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## Timeliness of corporate reporting in developing economies: Evidence from Turkey

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**Abstract:** This paper empirically investigates the effects of both firm and audit - specific factors on the timeliness of financial reporting practices of firms listed on Borsa Istanbul using panel data methodology. This study employs a data set containing annual data from 150 non-financial Turkish listed companies in Borsa Istanbul between the years 2009 – 2014 to document their reporting behaviors. Descriptive analysis indicates that average reporting time is 69 days for the whole sample and 62 days and 74 days for individual and consolidated financial statements respectively. In line with prior studies, firm size, dividend per share, auditor type and good news (income), unsurprisingly, has a significant negative impact on timeliness behavior of sample firms. In addition, financial statement type (individual and consolidated financial statements) also has a significant effect on reporting time. On the other hand price to book ratio and leverage of firms have no significant impact as hypothesized. Examining the reporting behavior of emerging markets contribute to the literature through comparing with the developed countries and indicating the factors which have impact on timeliness. The outcomes of research also provide some insights to the interested parties and regulatory bodies to evaluate the preparation of financial statements in terms of timeliness.

**Keywords:** Timeliness of corporate reporting, Reporting delay, Emerging countries, Regulation, Borsa Istanbul

**JEL codes:** M40, M41, M49

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## 1. Introduction

Reporting is a way of companies' communication through divulging any financial or nonfinancial information with the annual reports to a wide range of users. In particular, financial statements play a major role for the parties with the different purposes in decision making. High-quality and useful accounting information require qualitative characteristics, such as the relevance of information, comparability, reliability and understandability. Timeliness is one of the main determinants of financial reporting quality and transparency of which attributed to the corporate governance principles. Timeliness is a crucial element of adequate disclosure and important characteristics of financial statements (Dyer & McHugh, 1975). Thus, timeliness of corporate financial reporting is a significant facet of effective communication associated with the other features of financial reporting.

Timely reporting mitigates the adverse effects of insider trading activities and aids to build trustworthy environment in capital markets. It is a known fact that companies in emerging countries are prone to disclose less information than developed ones. In the absence of strict regulations and transparency, information asymmetry comes out, and one effective way to impede these adverse impacts is to be in prompt about annual reports (Ashton *et al.*, 1989). Therefore, reporting on time is crucial to lessen the effect of poor conditions related to investor rights in emerging capital markets and inhibit the insider trading.

Timeliness has received much attention due to the number of institutional and foreign investors and investment funds increase. It has become a critical issue more than ever due to the changes in the economy, technology, expectations and business practices (Owusu-Ansah & Leventis, 2006). Hence, regulatory bodies (Capital Markets Board), laws (Turkish Commercial Code) or professionals preparing the financial statements place importance to the deadline times and reporting delays. Publication period of annual reports for either separate or consolidated financial statements are shortened for annual statements but remain same for interim periods in Turkish Commercial Code.

This paper discusses the determinants of reporting behavior of companies under the light of disclosure theories. Factors or motivations that affect publishing financial statements earlier or later within a regulatory deadline are explored in a detailed manner. This study aims to identify the period of the timing of issuance of financial statements listed on Borsa Istanbul and clarify the main factors on the timeliness of financial reporting. Examining the timeliness of reporting on Borsa Istanbul is an interesting issue for several reasons. First, BIST is an emerging market that is relatively less regulated and needs to be more institutionalized. Secondly, trading volume, foreign ownership, and companies that went public are increasing. Therefore, timeliness of financial reporting catches the attention of players in the

markets. Finally, to integrate to the Euro Zone and to comply with International Financial Reporting Standards (IFRS), timeliness examination for Borsa Istanbul has a vital importance. First motivation for studying the timeliness is policy based. Examining the factors which have impact on timeliness might aid to regulatory bodies and other. The outcome of the research would provide a valuable input to the interested parties. Timely reporting in emerging markets is of particular importance since the information asymmetry and reporting lag is much longer in comparison to developed countries. Therefore, analyzing Turkish capital markets in terms of timeliness will provide some insights to the preparers and users of financial statements.

The remainder of the paper is structured as follows. In the next section, the historical background and regulatory framework of timeliness are discussed. In section 3, the most relevant literature is. Next sections proceed with research design, empirical findings and conclusion.

## **2. Regulatory framework**

Law of Capital Market and Turkish Commercial Code are the regulatory sources for the reporting and these codes force the companies to publish their financial statement within a regulatory deadline. Turkish Commercial Code (Article 409) requires that shareholders should hold the general assembly within three months following the end of each financial year. Since balance sheet and meeting agenda of the company needs to be prepared three weeks before the assembly, publication time of financial reporting has been changed by Capital Markets Board. Communiqué on Principles of financial reporting which states the arrangements on financial reporting procedures published by Capital Markets Board of Turkey in the official gazette on 13.06.2013.

