AN EMPIRICAL ANALYSIS OF AUDIT DELAY IN TURKEY

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ABSTRACT: The main purpose of this study is to examine the factors that affect delays in the signing of audit reports in Turkey. The audit delay is measured as a function of the number of days that elapse from the accounting period until the date when the audit report is signed. This study utilizes a sample of 508 firms listed on the Borsa Istanbul in 2013. The findings indicate that the companies that report net income, that have standard audit opinion release their audited financial statements earlier. Variables such as auditor firm and leverage show no significant relationship with audit delay.

Keywords: Audit Delay, Financial Reporting, Turkey

JEL Code: M42

Introduction

The objective of financial statements is to provide information about the entity that is useful to a wide range of users in decision making. In order to be useful for decision making, financial statements should be understandable, relevant, reliable, and comparable. Timeliness of financial statements is one of the important determinants of their relevance. Also many accountants, managers and financial analysts believe that timeliness is an important characteristic of financial statement.

Timely financial reporting is an essential ingredient for a well-functioning capital market. Undue delay in releasing financial statements increases uncertainty associated with investment decisions. The increase in the delay reduces the information content and relevancy of the information. Entities should balance the relative benefits of timely reporting with the reliability of information provided in the financial statements.

The main purpose of this study is to examine the factors that affect delays in the signing of audit reports in Turkey. We investigate the effects of factors such as company size, sign of income, audit opinion, auditor firm, and debt to equity ratio on timely financial reporting practices.

The remainder of this paper is organized as follows. In section 2, the regulatory framework in Turkey is described. In section 3 prior research on the audit delay is briefly discussed. In section 4, the research design and the methodology is described. Section 5 presents the results while section 6 is concludes the paper and contains limitations and provides directions for further research.

The Regulatory Framework in Turkey

The reporting obligations of Turkish listed companies relating to timeliness of annual financial statements are found in two regulatory sources issued by the Turkish parliament: (i) Turkish Commercial Code (TTK) and (ii) Law of Capital Market. The Turkish Commercial Code
was published in the Official Journal dated 14 February 2011 and numbered 6102. Turkish Commercial Code (clause 437) requires annual reports be prepared at least 15 days before the date of the annual general meeting. The communiqué “Financial Statements in the Capital Market” included in the Law of Capital Market is the other regulatory source that obliges companies to publish financial statements in a defined period of time. This communiqué was published in the Official Journal dated 13 June 2013 and numbered 28676 (SPK, 28676). According to communiqué enacted in 2013, companies that are listed on the stock-exchange must publish their separate audited financial statements within 60 days and consolidated audited financial statements within 70 days.

**Review of the Relevant Literature**

Timeliness requires that information should be made available to financial statement users as rapid as possible and it is a necessary condition to be satisfied if financial statements are to be useful. It has been argued that the shorter the time between the end of the accounting year and publication date, the more benefit can be derived from the audited annual reports. However, it is not possible to release annual reports unless it is certified as accurate by professional chartered accountant(s). One of the most material reasons for late publication of annual reports by public limited companies is that the accounts need to be audited before the release of financial statements. Time lag in financial report release and audit delay are intertwined and used interchangeably in financial reporting literature. As a result, in many cases audit delay has been studied together with actually dealt with timeliness (Hossain and Taylor, 1998).

The existing literature on timeliness and audit delay is very extensive. Most of these studies have been focused on the timeliness of corporate and audit reports. There are studies which empirically examined the relationship between the audit delay/timeliness and several company characteristics and audit related factors in the developed countries as well as in developing countries. These studies are carried out in the US, Australia, Canada, Spain, New Zealand, France, Greece, China, Bangladesh, India, Kuwait, Bahrain and Pakistan.

Mouna and Anis investigated the relationship between the timeliness and corporate governance for companies listed on the Tunisian stock exchange during 2009. They found that the ownership concentration, the CEO’s duality function, and good news have some impact on timeliness (Mouna and Anis, 2013).

Sallem et al. examined the audit lag in Kelantan. According to their findings 13.28% of financial reports were completed within 5 months while 2.34% took more than 11 months. The results of their study increase the understanding of how Kelantan local authorities manage to prepare their financial report in timely manner (Sallem et al., 2012).

Al-Ghanem and Mohamed Hegazy analyzed the factors that affect audit delays in Kuwait in 2006 and 2007. Their results showed that only company size is negatively correlated with audit delay. Their other variables industry, leverage, percentage change in earning per share, type of auditors and liquidity show no significant correlation with audit delay (Al-Ghanem and Hegazy, 2011).

