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Auditor Tenure, Auditor Industry Expertise, and Audit Report Lag: Evidences of Iran

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Abstract

The findings of theoretical investigations indicate that short-term auditor tenures may contribute to further audit report lags (ARLs). On the other hand, auditor industry expertise represents one of the determinant factors contributing to audit quality, which has been widely studied in numerous researches. Indeed, the better the quality of audit, the less delayed would be the audit report. As such, aiming at investigating the association between auditor tenure and ARL on the one hand, and studying the adjusting effect of auditor industry expertise on the other hand, the present research investigated 141 firms operating within 25 industries during 2010-2014. Chaw and Hausman Test results indicated, at 5% level of significance, that the corresponding regression model should be assessed with consistent effects. Furthermore, undertaking multivariate linear regression analysis, the research results implied no significance association between auditor tenure and ARL. In fact, the first hypothesis that auditor tenure is negatively related to ARL was rejected. On the other hand, the second hypothesis that auditor industry expertise may attenuate the association of auditor tenure and ARL was also rejected, meaning that, even with auditor industry expertise considered, a significant relationship between auditor tenure and audit report lag could not be recognized.

Keywords

Auditor industry expertise, Audit report lag (ARL), Auditor tenure.

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Introduction

Reliability and timeliness of financial statements represent two very important and useful criteria on which their users may focus. Leventis et al. (2005) suggested that, audited financial statements can be perceived as reliable and readily available sources of information, because such financial statements are provided to their users along with opinions from auditors or other independent professionals; such opinions may add to the reliability of the financial statements, so that the users can be more confident about the decisions they make on the basis of such financial statements.

However, according to Iranian generally accepted accounting principles, financial statements may lose part of their usefulness if they fail to be available to the users within a certain time after the reporting date (e.g. because of prolongation of the auditing process). In other words, the shorter the interval between the fiscal year end and the audit report release date, the higher informative value the audit report may attain (Badri & Alikhani, 2006). Accordingly, it is important to understand factors contributing to audit report lag (ARL), because final public release fastness of financial statements tends to be determined by how fast auditing process is undertaken (Abidin & Ahmad-Zaluki, 2012). Any delay in the release of financial statements may be translated into changes in the market behavior (Chambers & Penman, 1984; Ashton et al., 1989).

There are some evidences showing firms have no way to decrease ARL. One of the most important factors that affect ARL is audit tenure. According to Note 2 under Article 10 in the instructions for trusted audit firms by Securities and Exchange Organization (SEO) in Iran, passed by Supreme Council of Securities and Exchange on July 29th, 1989, audit firms are not allowed to admit a firm's request for independent audit or legal auditor for more than four years in a row. However, they are allowed to admit such requests until more than two years after the end of so-called four-year-in-a-row interval. On the other hand, there have been different discussions about the issue of mandatory audit firm rotation. The opponents of audit firm rotation

believe that the costs of mandatory audit firm rotation are so high. Because lack of information of auditors about the clients and related industries could affect the quality of auditing in early years (Lim & Tan, 2010).

Meanwhile, others assert that the most important fraud risk components are dependence of a main part of salaries and benefits of managers on operations results, financial statements, or cash flows and lack of supervision from management on important internal controls (Bazrafshan, 2015). So long-tenured auditors may be less objective and lack professional skepticism, which also influences audit quality. As mentioned earlier, not only audit firm rotation results in reduction of audit quality and has high costs but also in this way ARL may be longer in the early years of the audit-client relationship. In other words, ARL is expected to be longer when audit firm tenure is short. Short audit tenure may create a delay in information provided to the market due to the auditors' unfamiliarity with firms' operations (Habib & Bhaiyan, 2011).

As a result, the audited information will be disclosed with lag, so the information will not be efficient (Lee et al., 2009). Briefly, previous studies have shown that short audit tenure can cause the longer audit delay. So there is an unanswered question: How changing the auditor could affect the reduction of the impact of short audit firm tenure and the enhancement influence of long audit tenure on the timeliness of financial reporting remains unanswered. With a view to the importance of ARL on the timeliness of financial reporting information and firms' financial performance, it is vital to examine how firms can reduce ARL. In this study, our focus is on the impact of audit firm tenure on ARL and whether choosing an industry-specialized auditor can be an effective way to influence the relation between audit firm tenure and ARL.

The remainder of this paper is organized as follows. In the second section, we provide theoretical foundations and background. In the third section, we introduce the study research method. In the fourth section, we provide the results of this study, and section five presents concluding remarks and recommendations.

Theoretical Foundations

Audit Report Lag (ARL)

ARL is defined as the time interval between the fiscal year end and the release date of annual financial statements to be prepared by firms (Mahdavi & Jamaliyanpuor, 2010). In financial reporting literatures, a close association has been found between delays in the presentation of financial statement and ARL, so that timeliness of the presentation of financial statements has been studied along with that of audit reports, in many cases (Carslaw & Kaplan, 1991; Ashton et al., 1989; Leventis, 2005).

