

# Corporate tax avoidance and the timeliness of annual earnings announcements

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**Abstract** Consistent with an agency theory of tax avoidance, this study investigates the extent to which tax avoidance results in a less timely annual earnings announcement. Using 16,340 firm-years spanning the period 1993–2010, evidence is presented suggesting tax avoidance that manifests through greater temporary and permanent book-tax differences results in a less timely annual earnings announcement. This result is robust to including several controls previously documented to affect reporting delay, including the magnitude of the earnings surprise, size, profitability, auditor-related influences, shareholder composition, capital intensity, financial reporting aggressiveness and financial condition. Evidence is also presented suggesting that tax avoidance impacts the value-relevance of earnings to investors at the announcement date, evaluated by the earnings response coefficient.

**Keywords** Tax avoidance · Tax aggressiveness · Earnings announcements · Earnings announcement timing · Reporting delay

**JEL Classification** G14 M41

## 1 Introduction

The investigation of disclosure strategies and financial reporting choices made by firms represents an important and influential domain of accounting research. Among the strands of research that encompass this domain are studies that investigate earnings announcement strategies. Prior research suggests managers tend to withhold the release of bad news relative to good news (e.g., Patell and Wolfson 1982; Bagnoli et al. 2002; Abad et al. 2009; Kothari et al. 2009). Several possible causes of this ‘good news early, bad news late’ phenomenon have been advanced in the literature, such as proprietary reporting costs

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(Verrecchia 1983, 2001), the desire to allow more time to disseminate bad news (Doyle and Magilke 2009) and long horizon career concerns (Kothari et al. 2009). In particular, Kothari et al. (2009) suggest managers' tendency to withhold bad news stems from agency conflicts inherent in the separation of ownership and control. This paper seeks to add to this line of research by investigating the extent to which corporate tax avoidance contributes to a delay in the timing of the annual earnings announcement (i.e., the length of time between the actual earnings announcement date and the prior fiscal year-end).

There are several reasons why one might anticipate a relation between corporate tax avoidance and the timing of the annual earnings announcement. First, Desai and Dharmapala (2006) suggest a potential interdependence between tax planning and managerial opportunism. Second, complex tax structures may engender additional scrutiny during financial statement audits. Finally, to the extent that a high level of tax avoidance informs on the firm's future growth opportunities (and hence the investment opportunity set), additional time may be necessary in order to formulate a response to an earnings surprise. Thus, there are reasons to believe, a priori, that tax avoidance is associated with a *less* timely annual earnings announcement.

This paper compliments the Kim et al. (2011) study, and disclosure literature in general, by investigating the extent to which corporate tax avoidance influences the timelines of the annual earnings announcement. In a sample consisting of 16,340 firm-year observations spanning the period 1993–2010, evidence is presented suggesting higher levels of corporate tax avoidance, manifested through larger temporary and permanent book-tax differences, results in a less timely annual earnings announcement. This result is robust to including several control variables used in prior empirical work, such as the sign and magnitude of the earnings surprise at the announcement date, size, auditor-related influences, financial condition, leverage, shareholder composition, capital intensity and financial reporting aggressiveness.

We also investigate whether greater levels of tax avoidance results in less informative earnings announcements by examining the earnings response coefficients ("ERCs") surrounding the annual earnings announcement date. Evidence suggests a lower earnings response coefficient for the 3 day window surrounding the annual earnings announcement for firms with greater exhibited tax avoidance during the most recent fiscal year (relative to firms with moderate levels of tax avoidance). This suggests earnings are generally more informative in the short window surrounding the annual earnings announcement date for firms with less tax avoidance during the previous fiscal year, complementing Ayers et al. (2009). Our study also offers practical relevance to the debate over book-tax conformity (Hanlon and Heitzman 2010; Atwood et al. 2010) by documenting that a potential 'hidden cost' associated with reduced book-tax conformity (i.e., greater book-tax differences) is a less timely and less informative annual earnings announcement.

The rest of this paper proceeds as follows. Section 2 reviews the previous literature in earnings announcement timing and tax avoidance that motivates the current study. Section 3 presents the sample selection criteria, tax avoidance proxies and research design. Section 4 presents results and Sect. 5 briefly concludes.

## 2 Hypothesis development and related literature

### 2.1 Earnings announcement timing motives

Since Patell and Wolfson's (1982) study on the intraday timing of earnings and dividend announcements, several studies have sought to shed additional light on the 'good news

early, bad news late' hypothesis.<sup>1</sup> Patell and Wolfson (1982) find that less favorable disclosures related to earnings and dividends tend to occur after trading more often than more favorable disclosures. One implication of this result is that management is perhaps attempting to disseminate information during non-trading hours in order to dampen its negative weight by including the information with various other sources. On the other hand, the results could also suggest that management is attempting "...to provide a natural no trading period for the dissemination and evaluation of news releases..." (p. 525). Doyle and Magilke (2009) refer to these implications as the opportunism and assimilation hypotheses, respectively. They find no evidence that firms opportunistically time their earnings announcements based upon whether the news is good or bad. Rather, they find evidence suggesting that more complex firms announce earnings after the market closes suggesting the firm is attempting to allow additional time for information dissemination. They interpret the observed higher trading volume surrounding after hours disclosures to be consistent with an information assimilation strategy.

