1992a). On the contrary, many studies such as Francis and Wilson (1988) and Simunic and Stein (1987) document a negative relationship between the existence of long-term debt in the capital structure and the selection of high audit quality proxies by Big4 auditor. This is because that Big4 auditor is more likely to deal with audit inherent risk with high present of leverage in the capital structure.

A review literature of audit quality and agency conflict is provided by Defond (1992) who review literature in order to understand inherent problem in the literature and what is required to be learned going forward. The finding of study by Mohammed (2018) indicates that larger firms and companies issuing new securities are more likely to engage with high audit quality proxies by Big-4 firms.

The aforementioned study conducted in US and many others in the UK and Australia. Very view studies conducted in the other countries. For instance, a study by Manalis and Citron (2000) addressed Greek audit market. The study examined the relationship between client characteristics and clients demand for high audit quality in term of Big4, second tier and local audit firms after the radical regulatory changes in Greek audit market in 1992. The client characteristics examined are control-ownership wedge, leverage, size and profitability for years 2011 to 2015. The study findings indicate that clients issue dual class shares are less likely to hire Big4 auditor than Non-Big4 auditor and it is significant at 1% level of significant. Furthermore, the average percent of return on assets, firm size and leverage is greater for clients hire Big4 auditor than clients hire Non-Big4 auditor.

3. The variables and the hypotheses

Previous literature found a relationship between clients' demand for strong external monitoring mechanism and clients' characteristics. This study concentrates on client characteristics for instance, control-ownership wedge, firm size, leverage and return on assets, as a degree of agency conflict.

3.1. Dependent Variable: Big4 versus other types of audit firms

Big4 uses as a proxy in this study to measure audit quality. This study propose dichotomies variable to measure audit quality, it coded 1 if the client hire Big4 auditor, otherwise 0 (DeAngelo, 1981a, 1981b). There are many reasons which promote this study to use Big4 auditor to measure audit quality. First, Big4 audit firms provide more quality audit than non- Big4 and this is the public perception regarding Big4 and nonBig-4. This comes from the idea that Big4 audit firms have more access to the knowledge and resource than non-Big4. Secondly, Big4 audit firms are more conservative to protect their reputational capital through adapting higher quality standards than non-Big4 audit firms (Balsam, Krishnan, & Yang, 2003; Caramanis & Lennox, 2008; Francis, 2004).

3.2. Independent variables: Client firm characteristics

3.2.1. Control-Ownership Wedge

Ownership structure (e.g. dispersed and concentrated ownership) has a substitution or complementary influence with board composition to monitor management activities via engagement with external monitoring mechanisms such as audit quality (Desender et al., 2013). This study combines agency theory and resource dependency theory to illustrate the board's incentive and ability to oversee management actions and reduce agency conflicts between majority shareholders and minority shareholders. Clients' incentive and the ability to monitor management activities in terms of hiring high audit quality is two-fold, namely, the alignments of interest and entrenchment effects.

According to alignment interests the board of directors and audit committee have a strong incentive to hire high audit quality on the grounds that controlling shareholders have strong incentives to enhance the contracting terms with other parties. Whereas, based on negative entrenchment effects the board of directors possess weak incentive to demand high audit quality in order to avoid realising any material misstatement in the financial reports and decrease the inherent litigation risk. This is because controlling shareholders tend to jeopardise minority shareholders' wealth. A review of the literature for audit quality by DeFond and Zhang (2014) proposes

that agency conflicts are the most important driver for clients' to demand high audit quality. This indicates that firms suffering severe agency conflicts possess strong incentives to demand high audit quality (Mohammed & Saeed, 2018).

Previous evidence documents that clients' selection of the external auditor derives from clients' preferences for auditor characteristics, whether that be auditor size or industry specialist auditor. There are few studies that support this argument, because most studies document that agency conflicts are considered as a better explanation for clients' incentives demand for high audit quality (DeFond & Zhang, 2014). It is of interest to extend the agency cost scope to carry out further investigation into the factors enhancing the clients' demand for high audit quality such as ownership structure. This indicates that the demand for strong external monitoring via high audit quality is contingent on the ownership structure; for example, the control-ownership structure (wedge) in Turkey. Thus, there is a need to examine the effect of control-ownership wedge on audit quality. For that reason, this study hypothesised that there is a relationship between control-ownership wedge and audit quality. Therefore, based on the aforementioned, this study's hypotheses are:

H1: There is a relationship between wedge and audit quality.