   According to Chapter 3 in "Statement of Financial Accounting Concepts" number 8 by FASB and IASB, timeliness represents one of the enhancing qualitative characteristics of prepared useful information in the course of decision-making by existing and potential investors, lenders, and other creditors. As suggested in the statement, timeliness is defined as available information to decision-makers and the effectiveness of this information on the decisions made by such individuals. Accordingly, along with other enhancing qualitative characteristics such as comparability, reliability, and understandability, the timeliness contributes to enhanced primary qualitative characteristics including relevance and honesty in the presentation. In particular, for an event with non-changing qualitative characteristics of relevance and honesty in the presentation, enhancing characteristics may largely help select the proper approach to depict the event (FASB, 2010).

Auditor Tenure

Auditor tenure refers to the number of years a firm retain an auditor; limiting the auditor tenure is commonly referred to as mandatory rotation of auditor (Myers et al., 2003). According to Note 2 under Article 10 in the instructions for trusted audit firms by Securities and Exchange Organization (SEO), passed by Supreme Council of Securities and Exchange on July 29th, 1989, audit firms are not allowed to admit a firm's request for independent audit or legal auditor for more than four years in a row. However, they are allowed

to admit such requests until more than two years after the end of so-called four-year-in-a-row interval. There are two important theories when it comes to audit tenure (term of experience) of an audit firm.

The first theory implies that, as an auditor tenure is lengthened, the independence of the auditor experiences a fall which can, in long-run, lead auditors to lose their motivations and see their objectives diluted; associations with management is known to be the source of this issue (Gul et al., 2009). In other words, long presence of an auditor besides his/her client may develop tendencies towards respecting the attitudes of the client management; a situation wherein his/her independence may be distorted (Rajabi, 2006). This is because the auditor had incurred some initial costs during his/her initial years of working for a new client, to compensate which he/she tends to retain the client.

On the other hand, rejecting the negative effect of long auditor tenure on the auditor independency, such researchers as Davis et al. (2000) believed that there are other factors which lead auditors to maintain their independency; for example, auditors' efforts towards retaining their credits and reputations, or fear of the possibility of arising lawsuits against them are among structures which may prevent them from exhibiting improper behaviors. In addition, as auditors can enhance their deal of knowledge and experience about their customers, on the basis of which experience they can enhance the quality and fastness of audit process.

Empirical evidences indicate a significant relationship between audit tenure, on the one hand, and audit effectiveness and efficiency, on the other hand. In other words, the longer the audit tenure is, the less the ARL, as a proxy for audit effectiveness and efficiency, is (Lim & Tan, 2010). Nevertheless, in their research, Lee and Jahng (2005) concluded that a short tenure time may not be translated into ARL. Indeed, the research indicated that audit efficiency may not be influenced by short tenure time.

Auditor Industry Expertise

Auditor industry expertise encompasses the development of constructive ideas to help clients create added value and provision of

novel perspectives/solutions for some issues with which clients may face in the scope of their industries. For auditors to be known as industry experts, they should recognize and well understand particular issues of the respective industry, identify key organizations operating in the industry, and know how particular issues of the industry may affect different sectors across the industry (Kend, 2008).

Although a great deal of attention has been dedicated to the subject matter of audit industry expertise within the recent years, a universal measure of audit industry expertise is yet to be developed (Neal & Riley, 2004). There are two preliminary criteria to recognize an auditor as one with industry expertise: Market share approach (Balsam et al., 2003; Dunn & Mayhew, 2004), and portfolio share approach (Krishnan, 2003). In addition, Neal and Riley (2004) proposed a new combined measure expressed as a function of market share and portfolio share.

Market share approach represents an auditor of industry expertise in terms of an audit institution which has made itself distinctive of its competitors in terms of its market share in a certain industry. This approach assumes that, one can achieve a measure of knowledge and industry expertise of audit institutions serving a certain industry, by observing their relative market shares in that industry. Accordingly, the institution with larger market share of a certain industry is supposed to enjoy a greater deal of knowledge and expertise within the scope of that industry.

Portfolio share approach considers, for each audit institution, relative distribution of audit services over different industries. Put it simply, every audit institution has clients which together form its portfolio. The industry with the largest number of clients within the portfolio of an audit institution may represent the audit institution's industry of expertise. This approach relies on how important is each industry within the client portfolio of the auditor (Krishnan, 2003). The third measure for industry expertise is the combined measure proposed by Neal and Riley (2004). This measure combines the market share and portfolio share measures together.

To the same extent as auditors become expert in a certain industry,

their specialized knowledge gets enhanced, so as they are expected to outperform non-expert auditors when it comes to the detection of fraudulent reports, so as to further accelerate the process of audit (Balsam et al., 2003). Auditor industry expertise may contribute to enhanced quality of the auditor's services in the industry of his/her expertise, which consequently improves his/her performance in terms of timeliness of audit report (Abidin & Ahmad-Zaluki, 2012).

Although numerous researches have recently focused on the association of short auditor tenure with ARL, but, to the best of our knowledge, no research has investigated, within the scope of Iran's economy, whether the auditor industry expertise can adjust the association of short auditor tenure with ARL or not?