Other studies have focused on *voluntary* disclosures as opposed to *mandatory* disclosures such as an earnings announcement, which is our focus.<sup>2</sup> Prior research examining *mandatory* announcements generally provides evidence suggesting that earnings announcement delay is dependent upon the sign of unexpected earnings. For example, in surveying 846 CFOs about earnings announcement policy, Chen and Mohan (1994) provide evidence suggesting that negative earnings news will prompt a more timely announcement.<sup>3</sup> However, Begley and Fischer (1998) find evidence suggesting that negative news (proxied by analyst forecast errors) is delayed more than good news. They measure 'delay' in relation to the previous year's announcement date. This relation is not monotonic, however. Although worse news is reported sooner than bad news, great news is not necessarily reported sooner than good news. Son and Crabtree (2009) measure the relationship between the total delay (number of calendar days between the annual earnings announcement date and the previous fiscal year-end) and the sign of unexpected earnings. They extend the result in Begley and Fischer (1998) by examining the difference between announcement day returns on the magnitude of unexpected earnings between early and late announcements. Specifically, they find evidence suggesting that abnormal returns surrounding the announcement date are greater for firms that report negative unexpected earnings earlier than other firms.<sup>4</sup>

Trueman (1990) advances an alternative explanation for the timing of earnings announcements. He suggests firms with unfavorable earnings news may be more inclined to engage in earnings management. There are two possible reasons for this result. First, managers may naturally be motivated to engage in upward earnings management to fulfill earnings expectations in order to maximize their performance-based compensation. Such action, as Trueman (1990) suggests, takes time and causes a delay in the announcement. Second, managers may wish to postpone the release of earnings news in order to observe

<sup>1</sup> Technically, the hypothesis was 'good news during, bad news after' in Patell and Wolfson's (1982) study. It has subsequently evolved into 'good news early, bad news late' as subsequent research has taken a broader focus.

<sup>2</sup> Studies such as Skinner (1994), Soffer et al. (2000), Miller (2005), Baginski et al. (2008), and Kothari et al. (2009) examine voluntary disclosure behavior around earnings announcements.

<sup>3</sup> In qualitative responses, they note "...numerous qualitative comments received overwhelmingly suggest lower-than-expected earnings will prompt the firm to release information earlier..." (p. 65).

<sup>4</sup> This result does not hold for firms reporting positive unexpected earnings. That is, there is no market related incentive to issue earlier earnings announcements for firms with positive unexpected earnings.

competitors' announcements. This provides managers with the option to subsequently engage in earnings management and further delay the earnings announcement. A key implication to this result is the extent to which the competitors' earnings announcement is itself delayed and hence the real option in the hands of the manager considering earnings management may be worth little. It is worth noting that these two alternative hypotheses do not necessarily imply upward earnings management. Political costs and the opportunity to take a 'big bath' may influence managers to engage in downward earnings management during the reporting delay.<sup>5</sup>

## 2.2 Tax avoidance motives

The earnings announcement timing literature suggests managers respond to natural incentives within the firm in deciding the timing of the earnings announcement. Managers, endowed with private information about the firm and its future prospects, may be inclined to manipulate the timing of the earnings announcement in order to alter the news released to the market and/or exploit news for personal gain. An alternative explanation for these results is the extent to which corporate tax avoidance impacts the timing of the annual earnings announcement. That is, managers may engage in tax planning throughout the year which may or may not complement earnings management activity. Tax planning designed to permanently reduce the firm's tax liability increase after-tax earnings which may assist the firm in meeting market expectations. This activity may require additional time at fiscal year-end in order to evaluate the extent to which tax avoidance will assist the firm in meeting expectations and to formulate a response to parties external to the firm.

Desai and Dharmapala (2006) suggest the inherent complexity in many tax structures can potentially act as a device to mask opportunistic rent diversion, through the consumption of managerial perks or personal empire building. They find that incentive compensation helps to reduce the level of tax avoidance as it aligns managers' and shareholders' interests particularly for firms with weak governance structures. Hanlon and Heitzman (2010) suggest additional research investigating the implications of Desai and Dharmapala's (2006) theory is warranted. The focus in this paper is not on the identification of tax aggressive firms; rather, this study proposes that one likely consequence of higher levels of tax avoidance is a less timely annual earnings announcement. If tax avoidance and rent diversion utilize complementary technologies, then firms with higher levels of tax avoidance will be more likely to engage in opportunistic behavior. The earnings announcement timing literature suggests greater opportunistic behavior (or greater opportunistic incentives) may result in a less timely earnings announcement. Consequently, investors may receive a less timely earnings announcement due to the complementary nature of tax avoidance and managerial opportunism. This leads to our primary hypothesis:

H1: Greater exhibited levels of tax avoidance is associated with a less timely annual earnings announcement.