3.2.2. Firms size

Previous studies hypothesize a positive relationship between firms' size and auditor choice in term of high audit quality. This is because previous studies perceive that firm size is an indicator for the extent of agency conflicts (Abbott & Parker, 2000, Firth & Smith, 1992b, Francis & Wilson, 1988, Simunic & Stein, 1987, Healy & Lys, 1986). A study by Manalis and Citron (2000) examining Greece context find that firm size is positively impacts on the client demand for high audit quality in term of Big4 auditor at 10 percent significant level. On the other hand, larger firms might receive more attention from Big4 audit firms (Berton, 1995). Additionally, larger firms might have received better services from a myriad of specialized and professional advisors; hence, the might not receive the same quality services when they engage with Non-big4 audit firms. Moreover, the big firms might ask additional professional services for

instance, legal services, consultation and tax services. Etc. and Big4 firms possess more capabilities to supply this kind of services. Based on above discussion, it could be suggested that there is a positive relationship between clients' size and clients demand for high audit quality in term of auditor selection. This study will use natural log of total assets as proxy to measure clients' firm size.

H2: There is a positive relationship between client firm size and high audit quality.

3.2.3 Leverage

In an agency frame, scholars' report agency cost exacerbates as a result of high debt percentage capital structure. This leads to increase clients demand for high external monitoring mechanism (DeFond & Zhang, 2014). The same view is provides by Li, Cho, and Wu (2014) that's high agency cost proxy by leverage increase the demand for high audit quality in terms of brand name auditor. Previous literature hypothesized and tested the relationship between clients tendency to hire high quality auditor and agency cost peroxided by leverage ratio to capital (Watts & Zimmerman, 1986). Ashbaugh and Warfield (2003); Craswell, Francis, and Taylor, (1995); Francis and Wilson (1988); Fan and Wong (2005) report a positive relationship between clients demand for high quality audit and leverage. This is because high reputational auditor have sufficient abilities to diversify away the risk related to high leverage ratio (Johnson & Lys, 1990). An addition, DeAngelo (1981) report that reputational auditor are more likely to provide high quality audit services. That's large auditor with high number of clients is more exposure to lose their clients in case of any failing to discover the breach and report the breach in clients accounting system. Nevertheless, Francis and Wilson (1988a) report a negative relationship between reputational auditor and leverage. This is support by both of Healy and Lys (1986b) and Johnson and Lys (1990) that there is a negative relationship between high debt level and audit quality. This is because firms structure their capital with high leverage ratios are more likely to switch to a lower quality audit services. Hence, there is inconsistent of previous studies results about the

relationship between leverage and clients demand for high quality auditor. Therefore, based on the aforementioned, the hypothesis is:

H3: There is a relationship between leverage and high-quality audit

3.2.4. Return on Assets (ROA)

Our profitability measure return on assets is measured as the ratio of net income to total assets and provides an idea of the overall return on investment earned by the firm. In other words, it measures how effectively management uses the assets under its control to generate income, regardless of how these assets are financed. Mustafa et al. (2017) identify ROA as a variable that may be related to auditor choice. Consistent with this argument, Abbott and Parker (2000) hypothesize that ROA is positively related to engagement of an industry specialist auditor, since a more profitable firm is more likely to pay the fee premium demanded by a specialist. They indeed find a positive, but not significant, correlation between ROA and industry specialist auditors. Manalis and Citron (2000) however, did not observe a significant difference between the ROA levels of two clients of the two groups of auditors- the Big-Six vs. the non-Big-Six- in the Greek market. They also find that the Big- Six clients are indeed more profitable compared to those of second tier audit firms, but surprisingly, the clients of local audit firms have higher (but insignificant) ROA than those of second tier audit firms. Accordingly, the hypothesis is:

H4: There is a relationship between leverage and high-quality audit

4. Methodology

All Turkish listed firms are used as the population for this study. The sample used in this study covers five years 2011 to 2015 period. The data are included by sectors, with nine main sectors. The sample consists of non-financial Turkish listed firms. There are several reasons to choose public Turkish listed firms, namely, the annual reports are publicly available and can be easily accessed via the BIST website. The second reason is that the data published via annual reports are suitably presented based on the firms' commercial code and

GAAP. The initial sample comprises of 411 firms, including banks and financial institutions (Mustafa, Che-Ahmad & Chandren, 2017). These kinds of industries are excluded from the sample because they are governed by different regulations and corporate governance codes (Zulkarnain, 2009). There is one reason behind the selection of this study period, this is because of new Turkish commercial code has been issued, effective from July, 1, 2012.