Recent researches such as Habib and Bhaiyan (2011) have been provided evidences indicating shorter ARL for audit firms with expert industrial auditors. As such, auditor industry expertise is expected to relax the positive association of short auditor tenure with ARL while strengthening the negative association between long auditor tenure and ARL.
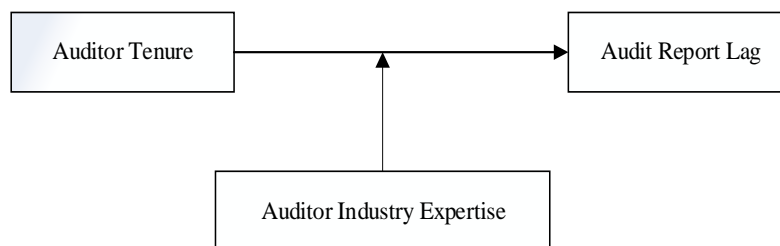
Fig. 1. Conceptual model

Research Background

Knowing that the present research's subject is not directly addressed in extant domestic researches as well as many foreign studies, several related researches to the variables discussed in the present research are referred to in the following. For instance, in their research, Carslaw and Kaplan (1991) illustrated that one can expect shorter ARLs when auditory services are assigned to large audit institutions. This was attributed to the fact that such institutions usually employ professional

auditors with large deals of auditory experience; based on their professional experiences, such auditors tend to take shorter times to identify the clients' financial systems, so that complexities of information processing systems may not incur ARLs.

Many researches, including those by Krishnan (2003) and Balsam et al. (2003), have shown that, firms may enjoy lower cost of capital, higher earning response coefficient, less accruals, and better debt rating when they are served by auditors of industry expertise, and for longer tenures. Interpreting these findings, one can see that longer auditor tenures may enhance the audit quality, so that such auditors can accomplish the audit process within a shorter period of time (Almutairi et al., 2009).

In order to investigate the effect of task rotation among employees of audit institutions, and replacement of the audit institution in charge of audit operations on the timeliness of presenting the audit report, Kam and Cheuk (2005) selected 365 Australian firms, as their research sample, for the fiscal year 2001. The research results indicated that, task rotation among employees of audit institutions, and the assignment of audit operations to a same-sized audit institution may impose no significant effect on the timeliness of audit report. However, when it comes to the assignment of audit operations to a larger audit institution, such a replacement of audit institution exhibited significant association with the time interval to implement and accomplish audit operations. In their research, Lee et al. (2009) investigated the relation between ARL and auditor tenure. The results indicated a significant negative association of auditor tenure and non-audit services with ARL.

In their research, Lee et al. (2009) investigated the relation between ARL and auditor tenure. The results indicated a significant negative association of auditor tenure and non-audit services with ARL. Tanyi et al. (2010) undertook a study on ARL after arbitrary and mandatory rotations of auditor. Their research results indicated longer ARLs for companies which periodically changed their auditors, as compared to those which undertook fewer auditor rotations.

As mentioned before, previous studies have revealed that, ARL is

determined by the firm and auditor-related factors such as firm size, structure of audit firm, auditor effort, and so on. Auditor tenure is among the factors which influences the effectiveness of auditors. Indeed, empirical evidences have shown that, the longer the auditor tenure, the more effective the audit firm is likely to perform (Lee et al., 2009). This is because it takes some time for the audit institution to get familiar with the client's operations, so that audit efficiency in the first year may be lower than that of the proceeding years. That is to say, the longer the audit tenure, the less ARL is likely to incur.

With their aim to determine the causes for delayed audit operation accomplishment across Malaysian firms, Adzrin and Ahmad (2010) selected 100 listed firms on Kuala Lumpur Stock Exchange during 1996-2000. Corresponding descriptive statistics indicated that, during the five-year period investigated, it had taken an average of more than 100 days (with a standard deviation of 36 days) for the selected firms to accomplish audit operations. The research results further illustrated that, of the eight independent variables defined, the six variables of industry type, loss (gain), audit opinion, auditors, fiscal year end, and liabilities to assets ratio exhibited significant relationships with the research variable. Audit operation timeliness was found to be directly related to loss (gain), auditory opinion and liabilities to assets ratio, while it was seen to be inversely related to industry type, auditors, and fiscal year end.

Mande and Son (2011) investigated the association of ARL with auditor rotation. Their findings indicated that as ARL increases, the frequency of auditor rotation follows a decreasing trend. By observing 502 firm-years corresponding to a set of listed firms on New Zealand Stock Exchange during 2004-2008, Habib and Bhaiyan (2011) investigated the auditor industry expertise along with ARL. Their research findings indicated shorter ARLs for the firms audited by an auditor of expertise in the corresponding industry.