Recent studies have begun to document the causes and consequences of the complementary relationship between tax avoidance and opportunistic incentives. For example, Frank et al. (2009) find a strong positive relation between tax avoidance and aggressive

<sup>5</sup> Chai and Tung (2002), using a sample of firms during the period 1991–1994, provide evidence suggesting firms that delayed reported earnings engage in higher levels of income-decreasing discretionary accruals. This allows the firm an opportunity to take a larger negative hit now and allow for better results in the future (relative to the current year) and benefit from the reversing effect of discretionary accruals.

financial reporting and suggest that insufficient costs exist to preclude firms from simultaneously pursuing tax planning strategies and earnings management in the same reporting period. The bad news hoarding implied by the earnings announcement timing literature is consistent with the rent diversion implied in an agency theory of corporate tax avoidance (Desai and Dharmapala 2006). Appealing to this relation, Kim et al. (2011) document evidence that tax avoidance is positively associated with firms' stock price crash risk. That is, firm-specific bad news tends to be released in greater magnitudes (after delaying disclosure for extended periods) causing a strong, negative price reaction. They suggest corporate tax avoidance provides investors with a potential screening technology for third-moment risks (i.e., negative skewness). If bad news is being stockpiled within the firm through tax avoidance, earnings management and other opportunistic activity, then the eventual disclosure of that information may induce extreme negative returns. Thus, the information risk engendered by corporate tax avoidance manifests, in part, through firm-level disclosure policy. This suggests additional research investigating the relation between tax avoidance and disclosure policy is warranted. One natural link is the extent to which tax avoidance impacts the timing of the annual earnings announcement. Thus, our paper offers an important contribution in advancing research examining the relations between disclosure policy and tax avoidance.

The primary purpose of this paper is to investigate the extent to which tax avoidance results in a less timely annual earnings announcement. The choice of conditioning mandatory disclosure timing on tax avoidance is chosen for a couple of reasons. First, theory and prior literature suggests firms choose disclosure policy opportunistically and engage in impressions management in order to influence the information environment. Consequently, investigating the relation between a voluntary disclosure event and tax avoidance contributes the inherent risk of a correlated omitted variables bias. Further, nondisclosure is a form of voluntary disclosure policy and it is impossible to identify when a firm is strictly engaging in nondisclosure. Investigating the extent to which tax avoidance impacts the timing of the annual earnings announcement potentially results in a more powerful test of the managerial opportunism explanation for reporting delay since existing studies have focused on measuring earnings management using discretionary accrual models that have statistical power issues. Moreover, managerial opportunism manifested solely through earnings management is difficult to sustain since discretionary accruals eventually reverse. Thus, smaller levels of earnings management are needed if the firm is employing complementary tax planning technologies (Frank et al. 2009).

### 3 Methodology

#### 3.1 Sample description

The sample results from the intersection of the IBES, Compustat and CRSP databases during the period 1993–2010. Our sample period begins in fiscal year 1993 for two reasons. First, prior literature suggests the book-tax gap began sometime in the early 1990s (Frank et al. 2009). Second, the enactment of SFAS No. 109, *Accounting for Income Taxes*, in 1992 suggests fiscal year 1993 as a natural initial sample year to ensure consistent application in tax accounting rules among firms.

We omit financial firms and utilities due to inherent differences in regulatory and institutional structures of these firms. We also omit missing values for the variables used in this study, resulting in 16,340 firm-year observations. Further, we omit observations with

reported assets less than \$1 million to combat the small deflator problem (Chen et al. 2010).<sup>6</sup>

### 3.2 Tax avoidance proxies

We use two proxies for tax avoidance that are generally accepted in the literature. Our first proxy for tax avoidance is measured as firm  $i$ 's overall book-tax differences ( $BTD$ ) as of year  $t$ . Following Hanlon et al. (2005),  $BTD$  is defined as pretax book income less minority interest in earnings (Compustat  $PI_{i,t}$  – Compustat  $MII_{i,t}$ ) less estimated taxable income. Taxable income is estimated as the sum of current tax expense (Compustat  $TXFED_{i,t}$ ) and current foreign tax expense (Compustat  $TXFO_{i,t}$ ), scaled by the top statutory tax rate of 35 % during the period under study, less firm  $i$ 's change in net operating loss carryforward (Compustat  $TLCF_{i,t}$ ). The difference between book income less estimated taxable income is then scaled by total assets as of year  $t - 1$ . Book-tax differences reflect tax planning that generates both temporary and permanent differences. Prior research suggests *higher* values of  $BTD$  reflect *greater* tax avoidance.