This study dependent variable is measured by categorical variable (Big4), thus logistic regression is utilized to examine the influence of a set of independent variables on dependent variable. Pallant (2011) propose three assumptions applied in logistic regression for instance, sample size, multicollinearity and outliers. Sample size classified as a logistic regression assumption (Julie Pallant, 2013). The sample size of this study is 146 firms with an average of 36 firms for each independent variable. The proper percentage required is about 10 observations for each explanatory variable as proposed by (Pallant, 2007).

It is very necessary to confirm that the data is free from multicollinearity problem before starting with the findings of regression analysis. The multicollinearity problem present when one or more independent variable/s are highly correlated with each other that might influence negatively on the findings of the regression analysis (Hair, Anderson, Babin, & Black, 2010). Generally, Variance Inflation Factor (VIF) is represents as the most utilized tool to evaluate multicollinearity for each independent variables (Pallant, 2011). Currently, the literature does not addressed any cut-off point to use as a sign for the existence of collinear repressor/s (Alsaeed, 2006). Nevertheless, some scholars proposed that the researchers could be aware of the value of VIF of more than 10, that is reflects high multicollinearity problem. On the other hand, the researcher might depend on the level of tolerance factor (1/VIF) to make a decision on multicollinearity. Theoretically, the tolerance factor illustrates the level of corresponding of independent variable's variability that is not illustrated by other explanatory variable in the regression model. According to tolerance factor the collinearity problem present when the value of 1/VIF is less than 0.10 (Pallant, 2011). **Table no. 1** shows the results of VIF and it shows that there is no indicator of multicollinearity problems. The VIF results of all independent variables and control variables are not greater than 5, and far

below the threshold value of 10, as proposed by (Hair et al., 2010), as a result this assert to the absence of multicollinearity problem.

Table no. 1. Variance Inflation Factor (VIF) and Tolerance Factor (1/VIF) Tests

Variable	VIF	1/VIF
WEDGE	1.18	0.848761
FSIZE	1.40	0.716455
LEVE	1.14	0.879643
FAGE	1.14	0.873398
Mean VIF	1.68	

Notes: WEDGE = Control-ownership wedge. FSIZE = Natural log of firm size. LEVE = leverage. FAGE = Natural log of firm age.

Source: Own projection

Nevertheless, the data are not affected by any multicollinearity problem, panel data method has the capability to overcome such problem, if it is present, as it is an effective method to generate many more degree of freedom that might assist to reduce any collinearity problem (Baltagi, 1998; Hsiao, 2003). The third assumption of logistic regression is the outliers. Outliers represent a unique combination of values across number of variables or observations that are unusually low and high value on a variable that will distort statistics (Hair et al., 2006). Standardized residual cases less than -3.3 and more than 3.3 represents as outliers (Pallant, 2007). In this study, the minimum standard residual is -2.38 and the maximum standard residual is -2.40 and this indicates that this study doesn't have any outliers. **Table no. 2** displays the standard residuals for Big4 audit firms as a dependent variable in this study.

Table no. 2. Residual Statistics-Test of Outliers

	Minimum	Maximum	Mean	Std. Deviation	N
Residual	-0.968	0.964	0.008	0.404	724
Std. Residual	-2.408	2.383	0.000	1.000	724

Source: Own projection

Based on Hosmer Jr, Lemeshow, and Sturdivant (2013) linearity is not an assumption in term of logistic regression. Nevertheless, the odd ratio must be linear with the logit value. As such linearity tests on continuous variables are preceded to check for linearity violations. A particular procedure under STATA, the lincheck procedure¹ displays that continuous variables in this study possess add ratios that are linear with the logit value. Therefore, the linearity is not obvious.