According to the Article 10 related to disclosure of financial reports expresses that firms which are not obliged to prepare consolidated financial statements have to report within 60 days and firms which are obliged to prepare consolidated financial statements have to report within 70 days following the end of their accounting periods. For the interim reports, 30 days and 40 days is given as a regulatory deadline for individual and consolidated financial statements respectively. Also, if the interim reports are the subject of the independent audit, ten extra days is added to the deadline. Additional time is dependent on the presence of valid reasons and applied by the application of the responsible manager from financial reporting committee or other committees.

Disclosing of financial statements needs to take place in the most reputable website of the firm for at least five years. According to the Capital Markets Board.

Communiqué on Principles of financial reporting, most reputable web-site term is used when a firm has more than one web-site. Since this study covers the period between 2009 and 2014, the mandatory deadline is different for the previous years for 2009, 2010, 2011 and 2012. According to the Communiqué published in 2003, individual and consolidated financial statements have to be published ten weeks and fourteen weeks of the financial year – end respectively. Therefore, this difference is handled in the empirical analysis and descriptive statistics separately. The deadlines for individual and consolidated financial statements are given chronologically below in Table 1.

**Table 1. Regulatory deadline for financial statements**

<b>Types of Financial Statements</b>	<b>Annual Period</b>		<b>Interim Period</b>	
	<b>Individual</b>	<b>Consolidated</b>	<b>Individual</b>	<b>Consolidated</b>
Since 2013	60 Days	70 Days	30 Days	40 Days
Before 2013	10 Weeks	14 Weeks	4 Weeks	6 Weeks

\* Weekly term has changed into daily term in Turkish Commercial Code (2013)

### **3. Literature review**

Studies on the timeliness of financial reporting mainly stress on two aspects of variables that are firm-specific factors measured directly from financial statements or corporate governance variables attained from annual reports or websites of companies.

Dyer and McHugh (1975) is the first study to try to examine the timeliness from the perspective of auditors and preparers of financial statements through using questionnaires for Australian firms. They subdivide the lags into four periods starting with auditor examination and ending with printing or publishing time to analyze the delays in a deeply manner. Firm size, profitability and financial year – end are the primary corporate based variables to measure the timeliness in reports.

Lawrence (1983) and Whittred and Zimmer (1984) document the relation between the financially distressed firms and reporting delays. According to the results, companies which are the candidates of bankruptcy issue their annual reports or auditor reports much later than the other companies. Atiase *et al.* (1989) discuss the issue of price reaction to the issuance of financial statements timing through controlling the firm size and bad news effect. They employ a multivariate model that

measures how reporting delay influences the price reactions in larger or smaller firms. They conclude that due to size effect, market reaction is limited for larger companies. On the other hand, reporting delay or early publishing has a significant impact on price reactions for smaller firms especially with bad news announcement. Soltani (2002) underlines the audit qualification and implies that audit reporting delays on individual reporting are more affected from the quality of auditor than consolidated annual reporting. This paper also finds the regulatory deadline 180 days superfluous at least for listed companies which caused encouraging results for French context.

Leventis and Weetman (2004) is a milestone study which applies an empirical model in Athens Stock Exchange for the year 1997 and emphasizes the delays in not only for financial statements but also for audit reports. This study combines the theories with the surrogate variables to explain timeliness of financial reporting with a different view. Trading volume, industry concentration ratio or gross plant property and equipment variables are some factors used in the timeliness of financial reporting for the first time to the best of our knowledge. Trading volume is used to prove that whether companies have higher trading volume publish their financial statements earlier to decrease information costs. Dogan *et al.* (2007) analyze the timeliness of reporting with an aspect of good news vs. bad news through calculating the return on asset and return on equity and states that firms divulge net income report earlier. According to their results, size and gearing of the firm are also related to the timeliness of financial reporting.

El-Masry *et al.* (2008a) and El-Masry *et al.* (2008b) mainly focus on the association between the timeliness of reporting and corporate governance characteristics of firms. Both studies employ a model which takes a snapshot to the websites of companies to measure the timeliness of corporate internet reporting. In addition to firm specific variables such as liquidity, firm size, profitability, they also use corporate governance variables for the purpose of disclosing what factors have more impact on the timeliness of financial reporting. McGee (2008) is one of the best studies that gives insights about corporate governance and timeliness of financial reporting with different countries applications and comparisons. He examines 20 countries, such as USA, Russia, China, etc. and results that timeliness is related to countries' specific factors as well as firm characteristics.