In their research, Lee and Jahng (2011) determined factors affecting ARL, where they indicated a negative association of ARL with non-auditory costs, type of audit firm, and qualified/modified auditor report. Furthermore, they observed that ARL may not be

significantly related to auditor tenure and abnormal audit costs. Additional analyses indicated that, unusual auditing hours, taxing services and internal control design services significantly contribute to reduced ARL. Habib and Bhaiyan (2011) found that the firms with auditors of industry expertise may enjoy shorter ARLs.

Abidin and Ahmad-Zaluki (2012) studied the relationship between auditor industry expertise and timeliness of reporting task. Their results demonstrated that no significant relation exists between auditor industry expertise and reporting pace. In contrast, reporting pace was seen to be significantly related to the audit institution size, firm size, profit reporting companies, and financial companies. Furthermore, longer ARLs were observed for firms receiving qualified/ modified audit reports as well as the firms reporting exceptional items and those of financial leverages. In their research, Reheul et al. (2013) studied the causes leading to ARL; their results indicated a significant negative relationship between auditor industry expertise and ARL.

In a paper entitled as "Auditor Tenure, Auditor Industry Expertise, and Audit Report lag", Dao and Pham (2014) used 7291 firm-year observations during 2008-2010 to investigate the relationship between auditor tenure and ARL along with the effect of auditor industry expertise on this relationship. The results revealed that, the positive relationship observed between ARL and short auditor tenure may be weakened by the auditor industry expertise.

Al Bhoor and Khamees (2016) in a paper titled "Audit Report Lag, Audit Tenure and Auditor Industry Specialization: Empirical Evidence from Jordan" assert that there is no significant relationship between audit report lag and audit tenure. Additionally, industry specializations of auditors will not influence on the relation between audit report lag and audit tenure in Jordan.

Domestic Studies

As mentioned before, domestic studies have not yet addressed the interactions among all of the three factors, auditor industry expertise, ARL, and auditor tenure, at the same time. As such, a number of related studies to the mentioned relations are referred.

In their research entitled as "An Investigation on the Effect of Audit Firm Rotation on Audit Report Quality for Listed Firms in Tehran Stock Exchange", Yegane and Jaafari (2010) studied 167 listed firms during 2001-2003 and found that, audit firm rotation may not contribute to enhanced audit report quality.

Investigating the association of auditor quality with accruals reliability within 2001-2007, Nahr, Jabbarzade, and Yaaghobpoor (2010) concluded that, compared to the firms audited by lower quality auditors, the firms audited by higher quality auditors enjoy higher accruals reliability factor, meaning they have high accruals reliability.

In their paper entitled as "Information Inequality: Evidences from the Association of Auditor Tenure with Auditor Industry Expertise" wherein data from 2006-2010 period was studied, Shirinbakhsh, Arefmanesh and Bazrafshan (2013) figured out that, auditor industry expertise and lengthened auditor tenure may contribute into reduced information inequality. On the other hand, they further found that, the relationship between auditor tenure and information inequality may not be influenced by whether an auditor of industry expertise or one without such an expertise is chosen.

Ebrahimi Kordlar and Rahmati (2013) published a paper entitled as "Investigation of How Audit Firm Size, Tenure, and Industry Expertise Are Related to Stock Liquidity", where they studied data from 102 firms during 2006-2010. The results indicated that audit firm size and audit firm tenure are positively related to stock liquidity. However, they found no significant relationship between auditor industry expertise and stock liquidity.

Alavi Tabari and Arefmanesh (2013) studied the association of auditor industry expertise with ARL. Their findings indicated shorter ARLs for the firms audited by auditors of corresponding industry expertise.

Research Methodology

Research Hypotheses

Based on the extant theoretical foundations, the research hypotheses are established as follows:

H1. Auditor tenure is negatively related to ARL.

H2. Auditor industry expertise may attenuate the association of auditor tenure and ARL.

Research Method

In terms of its objective, this is an applied research, while it can be classified under descriptive-correlative researches when it comes to its origin and methodology. Research data were collected from financial statements of selected firms via using Rah-Avard Novin Software. Once finished with calculating descriptive statistics, the research regression models were fitted and then analyzed. All statistical tests were undertaken utilizing EViews 8 Software.

Statistical Population, Sampling Method, and Sample Size

The period considered in this research was 2010-2014. Statistical population of this research encompassed all listed firms in Tehran Stock Exchange (TSE). Rejection sampling approach was followed in the present research, wherein the firms of the following four criteria were considered:

- The firm should be actively present in TSE during the researched period.
- The firm may not be classified under either of insurance firms, investment firms, banks, or leasing companies.
- The firm may have its year end on March 20th.
- The firm should have its financial data available for the research period.

Finished with rejecting the firms failing to meet the above criteria, of total listed firms on TSE, we were left with a sample of 141 firms within 25 industries, so that their data for the five-year period of 2010-2014 (including 705 firm-year observations) were employed to undertake the research.