4.1. Model specification

To address the research objective of this study, this study model investigates the relationship between firms'

¹ Lincheck procedure provides a quick-and-dirty check of whether a continuous covariate in a general linearized model (GLM) in linear in the link function. Lincheck makes a new categorical variable that breaks the continuous covariate into quartiles, then re-estimates the GLM using dummy variables for the quartiles, and finally provides a graph of estimated coefficients plotted against the midpoints of the quartiles. A linear graph supports the assumption of linearity of the continuous covariate. Lincheck works with most GLM commands such as logit/logistic and probit model.

features (control-ownership wedge, firm size, leverage and firm age) and audit quality. This study's hypotheses outlines are examined using the following model.

$$AUD_{it} = \beta_0 + \beta_1 WEDGE_{it} + \beta_2 FSIZE_{it} + \beta_3 LEVE_{it} + \beta_4 FAGE_{it} + \epsilon_{it}$$

Where:

For each firm (i) and each year (t)

AUD_{it} = Audit quality. A dichotomous variable is used to examine the hypotheses variables.

FSIZE= Firm size

LEVE= Leverage

FAGE= Firm age

ϵ_{it} = Error term supposed to be normally scattered with constant differences.

5. Results and discussions

This study investigates empirically the effects of clients' characteristics on audit quality of firms listed in BIST.

This section shows the descriptive statistic, correlation matrix and multiple regressions of independent variables and dependent variable. Descriptive statistics and univariate test results for binary variables (e.g. WEDGE) the divergence in proportion is identified in **Table no. 3**. *Chi-square* test¹ explains the divergence in proportions of the binary variables between the both groups of firms. The *Chi-square* test is used for categorical having a number of categories and there is no agreed method to order those from the lowest to highest (Idre, 2017). The result of the *Chi-square* test for the distribution differences between WEDGE and non-WEDGE firms exposes that Big4 and non-Big4 selection is a statistically significant at 1% ($\chi^2 = 56.9964$; $p = 0.000$). The results explain that the auditor selection in the environment of Turkey is driven by the presence of WEDGE (divergence between control rights and cash flow rights). The number of clients hire non-Big4 auditor and Big4 auditor is about 94 and 211 respectively, for non-WEDGE firms. While firms practice WEDGE and hire non-Big4 auditor are about 248 firms and WEDGE firms hire Big4 auditor are about 171 firms.

Table no. 3. Descriptive Statistics (Frequency) and Univariate Test Results for Dummy Variables for WEDGE and Audit Quality

	Non-WEDGE	WEDGE	Total
Non-Big4	94	248	342
Big4	211	171	382
Total	305	418	724

Pearson $\chi^2(1) = 56.9964$ Pr = 0.000

Note: for categorical variables (i.e. WEDGE) (tabulate Big4 non-WEDGE, χ^2) has been employed to report the χ^2 and P-value.

Source: Own projection

Then it is evident that WEDGE firms display higher frequency in regards to engage with non-big4 audit firms. The *Chi-square* test show that WEDGE is significant determinant of client's demand of high audit quality. Controlling shareholders might get strong incentive to expropriate minority shareholders wealth as a consequence of their negative entrenchment effect (Desender et al., 2013). Controlling shareholders possess adequate incentive and ability to monitor management directly instead of depending on external monitoring and hold them accountable for activities not aligned with their interests (Bohinc & Bainbridge, 2001). This means that there is significant relationship between WEDGE and audit quality. The result is consistent with that of (Chien et al., 2008; Fan & Wong, 2002) in the context of Taiwan and East Asia respectively. Also, this study finding in align with the Turkey environment (Ararat, Aksu, and Tansel Cetin, 2015b).

Table no. 4 shows the number of observations, mean, standard deviation, min and max for of firm size, leverage, and firm age. The average firm size (FSIZE) measured by total assets of the firms in this study sample is (1,904) Turkey Lira (TL) (\$5,277 at \$1= 3.608) with a standard deviation of 2.608 and a minimum value of 1.433 and a maximum value of 2.608.