Aktas and Kargin (2008) explore the association between the timeliness feature and profitability of the company and come up with the result that higher positive earnings per share is effective and have a significant effect on early reporting. Lee *et al.* (2008) compare the multinational and domestic companies with regards to timeliness and document that multinational firms' reporting lag is shorter even though their audit delay is longer because of the complexity of accounting transactions. Moreover, companies disclose bad news and net loss and high leverage are associated with reporting delays, but firms audited by big 4 and larger companies report earlier. Turel

(2010) focuses on reporting lead time with firm and auditor specific determinants for the Turkish listed firms. She examines 211 non-financial companies with five different hypothesis related to size, industry, the sign of income, auditor type and opinion. According to the results, 59% of the firms publishing individual financial statements and 66% of the firms publishing consolidated financial statements prepare their reporting earlier than the regulatory deadline. In addition, while firms with positive income publish financial statements earlier, companies audited by big four report later. Size is not statistically significant. Akle (2011) investigates the period between 1998 and 2007 for the companies listed on the Egyptian stock exchange. Average days of financial reporting gradually decreases over the years and application of corporate governance principles effectively helps to reduce the timing of issuance notably in the financial sector.

Iyoha (2012) studies the impact of firm attributes on the timeliness of financial reports in Nigeria. With the panel data analysis and 61 companies between the periods 1999 – 2008, the paper concludes that the age of the company has a significant impact on timeliness. In addition, sectors are found significantly different regarding timeliness. Specifically, the banking sector is the fastest one to publish financial statements earlier. Other firm-specific variables such as profitability, size or financial year end do not have any significant impact on early reporting.

Al-Shwiyat (2013) examines the Amman Stock Exchange with 120 sample companies with several factors such as company's age, return on assets, return on equities, dividends and earnings per share. 111 days is the average reporting time which is a long period when comparing to the other developing countries. While the leverage and the firm size have significant positive impact on timeliness, earnings per share ratio has a significant negative relationship. Vuran and Adiloğlu (2013) research 178 companies for 2009 to analyze timeliness with many firm-specific variables. They separate the financial statements according to type of financial statement as a consolidated or individual and examine the current ratio, ROA, CFO, interest expense, size and sign of income.

## **4. Research design**

### **4.1. Sample selection**

The sample of this study includes 150 non-financial firms listed on Borsa Istanbul. In this paper, timeliness of financial reporting is handled by the firms listed on Borsa Istanbul during the period 2009 - 2014. All the companies included in the sample fulfill the following two criteria. Firstly, they are all listed on the market since 2009 and none of them was expelled during the period 2009 - 2014. Five companies whose year-end is other than 31 December were excluded from the sample. The analysis

consists of a total 900 firm- year observations from the financial statements of firms using Thomson Reuters Eikon database and Public Disclosure Platform. Since the financial statements of the banking sector and insurance companies are differ in many ways, non – financial companies were chosen as our sample. It is also consistent with the previous studies such as Ismail and Chandler (2005) and Owusu-Ansah and Leventis (2006).

**Table 2. Sample firms**

Non-Financial Firms Listed on BIST for 2009	192
Firms Have Missing Data and Outliers	-37
Firms Have Different Financial Year -End	-5
Firms Available For Analysis	150
Total firm-year observations	900

## **4.2. Hypothesis development**

Several company attributes or corporate governance characteristics have been analyzed in previous timeliness studies to clarify which factors have more impact on reporting timely. In this study, seven firm-specific factors determined to analyze the timeliness of financial reporting on Borsa Istanbul. These are company size, auditor type, income, leverage, financial statement type, price to book ratio and dividend per share.

### **4.2.1. Firm size**

Firm size is a widely used variable in timeliness of reporting literature and mixed results (positive or negative relations) presented in the empirical analysis. Studies come up with the positive relationship between the reporting lead time and firm size suggest that larger firms are subject to more transactions and accounting department deals with more complex accounting issues. On the other hand, most of the studies find a negative correlation for the size variable. Arguments which support this hypothesis start with the idea that having more resources and established accounting department and staff or having sophisticated accounting systems lead larger firms to report earlier (Owusu-Ansah, 2000). Since larger firms' internal control systems provide effective process to auditors, auditing mechanism spends less time while assessing the accounting information in larger firms (Dyer & McHugh, 1975).

Moreover, larger companies have more followers, particularly financial analysts or investors heavily rely on the timeliness of financial reporting (Leventis & Weetman,



2004). Firm size is a significant indicator of proving larger firms are followed by many investors than small companies. Therefore, larger companies are in the spotlight with regards to punctuality of financial reporting. Total assets is used dichotomously to measure the firm size and to display the negative relationship in the model for the first hypothesis. Firm-year observations are classified into three categories and assigned to small, medium and large firms in terms of their total assets value.