Research Models and Declaration of Variables

Panel data methodology was used for data analysis, while ordinary least squares (OLS) regression method was employed to test the research hypotheses. Following the approach used by, Habib and

Bhaiyan (2011) and Dao and Pham (2014), we used the following regression model moderated based on Iran situations to test the relationship between auditor tenure and ARL, and also the adjusting effect of industry expertise, as a variable, on this relationship:

$$ARL = \alpha_0 + \alpha_1 STEN + \alpha_2 SPEC * STEN \\ + \alpha_3 lTEN + \alpha_4 SPEC * lTEN + \alpha_5 ROA \qquad (1) \\ + \alpha_6 LEVERAGE + \alpha_7 LOSS + \alpha_8 BIG + \alpha_9 SIZE + \varepsilon$$

where:
- ARL, referring to the number of calendar days from fiscal year end till the audit reporting date, it is taken as the dependent variable in this research.
- SPEC refers to auditor industry expertise and is measured via the market index.
- STEN refers to auditor tenure; its value is set to 1 if the auditor works with a client for 2, 3, or 4 years in a row, and it is set to zero otherwise.
- LTEN is the long-term tenure; it is set to 1 if an auditor restarts working with the same client after the two-year statutory lag time; otherwise, it will be set to 0.
- SPEC*STEN is used to measure the interaction between an auditor's industry expertise and tenure, it is calculated by multiplying the auditor's industry expertise by long-term tenure.
- SPEC*long is used to measure the interaction between an auditor's industry expertise and tenure, it is calculated by multiplying the auditor's industry expertise by long-term tenure.
- LEVERAGE refers to the financial leverage obtained by dividing debit ratio by total assets.
- LOSS will be set to 1, provided the firm reports some loss, and 0, otherwise.
- BIG's value will be set to 1, if financial statements are audited by the audit organization, and 0, otherwise.
- SIZE refers to the size of the firm; measured at the logarithm of total assets.

- ROA is the return on assets, determined by dividing net profit by book value of assets.

Low-performance firms are expected to exhibit longer ARLs (Lee et al., 2009). As such, loss-making firms and those of high values of leverage are supposed to exhibit longer ARLs; furthermore, the higher the ROA is, the shorter the ARL would be. Along the same line of reasoning, Ashton et al. (1989) found that the smaller the firm is, the longer ARL is likely to exhibit, and vice versa. Habib and Bhaiyan (2011) attributed this to the fact that, larger firms put more pressure on their auditors towards preparing audit reports on time, so that such auditors tend to accomplish the task within a shorter period of time. In addition, as larger firms enjoy tighter internal control arrangements, as compared to smaller firms, the auditor can accomplish his/her task some time sooner. Furthermore, audit operations undertaken by audit organization are supposed to be associated with reduced ARLs.

Results and Discussion

Aiming at investigating the relation between audit tenure and ARL along with the effect that measured audit quality may pose on this relation via auditor industry expertise, the present research considers possible effective factors on ARL. Studied for this purpose is a sample of 141 firms operating in 25 industries, making a total of 596 observations.

As shown in Table 1, the corresponding audit reports to the sampled firms were reported at an average ARL of 77 days. Comparing this average ARL to the one obtained in a research on the effect of auditor industry expertise during 2007-2011 (97 days), it is evident that, as time passes since the adoption of TSE Guidelines, auditors tend to present their reports at shorter ARLs (Barzide & Maadanchiha, 2014). This is while the minimum and maximum observed ARLs were 111 and 36 days, respectively. On the other hand, the median indicates that about half of audit reports have been prepared at less than 3 months of ARL. Furthermore, an average auditor industry expertise of 14% is reported which is far less than the corresponding value to the previously investigated period of 2010-

2011 (about 64%). Indeed, such a low average industry expertise can be attributed to the fact that, during recent years, auditors have tended to undertake a variety of distinct audit activities, so that it was practically impossible to achieve a great deal of expertise. Accordingly, such figure can be an indication of low quality of recent auditors. On the other hand, the results of multiplying auditor industry expertise by short-term and long-term tenure were found to be 5% and 6%, respectively, which show that, for the sample under study, representing the quality of auditor, auditor industry expertise had equally adjusted the short-term and long-term tenures. Based on the results of descriptive statistics, one can find that about half of the firms have been audited by the audit organization, while half of the firms have established short audit tenures with the other half having long audit tenures. Furthermore, half of the companies have reported a deal of loss for the years under investigation.

Table 1. Descriptive Statistics

correlation / probability	LAG	BIG	LEV	LONGTEN	LOSS	ROA	SIZE	SPEC	SPECLONG	SPECSTEN	STEN
LAG-TRM	1										
	….										
BIG	0.005	1									
	0.895	…..									
LEV	-0.12	-0.022	1								
	0.003	0.588	…								
LONGTEN	0.096	0.501	0.1	1							
	0.017	0.000	0.01	….							
LOSS	0.203	0.046	-0.125	0.04	1						
	0.000	0.25	0.002	0.315	….						
ROA	-0.29	-0.002	-0.203	-0.095	-0.45	1					
	0.000	0.968	0.000	0.018	0.000	0.000					
SIZE	-0.11	0.231	-0.014	0.092	-0.09	0.2	1				
	0.009	0.000	0.72	0.022	0.019	0.000	….				
SPEC	0.05	0.348	0.047	0.171	0.016	-0.04	0.178	1			
	0.213	0.000	0.24	0.000	0.698	0.25	0.000	….			
SPECLONG	0.026	0.586	0.012	0.581	0.11	-0.12	0.281	0.571	1		
	0.521	0.000	0.768	0.000	0.006	0.01	0	0.000	….		
SPECSTEN	0.052	0.586	0.071	-0.2	-0.05	0.01	-0.08	0.597	-0.108	1	
	0.192	0.000	0.078	0.000	0.192	0.86	0.246	0.000	0.007	…	
STEN	0.01	-0.29	-0.113	-0.513	0.003	0.024	-0.07	-0.07	-0.314	0.387	1
	0.8	0	0.005	0	0.939	0.55	0.066	0.113	0	0	0