The mean ratio of total debt to total assets (LEVE) of the firms in the sample is 0.481 (0.279 percentage the standard deviation) with a minimum of 0 and a maximum of 1.707. The mean level of firms age (FAGE) is 33.825 with a minimum and maximum value (1 & 80) respectively. This range is very close to study conducted by Gacar (2016) in the context of Turkey that reported a mean value of 39.910 and standard variation of 15.211 and a minimum of 0.60 and a maximum of 81.00.

Table no. 4. Descriptive Statistics of Continuous Variables

Variable	Obs	Mean	Std. Dev.	Min	Max
FSIZE	724	1.904	1.781	1.433	2.608
LEVE	724	0.481	0.279	0	1.707
FAGE	724	33.825	15.856	1	80

Source: Own projection

¹ *Chi-square* test is used in order to compare the average ranks of WEDGE firms and Big4 audit firms. This test is fit for non-parametric tests for categorical variables instead of *t*-test. A normal distribution of the mean variances is the assumption of the *t*-test. Categorical variable is one that has two or more

categories and there is no intrinsic ordering to the categories. For instance, hair colour is a categorical having a number of categories (e.g. brown, blonde, red ... etc.) and there is no agreed method to order those from lowest to highest.

Table no. 5 displays the correlation between this study variable. The general overview indicates that the correlation between variable is less than 0.80 (the

threshold value). This infers that the multicollinearity between variables is at low level.

	Big4	DUSH	FSIZE	LEVE	FAGE
Big4	1.00				
DUSH	-0.28	1.00			
FSIZE	0.39	-0.22	1.00		
LEVE	0.16	-0.13	0.24	1.00	
FAGE	0.25	-0.15	0.10	-0.06	1.00

Source: Own projection

Table no. 5 shows that WEDGE has negative correlation with audit quality. While FSIZE, LEVE and FAGE positively correlated with audit quality in term of brand name auditor.

(control-ownership wedge, firm size, leverage and firm age). The relationship between control-ownership wedge and the Big4 is very highly significant at 1% level of significance $p = 0.000$ ($t = -4.82$); with a very strong impact (Table no. 6). This influence is effective at 83.7%.

Table no. 6 shows that about 18% of the differences in the audit quality are explained by firms' characteristics

Variable	Coeff	T-Value	Probability
DUSH	-0.837	-4.82	0.000
FSIZE	0.471	8.42	0.000
LEVE	0.692	2.13	0.033
FAGE	0.656	4.54	0.000
R ²	0.18		
Prob>chi ²	0.000		

Source: Own projection

The implication is that wedge can influence the appointment or non-appointment of Big4 auditors by some 83.7%. A critical evaluation of the coefficients also shows that the type of the relationship that exists between the two is negative. This shows that the influence of wedge strongly discourages the appointment of Big4 auditors; because this relationship is highly significant and very strong it should be considered very reliable by management. The evidences align with this study results was documented by previous empirical studies (Jong-hag Choi, 2008; Kim & Yi, 2006). The result supports Hypothesis 1. As anticipated, FSIZE proxies by natural log of total assets positively influence on clients demand for high quality auditors. The level of significant of FSIZE is at 1% level of significance ($t = 8.42$). Besides, the degree of influence on Big4 is

47.1%. This result is inferred to mean that big sized firms are more likely to engage with high quality auditor in terms of Big4 audit firms. Consistently, Karaibrahimoglu (2013) reports that large firms issue high quality financial reports in order to obtain additional resource of money (capital) and attracts more investors, that's in turn, require strong external auditors. The result supports Hypothesis 2.

Table no. 6 displays that LEVE has significant positive influence on clients incentive to hire Big4 ($t = 2.13$; $p = 0.033$). The level of significant is at 5% level of significance. The result reflects that firms have high ratio of debt to total assets are more likely to acquire strong external monitoring mechanism. Previous literature by Abbott and Parker