*H1: Firm size is negatively associated with reporting lead time.*

#### **4.2.2. Auditor type**

Auditor type is a common determinant in many papers that clarifies the relationship between the companies' financial statements audited by internationally known auditing firms (Big Four) and the duration from the financial year-end to first issue date. Many models split the sample with a dichotomous variable to introduce the model of those audited by Big 4 and audited by local firms. Al-Ajmi (2008) used to term auditee's size to evaluate the agency costs and concludes that larger firms are audited by larger or reputable auditors to mitigate the agency cost. Clatworthy and Peel (2010) and Hashim *et al.* (2013) argue that auditing by Big 4 helps to decrease the duration of reporting since their resources and experience is qualified enough than the other firms. Ahmed (2003) studies the auditor type with the other variables such as audit fee and international linkage due to the lack of big 4 or 5 in the sample countries. In order to introduce the dummy variable for auditor type and eliminate the subjectivity, auditor fee, auditor size and existence of international linkage are used to categorize to auditors regards to big or small. In this paper, Big 4 is used to analyze the relationship between auditor type and timeliness.

*H2: Auditor type is negatively associated with reporting lead time.*

#### **4.2.3. Good news vs. bad news (income)**

The profitability of a company, in other words, reporting net income or loss has significant effects on timely reporting as mentioned in previous studies. Signaling theory suggests that more profitable firms disclose more information and abide by the deadline through reporting earlier (Ismail & Chandler, 2005). On the other hand, management with bad news avoids publishing earlier to cover up the losses and reduce the adverse effects. From this point of view, companies tend to report positive news earlier than unfavorable ones which are held by many researchers to link with disclosure theories (Milgrom, 1981).

Haw *et al.* (2000), Owusu and Ansah (2000) and Whittred and Zimmer (1984) also states that publishing of financial statements earlier is related to favorableness of news. It is a well-known fact that managers are eager to disclose any positive information as soon as possible when comparing the negative news. They might

withhold unfavorable news through hoping to receive any positive news to compensate the effects of negative results (Givoly & Palmon, 1982). Thus, share prices might be gradually less affected during this discretionary created time.

Good news vs. bad news are measured with different variables on the timeliness of financial reporting such as annual change in profitability, the examination of remarks or comments in the audit reports, return on equity or return on assets. In this study, return on assets is used to measure the profitability of the firms.

*H3: Profitability (Good news) is negatively associated with reporting lead time.*

#### **4.2.4. Leverage**

Gearing or in other words, leverage refers to use debt to finance the operations. Trade – off theory suggests that larger firms tend to be highly geared and it resulted that firms prefer debt financing are supposed to publish their financial statements earlier for the purpose of credibility (El-Masry Abdelsalam *et al.*, 2008). On the other hand, Abdullah (2006) and Carslaw and Kaplan (1991) claim that high leverage is positively associated with timeliness because auditor check over on highly leveraged firms takes too much time. They also provide that high leverage refers to the financial distress and firms under pressure might withhold the financial statements for a while to reduce the adverse effects as mentioned earlier. Leverage is measured as total debts over total assets.

*H4: Leverage (gearing) is positively associated with reporting lead time.*

#### **4.2.5. Financial statement type**

Leventis and Weetman (2004) analyze the reporting practices of individual companies rather than group companies due to the fact that group companies are subject to different regulations and variables used in their model are much complicated to measure for the group companies. Soltani (2002) examines group and non-group companies with regards to presenting annual accounts to France authorities. Because consolidated and separate financial statements have different characteristics and deadlines, they need to be evaluated differently.

*H4: There is an association between the financial statement type and timeliness of financial reporting.*

#### **4.2.6. Price to book ratio and dividend per share**

In order to measure the market effectiveness in the model, two variables are added. Firms with high dividend yield tend to report financial statements earlier in conjunction with the signaling theory (Abdulla, 1996). There is no hypothesis developed for the price to book ratio to the best our knowledge. However, it might

be considered that firms with higher price to book ratio are prone to report earlier because of the price performance of the firm (Fama & French 1995).

*H5: Price to book ratio is negatively associated with reporting lead time.*

*H6: Dividend per Share is negatively associated with reporting lead time.*

### 4.3. Model specification

Panel data analysis offers a combination of regression and time series data type. It includes both cross-sectional and time series dimensions for each individual. This makes it possible to study a dynamic aspect of the problem (Frees, 2004).