The Results in Table 2 indicate that all the independent and dependent variables in unit root test of Levin, Lin and Chu (2002) are stable at 5% level of significance. This means that the mean and variance of the variables over the time and the covariance of variables in different years have been constant. As a result, the investigated companies had not the structural changes and the use of these variables does not result in false regression model.

Table 2. Test stability

Research variables	Level of significance	Test statistic
Asset	0	-35.4162
SPEC	0	-199.791
ROA	0	-39.7122
Loss	0.0002	-3.49901
Leverage	0	-12693.30
Lten	0	-5.80026
Sten	0	-10.3129
Tenure	0	-23.1619
LAG	0	-29.6490
spec*long	0	-27.1316
spec*sten	0	-17.5173
BIG	0.0001	-3.86606
Size	0.0001	-40.0266

According to Table 3, it is evident that neither collinearity nor correlation exists between independent variables, which is also observable from the variance inflation factor (VIF) reported in the regression results table. On the other hand, the correlation coefficient results indicate a negligible positive association between ARL and long-term audit tenure.

In order to investigate the research main objective, the regression model presented in the preceding sections was used. For the assessment of this model, first, Chaw test was used to investigate the consistency of effects. As reported in Table 3, the results indicated that the assessed model was significantly of panel form at a p-value of less than 0.01 (99% level of confidence). In addition, according to the results of Hausman test, the null hypothesis of randomness of the effects was rejected at a p-value of less than 0.01, so that the model was assessed with consistent effects.

Table 3. Correlation coefficient

	Mean	Median	Maximum	Minimum	Std.Dev	Skewness	Kurtosis	Sum	Sum Sq. Dev	Observation
STEN	0.442	0.000	1.000	0.000	0.497	0.229	1.052	264	147.000	596
SPECLONG	0.057	0.000	1.000	0.000	0.168	4.181	21.310	34.100	16.830	596
SPECLONG	0.060	0.000	0.794	0.000	0.160	3.219	13.052	36.059	15.140	596
SPEC	0.143	0.040	1.000	0.000	0.226	2.217	7.421	85.310	30.470	596
SIZE	5.947	5.911	7.731	4.356	0.556	0.340	3.213	3544	183	596
ROA	10.343	7.224	63.134	-36.790	13.256	0.839	5.149	6164	104564	596
LONGTEN	0.302	0.000	1.000	0.000	0.450	0.862	1.743	180	125.630	596
LOSS	0.098	0.000	1.000	0.000	0.298	2.685	8.211	59	53.159	596
LEV	1.607	0.670	36.340	-17.180	4.224	4.208	26.920	957.850	10617.920	596
BIG	0.219	0.000	1.000	0.000	0.414	1.353	2.831	131	102	596
LAG-TRM	77.410	81.000	111.000	36.000	23.000	-0.176	1.586	46142	319565.000	596

Table 4. Panel tests

Model Test	F-statistics	p-value
Chaw test	9.4238	0.0000
Hausman test	39.687	0.0000

Table 5. The results of hypothesis testing

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BIG	7.757139	3.44265	2.253246	0.0247
LEV	-0.05865	0.178062	-0.32936	0.742
LONGTEN	2.968652	2.238693	1.326065	0.1855
LOSS	0.318853	2.728221	0.116872	0.907
ROA	-0.07692	0.079172	-0.9716	0.3318
SIZE	1.319004	5.767304	0.228704	0.8192
SPEC	-7.62726	8.52606	-0.89458	0.3715
SPECLONG	-3.68176	9.707502	-0.37927	0.7047
SPECSTEN	-1.30055	6.415051	-0.20273	0.8394
STEN	1.426227	1.538495	0.927027	0.3544
C	68.88261	34.32859	2.006567	0.0454
R-squared	0.78205	Mean dependent var	77.69565	
Adjusted R-squared	0.710024	S.D. dependent var	23.21427	
S.E. of regression	12.50075	Akaike info criterion	8.101504	
Sum squared resid	72821.25	Schwarz criterion	9.207553	
Log likelihood	-2360.52	Hannan-Quinn criter.	8.531401	
F-statistic	10.85784	Durbin-Watson stat	2.129826	
Prob (F-statistic)	0			