Our second measure of tax avoidance captures managers' discretionary tax planning activities that generates only permanent book-tax differences, " $DTAX$ ", following Frank et al. (2009).<sup>7</sup>  $BTD$  captures both temporary and permanent book-tax differences, whereas  $DTAX$  captures only *discretionary* permanent book-tax differences. Hence,  $DTAX$  may be considered a more robust measure of non-conforming tax avoidance. *Higher* levels of  $DTAX$  reflect *greater* tax avoidance (Frank et al. 2009).

### 3.3 Research design

To investigate the extent to which tax avoidance results in a less timely annual earnings announcement, the following model is estimated:

$$\begin{aligned} DELAY_{i,t} = & \beta_0 + \beta_1 TAX_{i,t} + \beta_2 UE_{i,t} + \beta_3 EXTR_{i,t} + \beta_4 LOSS_{i,t} + \beta_5 OPIN_{i,t} + \beta_6 FYE_{i,t} \\ & + \beta_7 BIG4_{i,t} + \beta_8 SIZE_{i,t} + \beta_9 LIT_{i,t} + \beta_{10} MTB_{i,t} + \beta_{11} LEV_{i,t} \\ & + \beta_{12} DISTRESS_{i,t} + \beta_{13} VOL_{i,t} + \beta_{14} SHARE_{i,t} + \beta_{15} PPE_{i,t} + \beta_{16} ACC_{i,t} \\ & + \delta_{ind} + \tau_t + \varepsilon_{i,t} \end{aligned} \quad (1)$$

The timeliness of the annual earnings announcement ( $DELAY_{i,t}$ ) is measured as the number of calendar days from fiscal year-end to the date of the annual earnings announcement for every firm  $i$  in year  $t$ .  $DELAY_{i,t}$  is conditioned on tax avoidance and a number of robust controls used in previous empirical work.  $TAX_{i,t}$  is one of two proxies of tax avoidance discussed in Sect. 3.2.

A robust set of controls is used in order to isolate the effect of tax avoidance on the timeliness of the annual earnings announcement. Previous work documents a relationship

<sup>6</sup> Since firms that have reported losses, or are in a net refund due position at year-end, may be in an intrinsically different tax position relative to more profitable firms, observations that have negative pretax book income, negative total tax expense, or negative cash taxes paid are excluded from the sample.

<sup>7</sup> Specifically,  $DTAX$  is measured by regressing permanent differences on intangibles, unconsolidated earnings, non-controlling interest in earnings, the change in net operating loss during the period, and lagged permanent differences. Further, this regression is estimated by industry (two-digit SIC) and year. Industry-years are required to contain at least 15 firm-level observations in order to obtain a valid estimate of  $DTAX$ .

between the sign and magnitude of the earnings surprise as of the announcement date and the timeliness of the earnings announcement (Begley and Fischer 1998). Earnings surprise (“ $UE_{i,t}$ ”) is measured as the actual earnings per share on the announcement date minus the mean analyst forecast immediately preceding the earnings announcement date. Consistent with prior work,  $UE_{i,t}$  is scaled by firm  $i$ 's stock price as of the beginning of the fiscal year (at time  $t - 1$ ).  $EXTR_{i,t}$  is an indicator variable equal to one if firm  $i$  has reported extraordinary items in year  $t$ .  $LOSS_{i,t}$  is an indicator variable equal to one if firm  $i$  has reported a net loss in year  $t$ .  $OPIN_{i,t}$  is an indicator variable equal to zero if firm  $i$ 's auditors have issued an unqualified audit opinion as reported by Compustat for year  $t$ , and one otherwise.  $FYE_{i,t}$  is an indicator variable equal to one if firm  $i$  has a calendar fiscal year-end.  $BIG4_{i,t}$  is an indicator variable equal to one if firm  $i$  is audited by a Big 4 audit firm in year  $t$ .  $SIZE_{i,t}$  is measured as the natural logarithm of firm  $i$ 's total assets as of year  $t$ .  $LIT_{i,t}$  is an indicator variable equal to one if firm  $i$  operates in a high litigation industry.<sup>8</sup>  $MTB_{i,t}$  captures firm  $i$ 's growth opportunities measured as the market value of equity divided by the book value of equity as of year  $t$ .<sup>9</sup>  $LEV_{i,t}$  captures firm  $i$ 's total leverage for year  $t$ , measured as the ratio of total liabilities to total assets.  $DISTRESS_{i,t}$  captures financial distress measured using Zmijewski's (1984) prediction model for firm  $i$  in year  $t$ .<sup>10</sup>  $VOL_{i,t}$  captures firm  $i$ 's share-based volatility for year  $t$  measured as the natural logarithm of total shares traded divided by common shares outstanding.  $SHARE_{i,t}$  captures firm  $i$ 's ownership concentration ratio measured as the ratio of common shares outstanding to common shareholders measured as of year  $t$ .  $PPE_{i,t}$  captures firm  $i$ 's capital intensity in year  $t$  measured as gross property, plant, and equipment scaled by total assets.  $ACC_{i,t}$  captures firm  $i$ 's financial reporting aggressiveness captured by estimating performance-matched pretax discretionary accruals during year  $t$  using the methodology in Frank et al. (2009). Industry,  $\delta_{ind}$ , and time indicators,  $\tau_t$ , are also included, and we use standard errors clustered by firm.<sup>11</sup>