Khasharmeh and Aljifri examined the determinants of audit delay in the UAE and Bahrain for 2004. According to their findings, profitability, debt ratio, sector type and dividend payout ratio have a strong influence on the timeliness of annual reports, audit type, firm size, and price earnings ratio have a weak effect on the audit delay (Khasharmeh and Aljifri, 2010).

Bonson-Ponte et al. analyzed the factors that determine delays in the signing of audit reports on the Spanish continuous market for the period from the year 2002 to the year 2005. They found that classification to sectors that are subject to regulatory pressure (financial and energy sector) and the size of company affect the audit delay. Variables such as audit firm, qualifications or regulatory
change show no significant relationship with audit delay in Spain. The results show that the companies of larger relative size sign the audit report in fewer days. Also the companies classified to sectors that are regulated internally and are subject to regulatory pressures also sign the audit report before those companies that belong to sectors that are not regulated (Bonson-Ponte et al., 2008).

Owusu-Ansah and Leventis investigated the factors that affect timely annual financial reporting on the Athens Stock Exchange. The results indicate that large companies, service companies and companies audited by the former Big-5 audit firms have shorter final reporting lead-time. According to the results companies in the construction sector, companies whose audit reports were qualified and companies that had a greater proportion of their equity shares directly and indirectly held by insiders do not promptly release their audited financial statements (Owusu-Ansah and Leventis, 2006).

Ahmad and Kamarudin investigated the determinants of audit delay in the Kuala Lumpur Stock Exchange during the period 1996-2000. The results suggests that the audit delay is significantly longer for companies classified as non-financial industry, receiving other than unqualified audit opinions, incurring losses and having higher risk. Financial companies and companies audited by the Big-5 tend to have a shorter audit delay (Ahmad and Kamarudin, 2003).

Owusu-Ansah analyzed the timeliness of annual reports on the Zimbabwe Stock Exchange in 1994. The results of the analysis indicate that 98% of the companies in the sample reported promptly to the public. Also the results show that company size, profitability and company age as statistically significant explanators of the differences in the timeliness of annual reports in Zimbabwe (Owusu-Ansah, 2000).

Haw and Wu examined the relation between firm performance and the timing of annual report releases by listed Chinese firms for the period from the year 1994 to the year 1997. They found that good news firms release their annual reports earlier than bad news firms, and loss firms release their annual reports the latest (Haw and Wu, 2000).

Hossain and Taylor examined the relationship between the audit delay and several company characteristics in Pakistan in 1993. The corporate attributes examined in this study are size of the company, debt-equity ratio, profitability, subsidiaries of multinational companies, audit fee, industry type and audit firm size. The results showed that audit delay was significantly related to the subsidiaries of multinational companies only (Hossain and Taylor, 1998).

Carslaw and Kaplan analyzed the determinants of audit delay in New Zealand for the period from the year 1987 to the year 1988. The results suggested that both company size and sign of income significantly affect audit delay far the two years examined. According to the results, there was a negative association between the audit delay and company size and also the audit delay and the sign of income (Carslaw and Kaplan, 1991).

Ashton et al. examined the determinants of audit delay on the Toronto Stock Exchange from 1977 to 1982. The results indicate that company size is inversely related to audit delay. They also indicate that financial service companies, as well as companies with year-ends in their “busy season” have shorter delays. And also Big-9 auditors are consistently associated with shorter audit delays than are smaller auditing firms (Ashton et al., 1989).

Ashton et al. analyzed the determinants of audit delay in USA in 1982. They found that audit delay is significantly longer for companies that receive qualified audit opinions, are in the industrial as opposed to financial industry classification, are not publicly traded and have a fiscal year-end other than December, have weaker internal controls, employ less complex data-processing technology, and have a greater relative amount of audit work performed after year-end (Ashton et al., 1987).
Research Methodology
In this part of the study, the aim of the research is explained, the process of sample selection and data collection is defined, the hypotheses of the study are drawn, and finally the estimated regression model is designed.

Aim of the Research
The aim of this research is to investigate the effects of company size, sign of income, leverage, audit opinion, and auditor firm on audit delay for companies listed on the Borsa Istanbul (BIST).

Sample Selection and Data Collection
The sample covers the listed Turkish companies for the year 2013. Because of the need to obtain information from annual reports, the study was restricted to public companies. There were 552 companies listed on the BIST as at 31 December 2013. We chose our sample on the basis of the following criteria. First, we excluded 6 companies having financial year-end other than 31 December because, as suggested in the literature, the month of financial year-end influences timely reporting behavior. Second 38 companies were excluded because of lack of data. The final sample consists of 508 companies, representing about 92% of all companies listed on the market. Table 1 reports the sampling design. The data for each of the 508 sample companies were taken from their annual reports.