According to the results reported in Table 5, the model was evident to be significant at 99% of confidence, and the investigated variables explained about 86% of variations in ARL. With a value of about 2, Durbin-Watson statistic indicated no autocorrelation within the error element. Furthermore, VIF was found to be less than 10 for all of the variables, meaning no collinearity was observed among different variables. As shown in the plot of residuals in Figure 2, error element distribution was seen to be normal at 22% probability.
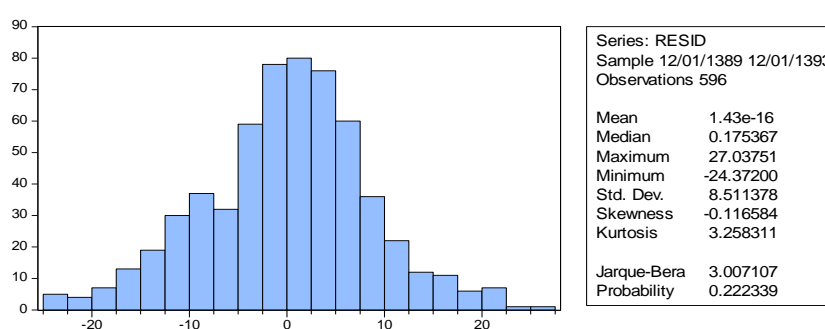

Series: RESID	
Sample 12/01/1389 12/01/1393	
Observations 596	
Mean	1.43e-16
Median	0.175367
Maximum	27.03751
Minimum	-24.37200
Std. Dev.	8.511378
Skewness	-0.116584
Kurtosis	3.258311
Jarque-Bera	3.007107
Probability	0.222339

Fig. 2. Error element distribution

Model assessment results indicated that, at a 5% level of significance, no significant relation exists between either of short-term or long-term tenures and ARL. This was in agreement with the results of some of the relatively similar previous researches. Yegane and Jaafari (2010) also found that, four-year regular mandatory rotation of audit institutions may not have any significant contributions to enhanced audit quality. However, it should be noted that the mentioned research as well as most of other researches undertaken on this topic, have studied time intervals before the adoption of mandatory rotation of auditor rotation act. The reality is that, prior to the adoption of such act, most of audit institutions had established long-term cooperation with their clients. Furthermore, the results of another research on the relation of tenure and conservatism during 2004-2011, showed that, neither short-term nor long-term tenures may be significantly related to conservatism (Khajavai & Hosseini, 2014). However, these results were against those of Dao and Pham's (2014) indicating a positive relationship between short-term tenure and ARL.

These are while no significant relationship has been found in the present research as well. Therefore, the first hypothesis that auditor tenure is negatively related to ARL is rejected.

In addition, auditor industry expertise and its adjusting effect on the relation of short-term and long-term tenures to ARL were found to be not significant at 5% level of significance. That is to say, the second hypothesis that auditor industry expertise may attenuate the association of auditor tenure and ARL was also rejected. This is in agreement with the findings of some domestic researches wherein auditor industry expertise represented audit quality. For instance, in a research investigating the period of 2006-2010, auditor industry expertise was reported to pose no significant effect on stock liquidity. Furthermore, Shirinbakhsh, Arefmanesh and Bazrafshan (2013) found that the relationship between auditor tenure and information inequality may not be influenced by whether an auditor of industry expertise or one without such an expertise is chosen. This is while theoretical researches have suggested auditor industry expertise and tenure may contribute to enhanced audit quality which consequently brings about enhanced quality of disclosed information while reducing information inequality. This was further in agreement with the results of Barzide and Maadanchiha (2014) indicating no significant relationship between auditor industry expertise and ARL. On the other hand, Dao and Pham (2014) concluded that an auditor of industry expertise may adjust the negative association of short tenure with ARL.

Discussion and Conclusion

Aiming at investigating the association between auditor tenure and audit report lag, and studying the adjusting effect of auditor industry expertise as well, the present research studied observations from 141 firms operating within 25 industries during 2010-2014. Seeking for a definition for auditor tenure, we considered mandatory rotation act based on Note 2 under Article 10 in the instructions for trusted audit firms by Securities and Exchange Organization (SEO), passed by Supreme Council of Securities and Exchange on July 29th, 1989. Accordingly, auditor-client relationships of 2 to 4 years were treated

as short tenures, while the tenure was treated as a long one provided the auditor restarts working with the same client after the two-year statutory lag time. Furthermore, in order to have a measure of auditor industry expertise, market share approach was followed.

The results indicated no significant relationships between ARL and neither short-term nor long-term auditor tenure. Indeed, the first hypothesis was rejected at 5% level of significance. That is to say, based on the first theory on auditor tenure explained in the preceding sections, as it decreases auditor independence, a long tenure provides a basis for reduced audit quality leading to further ARL. In fact, such a decrease in the independence of auditors may lead them to lose their motivations and see their objectives faded.