A panel data regression model with k variables displayed as:

$$Y_{it} = \beta_{1it} + \beta_{2it}X_{2it} + \beta_{3it}X_{3it} + \dots + \beta_{nit}X_{nit} + u_{it} \quad (1)$$

In the model I; 1, 2, ..., n shows cross section and T= 1, 2, ..., n shows time periods. Also,  $u_{it}$  is assumed to be zero mean and constant variance. There are more parameters predicted than observations. Therefore model cannot be predicted in this form and it should be reconstructed. In order to do that, there have to be some assumptions made to have the models known as fixed effects and random effects. Firstly, we assume all regression coefficients are equal to common units; then model can be shown;

$$Y_{it} = \beta_1 + \beta_2X_{2it} + \beta_3X_{3it} + \dots + \beta_nX_{nit} + u_{it} \quad (2)$$

$\beta_1$  is a common intercept for all units and  $\beta_2, \dots, \beta_k$  parameters are common marginal effects of each explanatory variables. In other words,  $\beta$  parameters show no difference between units and times. This model is also known as fixed effects model. Random effects model is the different form of fixed effects model regarding intercept. Random effects intercept term is modeled as  $\beta_1 = \bar{\beta}_1 + \mu_i$  and the model is shown as  $\beta_1$ . In order to present which model is superior, Hausman test is the analysis of the different models.

$$Y_{it} = (\bar{\beta}_1 + \mu_i) + \beta_2X_{2it} + \beta_3X_{3it} + \dots + \beta_nX_{nit} + u_{it} \quad (3)$$

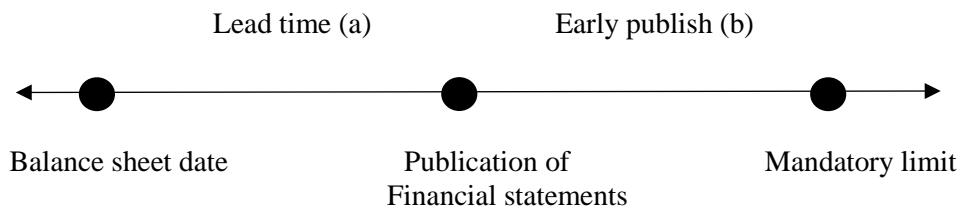
$$Y_{it} = \bar{\beta}_1 + \sum_{n=2}^N \beta_n X_{nit} + (u_{it} + \mu_i) \quad (4)$$

#### 4.3.1. Reporting lead time model

$$Lead\ Time_{it} = \beta_1 + \beta_2 Size_{it} + \beta_3 Leverage_{it} + \beta_4 Income_{it} + \beta_5 PTB_{it} + \beta_6 DPS_{it} + \beta_7 Fin.Stat.Type_{it} + \beta_8 A.Type_{it} + u_{it}$$

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Reporting lead time is measured through calculating the number of days between the financial year end of the companies (31 December) and the first publication date which is on Public Disclosure Platform. Public Disclosure Platform (PDP) is an electronic system through where all notifications, news and financial information of companies are published mandatorily. The system covers over 600 companies and 3000 users all over Turkey. PDP is a platform where all users have a chance to access accurate and fair information in prompt about listed companies at low costs through the website. In the past studies such as Leventis and Weetman (2004), discretionary delays, particularly in audit reports delays, handled and measured as the dependent variable. However, because of regulations of the timing of reporting financial statements in Turkey, publishing of audit reports and financial statements happen simultaneously.



**Table 3. Independent variables**

Variables	Definition	Expected sign
	Total Assets	
Firm Size	Dummy Variable (3 Category) (Large, Medium, Small)	-
Leverage	Financial Leverage Ratio	+
Income	Return On Assets	-
PTB	Price to Book Ratio	-
DPS	Dividend per Share	+
Financial Statement Type	Dummy Variable (Consolidated or Individual)	+
Auditor Type	Dummy Variable (Big 4 vs. Local Auditors)	+

All companies publish their financial statements within the mandatory deadline, except special permissions from Capital Markets Board. The fear of being influenced by the market participants negatively or any punishment that might take place from

the regulatory authorities play a role in reporting timely for the companies. Although all companies meet the regulatory deadline, there is a huge difference between the issue of financial statements and the end of the financial year. In this paper, individual and consolidated financial statements examined separately with the purpose of presenting the actual situation in a better way. Intervals for publishing and the yearly information is given tables below for both types of financial statement.

**Table 4. Reporting lead time for individual financial statements**

Interval (Firm-year)	2013 - 2014		Interval (Firm-year)	2009 - 2012	
	Perc.	Cum.Perc.		Perc.	Cum.Perc.
0-40 days	3%	3%	0-40 days	2%	2%
41-50 days	16%	19%	41-50 days	11%	13%
51-59 days	28%	<b>47%</b>	51-59 days	16%	29%
<b>Regulatory limit 60 days</b>	<b>53%</b>	100%	60-69 days	25%	<b>54%</b>
			<b>Regulatory limit 70 days</b>	<b>46%</b>	100%

Table 4 displays the lead time for separate financial statements within the regulatory deadline in different periods. The regulatory deadline was 70 days (10 weeks) between the years 2009 – 2012 and %54 percent of sample published early and % 46 percent of the sample on very last day. However, for the last years, 2013 and 2014, the percentage of publishing early decreased to % 47 percent because of the ten days reduction in deadline. Publishing separate financial statements earlier than 40 days is generally uncommon. Turkish firms which prepare separate financial statements are mostly eager to publish their financial statements on the last day. Yearly information is given in figure 1 below, and it states that early publishing rate decreases in connection with the regulatory deadline decreases from 70 days to 60 days.