(2000); Adeyemi and Fagbemi (2010) and Hope, Kang, Thomas, and Yoo (2008) report that firms with high ratio of leverage are more likely to hire strong monitoring mechanism. They infer that there is a positive relationship between leverage and high-quality audit services. Financial risk and agency conflicts between agent (managers) and principle (shareholders and debt holders) is high for firms with high proportion of debt to capital structure. Thus, high audit quality is required in order to protect debt holders' rights from managers' expropriation (Ashbaugh & Warfield, 2003; Francis & Wilson, 1988). Thus, the result supports Hypothesis 3. **Table no. 6** also displays that FAGE has high significant positive relationship with clients' incentive to demand Big4 audit firms. The significant level is at 1% level of significance ($t = 4.54$). This is because old firms have got enough experience to enhance the quality of their financial reports (Shan, 2014). Furthermore, older firms are more likely to be controlled by family founders and this could enhance their entrenchment effects (Liu, Ahlstrom, & Yeh, 2006; Wong, Chang, & Chen, 2010). Therefore, in order to create protected environment for investors particularly minority shareholders, older firms are more likely to hire Big4 audit firms. This argument aligns with previous studies by (Arosa, Iturralde, &

Maseda, 2010; Anderson, Mansi, & Reeb, 2003). The result supports Hypothesis 4.

6. Conclusion

The discussion addressed above has revealed that control-ownership wedge possesses negative influence on clients' ability to demand high audit quality of Turkish listed firms. FSIZE, LEVE and FAGE have positive influence on clients' ability to demand high quality audit services. This is because control-ownership influence not only on director's incentive to monitor, but also their abilities to do so. Thus, the study infers that control-ownership wedge has significant impacts on clients' incentive and ability to demand high audit quality. The research therefore, recommends policy makers to introduce unique definition and measurements of corporate governance to accommodate the unique feature of control-ownership wedge firms listed in BIST. The study also recommends further studies that could include more data, inclusion of other variables of corporate governance at before and after regulatory changes in 2012 for comparison of clients' demand before and the aftermath.

REFERENCES

- Abbott, L. J., & Parker, S. (2000). Auditor selection and audit committee characteristics. *Auditing*, 19(2), 46–66. <http://doi.org/10.2308/aud.2000.19.2.47>
- Adeyemi, S. B., & Fagbemi, T. O. (2010). Audit quality, corporate governance and firm characteristics in Nigeria. *International Journal of Business and Management*, 5(5), 169–179.
- Alsaeed, K. (2006). The association between firm-specific characteristics and disclosure: The case of Saudi Arabia. *Managerial Auditing Journal*, 21(5), 476–496.
- Anderson, R. C., Mansi, S. A., & Reeb, D. M. (2003). Founding family ownership and the agency cost of debt. *Journal of Financial Economics*, 68(2), 263–285.
- Ararat, M., Aksu, M., & Tansel Cetin, A. (2015). How board diversity affects firm performance in emerging markets: Evidence on channels in controlled firms. *Corporate Governance (Oxford)*, 23(2), 83–103. <http://doi.org/10.1111/corg.12103>
- Arosa, B., Iturralde, T., & Maseda, A. (2010). Outsiders on the board of directors and firm performance: Evidence from Spanish non-listed family firms. *Journal of Family Business Strategy*, 1(4), 236–245.
- Ashbaugh, H., & Warfield, T. D. (2003). Audits as a Corporate Governance Mechanism: Evidence from the German Market. *Journal of International Accounting Research*, 2(1), 1–21. <http://doi.org/10.2308/jiar.2003.2.1.1>
- Balsam, S., Krishnan, J., & Yang, J. S. (2003). Auditor industry specialization and earnings quality. *Auditing: A Journal of Practice & Theory*, 22(2), 71–97.
- Baltagi, B. H. (1998). Panel data methods. *Statistics Textbooks And Monographs*, 155, 291–324.