Also, according to mandatory auditor rotation act, they are forced to discontinue their line of cooperation with the same client after a maximum of four years in a row, for at least two years. Therefore, based on the definition provided for long-term tenure in the present paper (following a four-year in a row cooperation, the auditor restarts working with the same client after the two-year statutory lag time) discontinuities in the interactions between auditor and client may result in unprecedented outcomes in terms of the association of auditor tenure and ARL. Indeed, the statutory lag may attenuate the benefits expected from a long-term tenure, so that the tenure may not be long enough to be able to reduce ARL. In this scope, considering the mandatory auditor rotation act-related experiences gained by other countries may help understand the situation. For example, European Commission has recommended auditor rotation, not only for listed firms in stock exchanges, but also for all public firms, after a maximum of seven years followed by a statutory lag of at least two years for the preceding audit partner and client to rejoin. In Britain, effective since December 15th, 2009, revised version of standard professional practices released by IAASB, mandated the rotation of audit partner while extending the allowed tenure for another two years beyond the five-year tenure allowed in the preceding version. In United States, audit partner rotation was used to be undertaken on a seven-year basis. On the other hand, considering the need for further

time to be better introduced with the client operations, short auditor tenures are also not expected to generate audit reports of lower ARLs.

Furthermore, as expressed by Sarbanes-Oxley Act, surveillance of financial reporting processes as well as independent auditor hire/fire arrangements are assigned to independent audit committees and mandatory auditor rotation may prevent the audit committee from choosing and maintaining the most qualified audit institution to undertake all audit tasks. Because, as the authority in charge of selecting and supervising audit institutions, the audit committee should be able to utilize its judgment power to determine the most suited institution to audit a given firm. In the course of such a judgment, audit committee may consider numerous factors including audit institution tenure and other important factors such as competence and reliability of the audit institution and its deal of experience within the scope of the corresponding industry, and rationality of the audit plan. As such, audit committee may possess the best position when it comes to evaluation of audit quality and determination of the auditor independence and impartiality; however, even if the committee recognizes the rehire of an audit institution as the best practice for a given firm, mandatory auditor institution rotation will confine it when it comes to select an audit firm or extend the tenure, so that the highest audit quality via the most efficient and effective approach is not likely to be achieved. The situation will be intensified provided either the firm operates in a very specialized industry wherein a very limited number of audit firms may possess the required expertise, or the firm is located in such a particular geographic location wherein a very limited number of audit institutions are available.

In addition, auditor industry expertise and its adjusting effect on the relation of short-term and long-term tenures to ARL were found to be not significant at 5% level of significance. That is to say, the second hypothesis that auditor industry expertise may attenuate the association of auditor tenure and ARL, was also rejected. As demonstrated by descriptive statistics, for the years following the adoption of mandatory auditor rotation in Iran, average auditor

industry expertise has been 14% with a positive statistical skewness, with more than half of the auditors been of just about 5% of expertise in the corresponding industries. From these statistics, one may conclude that, within the recent years, mandatory rotation of auditors has prevented auditors from attaining expertise in terms of the investigated industries. In fact, the four-year period has not been enough for the auditors to gain expert knowledge on a particular industrial activity, so as to add to their creditability of their services. This is while theoretical foundations indicate that, auditor industry expertise can attenuate positive and negative effects of long-term and short-term auditor tenures, respectively.

Recommendations

Failure to find a significant relationship between short-term tenure and ARL arises a question: What has been the basis to determine the so-called four-year period for mandatory rotation of auditors? In fact, as it was also suggested by previous studies in this regard, the figure in this act may need a revision, as it is set to figures higher than 4 in other countries. Furthermore, there are numerous considerations to be taken into account when revising the audit rotation act, among which one can refer to costly nature of mandatory rotation of auditors, the fact that such rotation, may limit the industry-specific fundamental knowledge, experience and expertise of the auditor and is likely to attenuate the role of audit committee.

In addition to the necessity of revising the number of years in this act as mentioned before, it is recommended to further highlight the role of audit committee, so that this committee takes part, more actively, in auditor selection process, because to the same extent as the role of this committee in the process of selecting competent and expert auditors fades, legal requirements will come into play, so that the obtained outcomes may not be adequately good.

According to the above considerations, SEO, as the responsible authority for setting standards and regulations in this scope, is required to ask for its professional members' opinions on these statutory limits.

Recommendations for Future Researches

It is recommended for future studies to consider symmetrical periods with respect to the year in which the revised act is adopted (2007) and investigate auditor tenure during the two periods, before and after the act, with the effects of high inflation rates during the recent years considered. Furthermore, in order to get results of higher validity, one can account for different characteristics of audit institutions such as their size.

On the other hand, it is suggested for future studies to calculate and analyze auditor industry expertise via other available ratios. Furthermore, instead of total assets, one can use total sales when calculating the corresponding ratio via market share approach. It is also suggested to consider other factors than auditor industry expertise when measuring the auditor quality. However, it should be noted that, there are many factors affecting ARL which are to be accounted for when generalizing the results of this research. Among other factors, one may refer to the availability of accurate data on the firms going concerned, audit fees against services other than crediting, and even incomplete information of audit fees against crediting services.

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