Figure 1. Reporting lead time for individual financial statements

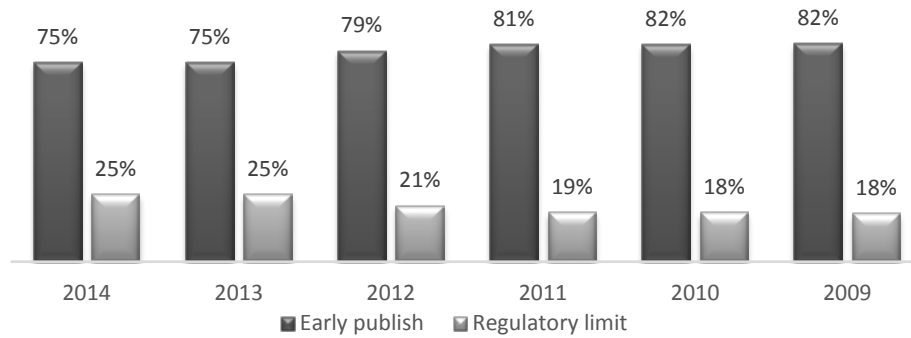
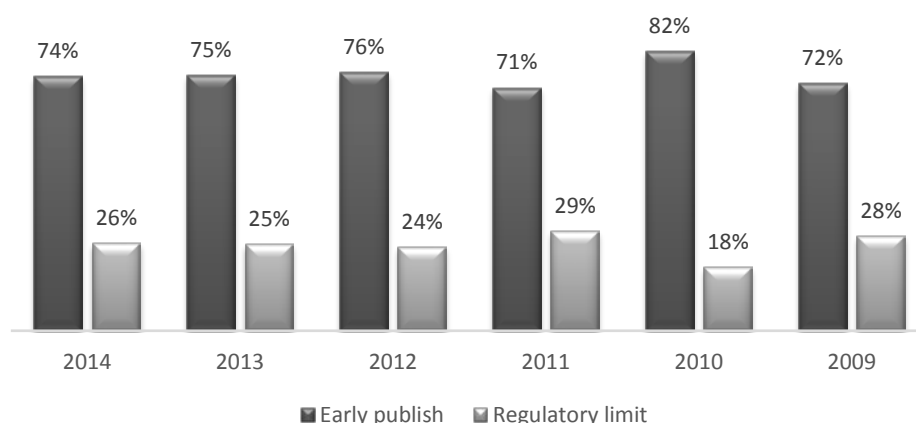


Table 5. Reporting lead time for consolidated financial statements

Interval (Firm-year)	2013 - 2014		Interval (Firm-year)		2009 - 2012	
	Perc.	Cum.Perc.	Perc.	Cum.Perc.		
0-50 days	9%	9%	0-60 days	16%	16%	
51-60 days	22%	31%	61-70 days	21%	37%	
61-69 days	43%	<b>74%</b>	71-80 days	14%	51%	
<b>Regulatory limit 70 days</b>	<b>26%</b>	100%	81-90 days	12%	63%	
			91-100 days	25%	<b>87%</b>	
			<b>Regulatory limit 101 days (14 weeks)</b>	<b>13%</b>	100%	

Early publishing rate also decreased for consolidated financial statements since the decrease in the number of days for group companies is almost a month. However, firms prepare consolidated financial statements are likely to publish earlier when the interval's first lines examined. It denotes that almost %35 – 40 percent of sample publish just as separate financial statements report. Figure 2 proves that early publishing fluctuates more than individual financial statements in different years.

**Figure 2. Reporting lead time for consolidated financial statements**



**4.4. Research findings**

Descriptive statistics for dependent and independent variables are given in Table 6. According to the results, an average day of publishing financial statements is 69 days, and in addition, it is 62 days for individual financial statements and 74 days for consolidated financial statements. Maximum and minimum days are 130 days and 30 days respectively. According to the Communiqué, in presence of reasonable causes and reasons acceptable by the Board (CMB), an additional time may be granted to entities for public disclosure of interim and annual financial reports.