Table 1 Summary of Sample Criteria

<table>
<thead>
<tr>
<th>Description</th>
<th>Number of Listed Companies</th>
<th>Percentage of Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Companies listed on BIST as of 31 December 2013</td>
<td>552</td>
<td>100</td>
</tr>
<tr>
<td>Deduct:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Companies with financial year-end other than December 31</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Companies lacking some data of interest</td>
<td>38</td>
<td>7</td>
</tr>
<tr>
<td>Companies with usable data (the sample size)</td>
<td>508</td>
<td>92</td>
</tr>
</tbody>
</table>

Hypotheses
To better understand how Turkish companies respond to the timely reporting requirements, it is necessary to relate their timely reporting practices to certain factors. This study investigates some of these factors that are relevant to the socio-economic conditions in Turkey and for which data were available. The factors include the company size (SIZE), the audit firm (AUDITOR), audit opinion (OPINION), sign of income (INCOME), and debt to equity ratio (LEVERAGE). Therefore, the hypotheses of this study are drawn below;

H1: Audit delay is a function of a company’s size.

Company size has been the variable studied most frequently by many studies and measured by the year-end total assets of each company as in prior studies (Carslaw and Kaplan, 1991, Ashton et al., 1989, Ashton et al., 1987, Courtis, 1976, Gilling, 1977, Newton and Ashton, 1989). Most prior studies found a negative association between the audit delay/timeliness and the company size. Both positive and negative relationship can be found between the company size and the audit lag. Usually, large companies are timely reporters for several reasons. First, large companies have more resources, more accounting staff, and sophisticated accounting information systems that result in more timely annual reports. Second, large companies tend to have strong internal control systems with the consequence that auditors spend less time in conducting control tests. Delays are, therefore
minimized and this enables the companies to report promptly to the public. Third, large companies tend to be followed by a relatively large number of financial analysts who usually rely on timely release of annual reports to confirm and revise their expectations of companies’ present and future economic prospects. And also management may want to reduce the probability of increased regulative control over their reporting activities. (Larger firms have taken less time to report, which is expected because they are more in the public eye). On contrary, it can be argued that large companies publish their financial statements later than the small ones since the financial transactions in large companies are more complex. In other words, there may be a positive relationship between the size of the company and the audit lag.

**H2:** Audit delay is a function of an auditor.

Auditors are classified into the Big 4 and the non-Big 4. The Big 4 refers to Pricewaterhouse Coopers, KPMG, Ernst&Young and Deloitte&Touche. The Big 4 audit firms are assigned 0 and the others are assigned 1. Most of the prior research about this subject (Hossain and Taylor, 1998, Bonson Ponte et al., 2008, Ansah and Leventis, 2006, Ahmad and Kamarudin, 2003, Ansah, 2000, Haw et al., 2000, Carslaw and Kaplan, 1991) investigates whether audited by Big audit firms have any positive effect on the audit lag. It is expected that the audit lag for the Big 4 firms will be lesser than the audit lag for the smaller firms. This is because the former are large firms and thus it is assumed that they are able to audit more efficiently and have greater flexibility in scheduling the audits so that it can be completed on time. However, a negative effect can also be expected since the numbers of Big four clients are much more than small auditing firms. In other words, it can be expected that companies that are audited by big four publish their financial statements later than other companies that are audited by small audit firms. Larger audit firms have larger clients, and the latter are more likely to have “on-going” audits than small companies; or that the larger auditing firms are more efficient. Big 4 firms, because they are larger firms, might be able to audit more efficiently, and have greater flexibility in scheduling to complete audits on a timely basis.

**H3:** Audit delay is a function of sign of income.

Sign of income is selected as a determinant of timely reporting in most of the studies. In this study, the companies reporting an income will be (Hossain and Taylor, 1998, Ansah and Leventis, 2006, Ahmad and Kamarudin, 2003, Carslaw and Kaplan, 1991, Ashton et al., 1987, Ashton et al., 1989, Schoderbek et al., 1993) assigned 0 whereas the remaining will be assigned 1. The companies reporting an income for the period are expected to have a shorter audit lag compared to the ones reporting a loss. Thus, a negative association is expected between the audit lag and the companies reporting an income. Loss announcements take longer to reach to the public than income announcements. It is suggested that earnings announcements containing good news might be advanced and, in particular, that earnings announcements containing bad news tend to be delayed (Givoly and Palmon, 1982).