As a follow-up analysis to (1), it would be desirable to capture a measure of market perception to a less timely annual earnings announcement. Unfortunately, the nature of tax avoidance precludes employing such methodology. Specifically, corporate tax returns are not publicly available hence investors must use firms' financial statements to infer any evidence, and implications, of tax avoidance. Further, industry and/or sector comparisons are necessary in order to appropriately assess the risk characteristics of a firm with greater exhibited tax avoidance. These activities are highly unlikely to be completed during the short window horizon surrounding the annual earnings announcement date. Moreover, any proxy used to identify a tax avoider as reporting earnings sooner than other firms in the industry contributes an unfortunate built-in look-ahead bias rendering any results difficult to interpret. However, one likely implication of greater exhibited tax avoidance from this discussion and the motivation developed in Sect. 2.2 is a less *informative* earnings

<sup>8</sup> We follow extant research (e.g., Francis et al. 1994; Shu 2000; Field et al. 2005; Rogers and Stocken 2005; Dopuch et al. 2008; Zhao et al. 2009) and define  $LIT$  equal to one if firms have the following SIC codes: 2833–3836, 3570–3577, 3600–3674, 5200–5961, 7370–7374.

<sup>9</sup> We include market-to-book ratio to control for any systematic reporting tendencies high growth firms may exhibit due to growth opportunities or litigation risk.

<sup>10</sup> Specifically, following Zmijewski (1984, p. 69),  $DISTRESS = -4.336 - 4.513 \times ROA + 5.679 \times LEV + 0.004 \times CR$ , where  $CR$  equals the firm's current ratio (current assets/current liabilities).

<sup>11</sup> We control for possible industry effects due to industry-level variation in effective tax rates documented in prior research (Dyregang et al. 2008). In terms of our tax avoidance measures, Agriculture, Mining, Oil, and Construction industries reported the largest  $BTD$ , while Manufacturing, Machinery and Electronics and Services had the largest values for  $DTAX$ .

announcement (Ayers et al. 2009). In other words, the annual earnings announcement may be less timely for firms with greater exhibited tax avoidance, but this may not translate into a less informative earnings announcement. In order to investigate this relation further, the following model will be estimated across tax avoidance quintiles:

$$r_{i,t} = \alpha_0 + \alpha_1 UE_{i,t} + \alpha_2 SIZE_{i,t} + \alpha_3 BM_{i,t} + \alpha_4 LEV_{i,t} + u_{i,t} \quad (2)$$

where  $r_{i,t}$  is firm  $i$ 's abnormal return computed using the market model surrounding a three day window centered on the date of the annual earnings announcement.<sup>12</sup>  $UE_{i,t}$  is the earnings surprise, measured as the actual earnings per share on the announcement date minus the mean analyst forecast immediately preceding the earnings announcement date. As in Eq. (1),  $UE$  is scaled by firm  $i$ 's stock price as of the beginning of the fiscal year (at time  $t - 1$ ). The parameter estimate,  $\alpha_1$ , yields a measure of the extent to which earnings are considered value relevant to investors. Variables known to impact the earnings response coefficient,  $SIZE_{i,t}$ ,  $BM_{i,t}$  and  $LEV_{i,t}$ , are included as controls.  $SIZE_{i,t}$  is measured as the natural logarithm of firm  $i$ 's market value of equity as of fiscal year end  $t$ .  $BM_{i,t}$  is measured as the natural logarithm of firm  $i$ 's ratio of book value of equity to market value of equity as of fiscal year end  $t$ .  $LEV_{i,t}$ , a measure of firm  $i$ 's total financial leverage, is computed as the ratio of total liabilities to total assets as of fiscal year end  $t$ . Each fiscal year end and within each industry (defined by two-digit SIC code), firms are ranked annually based upon the chosen tax avoidance proxy from Eq. (1) and placed into quintiles for purposes of estimating Eq. (2). To the extent that firms with greater exhibited tax avoidance present financial statements that are less timely and/or require more time to analyze the risks and prospects facing the firm, investors will find the annual earnings announcement to be *less* value relevant.