**Table 6. Descriptive statistics for variables**

	Mean	Median	Maximum	Minimum	Standard Deviation
<b>Lead time</b>	69	68	130	30	16
<b>Roa</b>	3.80	3.68	38.25	-35.66	9.11
<b>Leverage</b>	0.48	0.47	1.70	0.02	0.24
<b>Ptb</b>	9.98	5.02	162.60	0.11	13.91
<b>Dps</b>	0.31	0.00	16.42	0.00	1.06
<b>Large firms</b>	0.33	0.00	1.00	0.00	0.47
<b>Medium firms</b>	0.34	0.00	1.00	0.00	0.47
<b>Small firms</b>	0.32	0.00	1.00	0.00	0.47
<b>Auditor</b>	0.65	1.00	1.00	0.00	0.48
<b>Fin. type</b>	0.59	1.00	1.00	0.00	0.49

**Table 7. Hausman test result**

	Chi-Sq. Statistic	Chi-Sq. Degree of Freedom	Probability
Cross-section random	13.461	8	0.097

In order to choose which model is superior between fixed effects and random effects for the panel regression analysis, Hausman test was run and concluded in Table 7 that random effects model is supposed to be used for the analysis. In order to determine the absence of multicollinearity problems, the Pearson's correlation coefficients between explanatory variables are tested. Gujarati (2003) suggests that multicollinearity is a serious problem only if the correlation coefficient between explanatory variables is more than 0.8. Since there is no result above than these limits in correlation matrix in Table 10, multicollinearity cannot be considered as an issue and can be ignored. F value of the model is significant and commented that panel regression model is valid in Table 9. The empirical panel estimation results obtained from OLS model, Fixed Effects Model and Random Effects Model is given in Table 9. The results presented in Table 9 shows that except for leverage and price to book ratio, all variables are significant and the explanation power of the model is % 14.37.

Company size shown as total assets with dichotomous variables constituted the first hypothesis is confirmed when table 9 results examined. According to the results, there is a statistically significant negative association between the firm size and timeliness of financial reporting. It conforms to previous studies such as Leventis and Weetman (2004) or Owusu and Ansah (2000). Larger firms are more likely to report earlier than the small firms due to the fact that larger firms have more sources and more motivations to be time sensitive.

Auditor type represented dichotomously as Big 4 or local has a 5% significant negative impact on timely reporting as expected. Many studies such as Garsombke (1981) or Ahmed (2003) reached the same results that audit delay or reporting delay is both lesser for the firms audited by Big 4. It is assumed that international audit firms are more experienced which makes them audit more effectively and efficiently with more sources promptly. Davies and Whittred (1980), Givoly and Palmon (1982) and Owusu and Ansah (2000) are the other studies which concentrate on the association between the auditor type (size) and timely reporting and hypothesized the negative correlation as in this study.

Income factor which is the most stressed determinant in reporting studies via good vs. bad news is also discussed in this study. Good news is likely to released very quickly because disclosing income needs less examination perceived positive motivation for both investors and management (Haw *et al.*, 2000). On the other hand, firms financially unhealthy are inclined to delay the announcement of bad news to mitigate the adverse effects (Al-Ajmi, 2008). Management incentives related to internal reporting hypothesis is another motivation to hide the bad news for a while as well.



Different measurements are used to analyze the income factor in timeliness such as the change in profitability in Givoly and Palmon (1982) or Haw *et al.* (2000), the level of profitability (Dyer & McHugh, 1975), sales growth as revenue changes in (Ismail & Chandler, 2005). Abdulla (1996) and Al-Ajmi (2008) use more than one variable to measure the good news-bad news effect in timeliness in particular dividend per share in addition to other common measurements. Thus, return on asset and dividend per share variables are used to investigate the effect of profitability on reporting lag. According to the results in Table 9, both variables have a negative impact and 10% significant and proves that profitability of a company or paying high dividends are essential motivations of issuing financial statements earlier.

Capital structure of a company is another facet of timeliness studies. Firms that have higher gearing might experience the possibility of failure and bankruptcy and are expected to delay the issuance (Carslaw & Kaplan, 1991). Although many studies find positive relationship such as Abdulla (1996), Carslaw and Kaplan (1991) or Owusu and Ansah (2000), there is another view supports the negative correlation. It suggests that firms having high debt to asset ratio might demand experienced auditors to compensate the suspicions of third parties and it leads to early publishing (Al-Ajmi, 2008). Even though the results display positive association, gearing has not a significant impact on the timeliness of financial reporting.

Since the examination of group companies and separate financial statements have different requirements of publishing, dichotomous variable is used to determine the effects of financial statement type and it is a substantial issue needs to be considered in the analysis. Price to book ratio is the last variable explored and to the best knowledge, there is no hypothesis found on the timeliness of financial reporting. However, in order to elaborate the market performance of firms with regards to timeliness, price to book ratio is considered as a good measurement. Yet, there is no significant relation even the negative coefficient found.