10. Beattie, V., & Fearnley, S. (1995). The importance of audit firm characteristics and the drivers of auditor change in UK listed companies. *Accounting and Business Research*, 25(100), 227–239. JOUR.
11. Berton, L. (1995). Squeeze play: Midsize accountants lose clients to firms both large and small. *Wall Street Journal*, (November 14) A, 1. JOUR.
12. Bohinc, R., & Bainbridge, S. M. (2001). Corporate governance in post-privatized Slovenia. *The American Journal of Comparative Law*, 49(1), 49–77.
13. Caramanis, C., & Lennox, C. (2008). Audit effort and earnings management. *Journal of Accounting and Economics*, 45(1), 116–138. <http://doi.org/10.1016/j.jacceco.2007.05.002>
14. Chien, C.-C., Chen, K. Y., & Wu, S.-Y. (2008). Corporate governance and auditor selection: evidence from Taiwan. *Corporate Ownership & Control*, 492.
15. Choi, J. (2007). The Association between Audit Fees and the Ownership Structure, 13(2).
16. Craswell, A. T. (1988). The association between qualified opinions and auditor switches. *Accounting and Business Research*, 19(73), 23–31. JOUR.
17. Craswell, A. T., Francis, J. R., & Taylor, S. L. (1995). Auditor brand name reputations and industry specializations. *Journal of Accounting and Economics*, 20(3), 297–322. [http://doi.org/10.1016/0165-4101\(95\)00403-3](http://doi.org/10.1016/0165-4101(95)00403-3)
18. DeAngelo, L. E. (1981a). Auditor independence, “low balling”, and disclosure regulation. *Journal of Accounting and Economics*, 3(2), 113–127.
19. DeAngelo, L. E. (1981b). Auditor size and audit quality. *Journal of Accounting and Economics*, 3(3), 183–199.
20. Defond, M. L. (1992). The association between changes in client firm agency costs and auditor switching. *Auditing*, 11(1), 16.
21. DeFond, M., & Zhang, J. (2014). A review of archival auditing research. *Journal of Accounting and Economics*, 58(2), 275–326. JOUR.
22. Desender, K. A., Aguilera, R. V., Crespi, R., & Garcia-Cestona, M. (2013). When does ownership matter? Board characteristics and behavior. *Strategic Management Journal*, 34(7), 823–842.
23. Fan, J. P. H., & Wong, T. J. (2002). Corporate ownership structure and the informativeness of accounting earnings in East Asia. *Journal of Accounting and Economics*, 33(3), 401–425.
24. Fan, J. P. H., & Wong, T. J. (2005). Do external auditors perform a corporate governance role in emerging markets? Evidence from East Asia. *Journal of Accounting Research*, 43(1), 35–72. JOUR.
25. Firth, M., & Smith, A. (1992a). Selection of auditor firms by companies in the new issue market. *Applied Economics*, 24(2), 247–255. JOUR.
26. Firth, M., & Smith, A. (1992b). The accuracy of profits forecasts in initial public offering prospectuses. *Accounting and Business Research*, 22(87), 239–247. JOUR.
27. Francis, J. R. (2004). What do we know about audit quality? *The British Accounting Review*, 36(4), 345–368.
28. Francis, J. R., & Wilson, E. R. (1988). Auditor changes: A joint test of theories relating to agency costs and auditor differentiation. *Accounting Review*, 663–682. JOUR.
29. Gacar, A. (2016). Relationship Between Audit Quality and Corporate Governance: An Empirical Research in Borsa Istanbul. *IOSR Journal of Business and Management (IOSR-JBM)*, 18(11), 84–88. <http://doi.org/10.9790/487X-1811068488>
30. Hair, J. F., Anderson, R. E., Babin, B. J., & Black, W. C. (2010). *Multivariate data analysis: A global perspective* (Vol. 7). Pearson Upper Saddle River, NJ.
31. Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (Vol. 6). Pearson Prentice Hall Upper Saddle River, NJ.
32. Healy, P., & Lys, T. (1986). Auditor changes following Big Eight mergers with non-Big Eight audit firms. *Journal of Accounting and Public Policy*, 5(4), 251–265. JOUR.
33. Hope, O.-K., Kang, T., Thomas, W., & Yoo, Y. K. (2008). Culture and auditor choice: A test of the secrecy hypothesis. *Journal of Accounting and Public Policy*, 27(5), 357–373.
34. Hosmer Jr, D. W., Lemeshow, S., & Sturdivant, R. X. (2013). *Applied logistic regression* (Vol. 398). John Wiley & Sons.
35. Hsiao, C. (2003). *Analysis of panel data* (Vol. 34). *Econometric Society Monographs*.
36. Idre. (2017). What statistical analysis should I use? Statistical analyses using STATA. <http://doi.org/http://stats.idre.ucla.edu/stata/whatstat/what-statistical-analysis-should-i-usestatistical-analyses-using-stata/>

37. Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
38. Johnson, W. B., & Lys, T. (1990). The market for audit services: Evidence from voluntary auditor changes. *Journal of Accounting and Economics*, 12(1), 281–308. JOUR.
39. Karabrahimoglu, Y. Z. (2013). Is Corporate Governance A Determinant of Auditor Choice?- Evidence From Turkey. *Kurumsal Yönetim Denetçi Seçiminde Belirleyici Midir?-Türkiye'den Bulgular.*, 13(2), 273–284.
40. Khalil, S., Magnan, M. L., & Cohen, J. R. (2008). Dual-class shares and audit pricing: Evidence from the Canadian markets. *Auditing: A Journal of Practice & Theory*, 27(2), 199–216.
41. Kim, J., & Yi, C. H. (2006). Ownership structure, business group affiliation, listing status, and earnings management: Evidence from Korea*. *Contemporary Accounting Research*, 23(2), 427–464.
42. Liu, Y., Ahlstrom, D., & Yeh, K. S. (2006). The separation of ownership and management in Taiwan's public companies: An empirical study. *International Business Review*, 15(4), 415–435.
43. Manalis, G., & Citron, D. B. (2000). The International Audit Firms as New Entrants-An Empirical Analysis of Auditor Selection in Greece, 1993 to 1997. *Cass Business School Research Paper*. JOUR.
44. Mohammed, N. H. (2018). Board characteristics and industry specialist auditor: The moderating role of concentrated ownership. *Academic Journal of Nawroz University*, 7(3), 55–65.
45. Mohammed, N. H., & Saeed, A. (2018). Determinants of Audit Fees: Evidence from UK Alternative Investment Market. *Academic Journal of Nawroz University*, 7(3), 34–47.
46. Mustafa, A. S., & Che-Ahmad, A. (2017). Ownership Patterns and Control of Top 100 Turkish Listed Companies. *Asian Journal of Finance & Accounting*, 9(1), 192–209.
47. Mustafa, A. S., Che-Ahmad, A., & Chandren, S. (2018). Board diversity, audit committee characteristics and audit quality: The moderating role of control-ownership wedge. *Business and Economic Horizons*, 14(3), 587–614.
48. Mustafa, A. S., Che Ahmad, A., & Chandren, S. (2017). Board diversity and audit quality: evidence from Turkey. *Journal of Advanced Research in Business and Management Studies*, 6(1), 50–60.
49. Onder, T., Aksu, M. H., & Balci, Y. (n.d.). Auditor selection in the Istanbul stock exchange. GEN, Marmara University. Istanbul.
50. Pallant, J. (2007). *SPSS survival manual: A step by step guide to data analysis using SPSS for third Window edition*. New York: McGraw Hill.
51. Pallant, J. (2011). *SPSS survival manual: A step by step guide to data analysis using SPSS Australia*. Allen & Unwin.
52. Pallant, J. (2013). *SPSS survival manual*. McGraw-Hill Education (UK).
53. Palmrose, Z. (1984). The demand for quality-differentiated audit services in an agency-cost setting: An empirical investigation. In *Auditing Research Symposium* (pp. 229–252). CONF, University of Illinois Urbana Champaign.
54. Shan, Y. G. (2014). The impact of internal governance mechanisms on audit quality: a study of large listed companies in China. *International Journal of Accounting, Auditing and Performance Evaluation*, 10(1), 68–90. <http://doi.org/10.1504/IJAAPE.2014.059183>
55. Simunic, D. A., & Stein, M. T. (1987). *Product differentiation in auditing: Auditor choice in the market for unseasoned new issues*. BOOK, Canadian Certified General.
56. Watts, R. L., & Zimmerman, J. L. (1986). Positive accounting theory. *The Accounting Review*, 65(1), 131–156.
57. Wong, Y., Chang, S., & Chen, L. (2010). Does a Family-controlled Firm Perform Better in Corporate Venturing? *Corporate Governance: An International Review*, 18(3), 175–192.
58. Y. Li, E., Cho, C.-C., & Wu, C.-H. (2014). Role of auditor in agency conflict and corporate governance: empirical analyses of Taiwanese firms. *Chinese Management Studies*, 8(3), 333–353. JOUR.
59. Zulkarnain Muhamad. (2009). Audit Market Competition: Causes and Consequences. *ICFAI Journal of Audit Practice*, 6(1).