## 4 Primary analysis

### 4.1 Descriptive statistics

Table 1 presents descriptive statistics for the sample period 1993 through 2010. The average firm issues the annual earnings announcement slightly more than 41 calendar days after its fiscal year-end. Consistent with prior tax avoidance literature  $ETR$  is larger than  $CETR$  (Dyreng et al. 2008), and the effective tax rates are close to those reported in existing studies. A concern with smaller cash effective tax rates is the extent to which the sample is comprised of smaller, and perhaps more growth-oriented firms. If this is the case, then this proxy may not be capturing tax avoidance. However, the relatively large means reported for size and the inclusion of  $DTAX$  help to mitigate confounding inferences in the multivariate analysis reported in Sect. 4.3. The average firm reports a very small positive earnings surprise at the annual earnings announcement date, and very little extraordinary items. Only 4 percent of the firms in the sample reported a net loss for at least one fiscal year, and 34.4 % of the firms in the sample report do not report a clean audit opinion.<sup>13</sup>

<sup>12</sup> Parameter estimates used in the market model to measure the abnormal return surrounding the annual earnings announcement date are obtained during a period ending 10 days prior to the earnings announcement date.

<sup>13</sup> Most of the firms in  $OPIN$  (99.998 %) report an unqualified audit opinion with explanatory language. A very small percentage (less than .002%) of firms in  $OPIN$  report no audit opinion. There are no firms in our sample that report an adverse opinion.



**Table 1** Descriptive statistics

Variable	N	Mean	SD	10th Pctl	50th Pctl	90th Pctl
DELAY	16,340	41.215	15.632	24.000	39.000	61.000
ETR	16,340	0.322	0.110	0.163	0.349	0.411
CETR	16,340	0.263	0.157	0.048	0.265	0.445
BTD	16,340	0.023	0.069	-0.033	0.018	0.086
DTAX	16,340	0.007	0.049	-0.032	0.002	0.054
UE	16,340	0.000	0.008	-0.004	0.000	0.005
EXTR	16,340	0.019	0.135	0.000	0.000	0.000
LOSS	16,340	0.039	0.194	0.000	0.000	0.000
OPIN	16,340	0.344	0.475	0.000	0.000	1.000
FYE	16,340	0.585	0.493	0.000	1.000	1.000
BIG4	16,340	0.382	0.486	0.000	0.000	1.000
SIZE	16,340	6.322	1.690	4.214	6.202	8.604
LIT	16,340	0.570	0.495	0.000	1.000	1.000
MTB	16,340	3.186	2.802	1.102	2.371	5.966
LEV	16,340	0.452	0.198	0.179	0.459	0.706
DISTRESS	16,340	-3.581	1.057	-4.816	-3.690	-2.121
VOL	16,340	14.011	0.905	12.812	14.042	15.161
SHARE	16,340	2.767	1.675	0.704	2.592	5.129
PPE	16,340	0.493	0.345	0.117	0.415	0.988
ACC	16,340	0.001	0.064	-0.068	0.000	0.074

This table presents descriptive statistics for the variables used in the empirical analyses. The sample is comprised of 16,340 firm-years spanning the period 1993 through 2010. Financial reporting delay, *DELAY*, is measured as the number of calendar days from firm *i*'s fiscal year-end to the annual earnings announcement date. The book effective tax rate, *ETR*, is computed as total tax expense (Compustat  $TXT_{i,t}$ ) divided by pretax book income less special items (Compustat  $PI_{i,t} - SPI_{i,t}$ ). The current cash effective tax rate, *CETR*, is computed as total cash taxes paid (Compustat  $TXPD_{i,t}$ ) divided by pretax book income less special items (Compustat  $PI_{i,t} - SPI_{i,t}$ ). Total book-tax difference, *BTD*, is computed using the Hanlon et al. (2005) methodology. Discretionary tax planning, *DTAX*, is computed following Frank et al. (2009). Earnings surprise, *UE*, is computed as the difference between actual earnings per share minus the mean analyst consensus forecast immediately preceding the earnings announcement date, scaled by lagged fiscal year-end stock price. *EXTR*, is an indicator variable equal to one if the firm has reported extraordinary items during the fiscal year. *LOSS* is an indicator variable equal to one if the firm reports negative net income during the fiscal year. *OPIN* is an indicator variable equal to one if the firm did not receive a standard, unqualified audit opinion for the most recent fiscal year. *FYE* is an indicator variable equal to one if the firm has a December 31 fiscal year end. *BIG4* is an indicator variable equal to one if the firm was audited by one of the Big Four audit firms. *SIZE* is measured as the natural log of total assets (Compustat  $AT_{i,t}$ ). Litigation risk, *LIT*, is an indicator variable equal to one if the firm's SIC code is in 2833-3836, 3570-3577, 3600-3674, 5200-5961, 7370-7374. Market-to-book ratio, *MTB*, is computed as the ratio of market value of equity (Compustat  $PRCC_{F_{i,t}} \times CSHO_{i,t}$ ) to book value of equity (Compustat  $CEQ_{i,t}$ ). Leverage, *LEV*, is computed as total long term debt (Compustat  $DLTT_{i,t}$ ) divided by total assets (Compustat  $AT_{i,t}$ ). Financial distress, *DISTRESS*, is measured using Zmijewski's (1984) prediction model. Share-based volatility, *VOL*, is measured as the natural logarithm of the ratio of total common shares traded during the year (Compustat  $CSHTR_{C_{i,t}}$ ) to total common shares outstanding at fiscal year-end (Compustat  $CSHO_{i,t}$ ). Share concentration ratio, *CON*, is measured as total shares outstanding (Compustat  $CSHO_{i,t}$ ) divided by total shareholders (Compustat  $CSHR_{i,t}$ ). *PPE* is computed as net property, plant and equipment (Compustat  $PPENT_{i,t}$ ) divided by total assets (Compustat  $AT_{i,t}$ ). Pretax discretionary accruals, *ACC*, is computed following Frank et al. (2009). Effective tax rates (*ETR* and *CETR*) are constrained to lie on the [0,1] interval. Firms with negative pretax book income (Compustat  $PI_{i,t}$ ), total tax expense (Compustat  $TXT_{i,t}$ ) or cash taxes paid (Compustat  $TXPD_{i,t}$ ) are omitted from the analysis. Utilities and financial firms are excluded from the sample. All continuous variables are winsorized at the 1 and 99 % level