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**Table 8. Hypothesis results**

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H1: Firm Size	Negative relation (Accepted)
H2: Leverage	Not significant (Rejected)
H3: Income	Negative relation (Accepted)
H4: Price to Book	Not significant (Rejected)
H5: Dividend per Share	Negative relation (Accepted)
H6: Financial Statement Type	Accepted
H7: Auditor Type	Negative relation (Accepted)

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Table 9. Panel regression results

Dependent Variable: Lead Time (Number of days)	ORDINARY LEAST SQUARE		FIXED EFFECTS MODEL		RANDOM EFFECTS MODEL	
	Coefficient	Probability	Coefficient	Probability	Coefficient	Probability
Income (ROA)	-0.152	0.015	-0.108	0.1130	-0.113	0.068*
Leverage	6.008	0.006	-2.757	0.5551	3.123	0.299
Price to Book (PTB)	-0.008	0.452	-0.023	0.1114	-0.017	0.171
Dividend per Share (DPS)	-1.318	0.005	-0.457	0.4086	-0.832	0.08*
Firm Size (Large)	-4.1	0.000	-8.737	0.0000	-6.171	0.000***
Firm Size (Medium)	6.817	0.000	14.165	0.0000	-3.384	0.029**
Firm Size (Small)	2.717	0.025	5.428	0.0171	9.556	0.000***
Auditor Type	-3.960	0.000	-3.514	0.1290	-3.549	0.019**
Financial Statement Type	1.41	0.000	1.33	0.0000	14.363	0.000***
Constant	62.379	0.000	67.104	0.0000	63.569	0.000***
R-Squared	0.236		0.627		0.144	
Prob. (F-Statistics)	0.000***		0.000***		0.000***	
Durbin-Watson Statistics	0.98		1.645		1.407	

\*\*\*, \*\*, \* %1, %5, %10 respectively

Table 10. Correlation matrix

	Lead time	ROA	Leverage	PTB	DPS	Large	Medium	Small	Auditor	Fin. type
Lead time	1									
ROA	-0.21 0.000***	1								
Leverage	0.18 0.000***	-0.43 0.000***	1							
PTB	-0.04 0.2073	0.01 0.9301	-0.03 0.445	1						
DPS	-0.16 0.000***	0.31 0.000***	-0.13 0.000***	-0.03 0.43	1					
Large	-0.06 0.061*	0.17 0.000***	0.12 0.000***	-0.01 0.695	0.08 0.014**	1				
Medium	-0.02 0.542	0.07 0.029**	-0.16 0.000***	0.06 0.09*	0.05 0.142	-0.51 0.000***	1			
Small	0.08 0.012**	-0.25 0.000***	0.04 0.21	-0.04 0.182	-0.13 0.000***	-0.49 0.000***	-0.5 0.000***	1		
Auditor	-0.15 0.000***	0.13 0.000***	0.04 0.264	-0.02 0.47	0.14 0.000***	0.34 0.000***	-0.05 0.099*	-0.28 0.000***	1	
Fin. type	0.36 0.000***	-0.01 0.891	0.12 0.000***	-0.05 0.151	0.02 0.64	0.34 0.000***	-0.05 0.116	-0.29 0.000***	0.11 0.000***	1

\*\*\*, \*\*, \* %1, %5, %10 respectively

## **5. Concluding remarks**

One measure of the quality of financial reporting under the concept of transparency is timeliness of financial reporting in addition to the other concepts such as accuracy, consistency, appropriateness, clarity and convenience (Al-Ajmi, 2008). Thus, it is an important intrinsic characteristic and an essential element of information relevance suggested by major standard setters over the years (Clatworthy & Peel, 2010).

This study empirically aims to investigate the association between timeliness of annual financial reporting and both firm-specific and audit related factors for the 150 non-financial companies listed on Borsa Istanbul for the period 2009 to 2014. Descriptive analysis indicates that average reporting time is 69 days for the whole sample and 62 days and 74 days for individual and consolidated financial statements respectively. The deadline for reporting used to be 10 weeks and 14 weeks for individual and consolidated financial statements and it was reduced in 2013 to 60 days and 70 days for both types respectively.

In line with prior studies, firm size, dividend per share, auditor type and good news (income), unsurprisingly, has a significant negative impact on timeliness behavior of sample firms. Also, financial statement type has a significant effect. On the other hand price to book ratio and leverage of firms have no significant impact as hypothesized. Although these conclusions are consistent with previous studies, findings of the study may not be generalized due to the limitations of not only it includes non-financial firms but also the period it covers. Future studies may concentrate on financial firms and larger period to justify the results with different variables. Corporate governance features or cross country examinations might also be included in the studies to analyze the timeliness in a comprehensive manner and to increase the robustness of the subject.

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