**H4:** Audit delay is a function of audit opinion.

The previous studies suggested that the audit lag is an increasing function of the audit opinion (Bonson-Ponte et al., 2008, Ahmad and Kamarudin, 2003, Carslaw and Kaplan, 1991, Ashton et al., 1989, Ashton et al., 1987). The qualified audit opinion is viewed as bad news and thus slows down the reporting process. Companies not receiving standard audit opinions are expected to have a longer audit lag compared to the ones receiving a standard (clean) report. In this study, a standard (unqualified) audit opinion will be assigned 0, and the rest are assigned 1.

**H5:** Audit delay is a function of debt to leverage

It has been argued that increasing the amount of debt a firm uses, will put pressure on the firm to provide its creditors with audited financial reports more quickly (Abdulla, 1996). Carslaw and Kaplan, 1991 and Abdulla, 1996 found no significant association between the debt-equity ratio
and audit delay. Companies having more debt in their financial structure can be argued to start and complete the audit quicker than those firm with less or no debt.

**Model Specification**

As in prior studies, we define “audit lag” as the number of days between a company’s financial year-end and the day of the audit report. If a company releases its financial statements within regulatory deadline, then, it cannot be said that the company has delayed in releasing its financial statements. Therefore, we describe the number of days that elapses between a company’s financial year-end and the date of audit report as its audit lag. We computed the audit delay for each company by counting the number of days that elapsed between its financial year-end and the date of the audit report.

To investigate the influence of the selected factors on audit lag in our sample, we estimated the following cross-sectional regression model. Table 2 shows the explanation of the explanatory independent variables.

\[
\text{AUDITLAG} = b_0 + b_1 \text{SIZE} + b_2 \text{AUDITOR} + b_3 \text{INCOME} + b_4 \text{OPINION} + b_5 \text{LEVERAGE} + e
\]

**Table 2 Definitions of Independent Variables**

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE</td>
<td>Total assets of company</td>
</tr>
<tr>
<td>AUDITOR</td>
<td>Type of audit firm represented by a dummy variable: “Big 4 audit firms” assigned a 0 otherwise 1.</td>
</tr>
<tr>
<td>INCOME</td>
<td>Sign of current year income represented by a dummy variable: companies with “positive net income” assigned a 0, otherwise 1.</td>
</tr>
<tr>
<td>OPINION</td>
<td>Type of audit opinion represented by a dummy variable: “standard opinion” assigned a 0, otherwise 1.</td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>Total debt / Equity</td>
</tr>
</tbody>
</table>

**Summary Statistics**

Table 3 presents summary statistics of the variables used in this study. As is evident, it takes BIST listed companies approximately 63 days, on average, to report to the public after the end of their financial year. The standard deviation for the AUDITLAG variable is 13 days, suggesting considerable variability in timely reporting by the companies. It is found that 55.70% of the sample was audited by big four audit firms and 86.61% of the companies audit report was standard. 66.73% of the companies report net income for the year 2013.

**Table 3- Summary Statistics**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Percentage*</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUDITLAG</td>
<td>62.98</td>
<td>12.89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>18.74</td>
<td>2.30</td>
<td></td>
<td></td>
<td>55.70</td>
</tr>
<tr>
<td>AUDITOR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>66.73</td>
</tr>
<tr>
<td>INCOME</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4 shows the results from comparison of means between the dichotomous variables. From the table, it can be seen that on average, the audit delay increases with the presence of a loss, qualified audit opinion and by small audit firms. As for AUDITOR, the mean delay for small audit firms is higher by about 3 days than those for big 4 audit firms with a mean delay of only 62 days. Regarding INCOME, companies suffering from losses seem to have a longer mean delay than those gaining a positive net income. Companies receiving a qualified audit opinion also seem to take on average of 5 days more than those receiving a clean audit report.

### Table 4- Mean Differences for Dichotomous Variables

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Big 4 Audit Firms</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUDITLAG (Mean)</td>
<td>62</td>
<td>65</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>13.43</td>
<td>12.01</td>
</tr>
<tr>
<td>Standard Opinion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUDITLAG (Mean)</td>
<td>62</td>
<td>67</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>12.37</td>
<td>15.46</td>
</tr>
<tr>
<td>Net Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUDITLAG (Mean)</td>
<td>61</td>
<td>67</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>12.01</td>
<td>13.85</td>
</tr>
</tbody>
</table>

**Regression Analysis**

Table 5 above presents the multiple regression results for the sample. As seen in the table, the F-statistic of model is significantly different from zero, indicating that a subset of the independent variables does explain the variation in AUDITLAG about its mean. The value of the $R^2$ indicates that only 7% of the variation in AUDITLAG is explained by the model. The coefficient estimates for SIZE, INCOME, OPINION are all statistically significant. Audit delay was positively associated with OPINION, INCOME and negatively associated with SIZE. This means that audit lag decreases with the presence of income and standard audit report. On the other hand, an increase in audit lag was observed with large firms. The AUDITOR coefficient is positive and also LEVERAGE coefficient is negative but statistically not significant.