**Table 2** Sample composition

Years	Frequency	%	Cumulative freq	Cumulative %
<i>Panel A: Time distribution</i>				
1993	925	5.66	925	5.66
1994	1,094	6.7	2,019	12.36
1995	1,141	6.98	3,160	19.34
1996	1,208	7.39	4,368	26.73
1997	1,198	7.33	5,566	34.06
1998	1,122	6.87	6,688	40.93
1999	1,038	6.35	7,726	47.28
2000	925	5.66	8,651	52.94
2001	719	4.4	9,370	57.34
2002	644	3.94	10,014	61.29
2003	687	4.2	10,701	65.49
2004	801	4.9	11,502	70.39
2005	868	5.31	12,370	75.7
2006	870	5.32	13,240	81.03
2007	838	5.13	14,078	86.16
2008	749	4.58	14,827	90.74
2009	700	4.28	15,527	95.02
2010	813	4.98	16,340	100
One-digit SIC	Frequency	%	Cumulative freq	Cumulative %
<i>Panel B: Industry distribution</i>				
0–1 (Agriculture, mining, oil and construction)	786	4.81	786	4.81
2 (Food, tobacco, textiles, paper and chemicals)	3,333	20.40	4,119	25.21
3 (Manufacturing, machinery and electronics)	6,135	37.55	10,254	62.75
4 (Transportation and communications)	595	3.64	10,849	66.40
5 (Wholesale and retail)	2,528	15.47	13,377	81.87
7 (Services)	2,197	13.45	15,574	95.31
8 (Health, legal and educational services and other)	766	4.69	16,340	100.00

Table 2 (Panel A) presents the time distribution. A larger number of observations are obtained from the mid- to late-90s. This is expected since firms with negative pretax income are omitted from the analysis. Further, this clustering is relatively modest and does not appear to induce a time effect. Panel B presents the industry distribution. We note a large number of observations from the manufacturing, machinery, and electronics industry (one-digit SIC = 3). In our multivariate analyses, we control for industry effects using industry indicators at a much more refined level (i.e., two-digit SIC).<sup>14</sup>

<sup>14</sup> In Sect. 4.3, we confirm our results are robust to using the Fama and French (1997) industry classification scheme in lieu of two-digit SIC. .

## 4.2 Correlations

Table 3 presents correlation coefficients for the variables used in this study. Although there are significant correlations across variables, most of the correlation coefficients are relatively small and collinearity does not appear to be an issue.<sup>15</sup> The negative correlation between *UE* and *DELAY* is consistent with the ‘good news early, bad news late’ hypothesis. The tax avoidance proxies are highly correlated with each other and display the correct sign. Using a two-sided test, and the 5 % level as the threshold for significance, both *BTD* and *DTAX* are statistically correlated with *DELAY*. Tax avoidance (through *ETR* and *BTD*) are negatively associated with *DELAY*, suggesting a result opposite of the hypothesized relation. All of the tax avoidance proxies are single period measures chosen to capture the extent to which tax avoidance in the *most recent fiscal year* is related to a delayed annual earnings announcement. Annual effective tax rates may contain a fair amount of noise, rendering their ability to capture tax avoidance objectionable (Dyreg et al. 2008). The same criticism may be advanced toward *BTD* and *DTAX*; however, *BTD* has been noted as a red-flag indicator in many financial statement analysis treatments (e.g., Hanlon 2005) and has been the subject of considerable debate as many firms’ *BTDs* appear to be growing due to the lack of conformity between financial and tax accounting. Further, *DTAX* is measured by industry (two-digit SIC) thereby isolating cross-sectional differences in effective tax rates (and thus permanent differences) across industries. As discussed in Sect. 3.2, *CETR* may exhibit tax avoidance primarily through temporary differences (i.e., conforming tax planning) that will eventually reverse. *BTD* also captures temporary differences (in addition to permanent differences). If *CETR* is insignificant and *BTD* is significant in estimating model 1, then one may conclude that *CETR* is in fact a noisy proxy for tax avoidance.