### Table 5- Regression Model

<table>
<thead>
<tr>
<th>MODEL: AUDITLAG= $b_0+b_1\text{SIZE}+b_2\text{AUDITOR}+b_3\text{INCOME}+b_4\text{OPINION}+b_5\text{LEVERAGE}+\epsilon$</th>
<th>Coefficient</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTERCEPT</td>
<td>74.813</td>
<td>14.773</td>
</tr>
<tr>
<td>SIZE</td>
<td>-.749</td>
<td>-.928</td>
</tr>
<tr>
<td>AUDITOR</td>
<td>.908</td>
<td>.767</td>
</tr>
<tr>
<td>INCOME</td>
<td>4.170</td>
<td>3.416</td>
</tr>
<tr>
<td>OPINION</td>
<td>3.407</td>
<td>2.068</td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>-.001</td>
<td>-1.058</td>
</tr>
</tbody>
</table>
Summary of the Regression Output

Sample Size 508
F Ratio 7.821
Significant F 0.000
\( R^2 \) 0.072
Adjusted \( R^2 \) 0.063

* significant at 0.05

It was also found that companies receiving a qualified audit opinion seem to suffer from a longer audit lag than those receiving a standard (clean) audit report. Logically, it can be argued that auditors need to spend considerable amount of time and effort in pursuing audit procedures to confirm the qualification or maybe possibly to avoid such qualification.

The other finding of this study is that companies that report net income for the period publish their financial statement 6 days earlier than other companies that report loss for the period. In addition, it is found that companies that have standard audit reports publish their financial statements 5 days earlier than other companies that have qualified or adverse opinions.

The nature and degree of multicollinearity among the explanatory factors and AUDITLAG were assessed. Table 6 presents the correlation matrix of the independent variables. Nevertheless, it seems that in this study, multicollinearity does not pose a problem in interpreting the regression results as the highest value of correlation is 0.28 represents the correlations between AUDITOR and SIZE.

<table>
<thead>
<tr>
<th>Variables</th>
<th>SIZE</th>
<th>AUDITOR</th>
<th>INCOME</th>
<th>OPINION</th>
<th>LEVERAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUDITOR</td>
<td>-0.281*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INCOME</td>
<td>-0.233*</td>
<td>0.186*</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPINION</td>
<td>-0.049</td>
<td>0.150*</td>
<td>0.078</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>0.049</td>
<td>-0.057</td>
<td>-0.024</td>
<td>0.041</td>
<td>1</td>
</tr>
</tbody>
</table>

* significant at 0.01

Conclusions, Limitations and Implications for Future Research

It is not only necessary that users have financial information which is relevant to their predictions and decisions; the information should also be current in nature rather than relating only to prior periods. The information used by investors and creditors should be current at the time of making the predictions and decisions. The accumulation and summarization of accounting information and its publication should be as rapid as possible to assure the availability of current information to the users. Timeliness is recognized as an important characteristic of accounting information by the accounting profession, the users of accounting information, and the regulatory agencies.

This paper investigates the effects of factors such as company size, sign of income, leverage, audit opinion, and auditor firm on timely financial reporting practices in a developing country, Turkey. For this objective, financial statements and audit reports of 508 listed companies were analyzed.

According to empirical results; 7% of the variation in the audit lag in our model is explained by variations in company size, auditor firm, sign of income, audit opinion, and leverage. The coefficient estimates for INCOME, OPINION and SIZE are all found statistically significant. The
LEVERAGE coefficient is found negative and AUDITOR coefficient is found positive but statistically not significant.

The findings indicate that the companies that report net income, have standard audit opinion release their financial statements earlier. The analysis provides strong support for the notion that the financial statements are delayed when a loss is reported or a qualified opinion is given. The possibility is that management delays the reporting of bad news by delaying the financial statement. According to results, it can be argued that investors should expect a loss or a qualified audit opinion for the period if the company does not release its financial statements early.

While these conclusions are consistent with prior studies, they should be considered in the light of these limitations. This study did not consider all relevant factors that might affect audit delay. And this study investigates the timely reporting behavior of BIST companies at a particular point in time. Future research may examine the same sample of companies over a period of time to ascertain the trend in their timely reporting behavior.

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