## 4.3 Multivariate analyses

Table 4 presents results from the multivariate regressions of *DELAY* on tax avoidance and control variables in Eq. (1). Results indicate that tax avoidance is associated with a *less* timely annual earnings announcement.<sup>16</sup> As discussed in Sect. 3.2, *BTD* captures both temporary and permanent differences which may cloud the relationship between tax avoidance and the timeliness of the annual earnings announcement, particularly if one believes that it is primarily permanent differences (or, more specifically, the opacity of permanent differences) that induce a less timely earnings announcement. Results show that larger *BTDs* are marginally related to later financial reporting ( $p$  value < 0.10).<sup>17</sup> *DTAX* represents the discretionary, permanent portion of book-tax differences and Table 4 shows a significant relationship between larger *DTAX* and longer reporting delays ( $p$  < 0.05). The statistically negative coefficient loading on *UE* is consistent with the ‘good news early, bad news late’ hypothesis, and the statistically positive coefficient loading on *ACC* is consistent

<sup>15</sup> The variance inflation factors (“VIFs”) among independent variables of interest in the regression model are all less than 2.

<sup>16</sup> In untabulated analyses, we estimate Eq. (1) using *ETR* and *CETR* as tax avoidance proxies and do not observe statistical significance. The effective tax rate (*ETR*) is affected by financial reporting conventions (through total tax expense) and the cash effective tax rate (*CETR*) does not distinguish between cash taxes paid and the timing of the tax liability. Thus, the effective tax rate measures are arguably noisy and, not surprisingly, do not exhibit a relation to financial reporting delay.

<sup>17</sup> All  $p$  values are two-tailed.

**Table 3** Correlations

	DELAY	ETR	CETR	BTD	DTAX	UE	EXTR	LOSS	OPIN	FYE	BIG4	SIZE	LIT	MTB	LEV	DISTR	VOL	SHARE	PPE	ACC
DELAY		<b>0.05</b>	0.01	-0.02	<b>0.03</b>	-0.06	0.01	<b>0.04</b>	0.01	-0.02	-0.02	-0.34	-0.15	-0.22	-0.05	0.07	-0.06	0.07	-0.08	0.09
ETR	0.00		<b>0.37</b>	-0.14	-0.31	-0.04	0.00	-0.08	-0.07	-0.05	-0.05	-0.08	-0.16	-0.05	0.05	0.02	-0.16	-0.06	0.02	0.03
CETR	0.01	<b>0.35</b>		-0.36	-0.17	-0.09	-0.01	-0.01	-0.04	-0.10	-0.04	-0.03	-0.05	-0.08	0.00	-0.04	-0.19	-0.12	0.00	-0.05
BTD	0.01	-0.10	-0.29		0.22	0.01	-0.01	-0.18	0.02	0.07	0.03	0.05	-0.01	0.10	-0.03	-0.04	0.05	0.03	0.10	0.14
DTAX	<b>0.04</b>	-0.31	-0.17	<b>0.30</b>		<b>0.04</b>	-0.01	-0.13	-0.03	0.00	<b>0.04</b>	-0.11	0.06	0.01	-0.06	-0.05	0.01	0.01	-0.06	0.07
UE	-0.11	-0.05	-0.08	<b>0.03</b>	<b>0.05</b>		-0.01	-0.03	0.01	0.01	0.00	0.03	0.05	0.01	0.01	-0.04	<b>0.08</b>	<b>0.04</b>	-0.03	-0.04
EXTR	<b>0.02</b>	0.00	-0.01	-0.01	-0.01	0.00		-0.01	<b>0.10</b>	-0.02	-0.01	-0.01	0.00	-0.03	0.02	0.02	-0.03	-0.03	0.03	0.00
LOSS	<b>0.05</b>	-0.08	<b>0.02</b>	-0.21	-0.18	-0.05	-0.01		0.06	0.01	0.00	-0.01	0.02	-0.06	0.06	0.14	<b>0.03</b>	<b>0.02</b>	-0.04	-0.05
OPIN	0.01	-0.05	-0.03	0.01	-0.04	<b>0.02</b>	<b>0.10</b>	<b>0.06</b>		<b>0.05</b>	<b>0.04</b>	<b>0.24</b>	-0.02	-0.03	0.12	0.09	0.09	0.03	<b>0.05</b>	-0.02
FYE	-0.01	-0.05	-0.09	0.06	0.00	0.01	-0.02	0.01	<b>0.05</b>		<b>0.05</b>	<b>0.12</b>	-0.10	0.04	0.07	0.08	-0.01	0.06	0.04	0.01
BIG4	-0.01	-0.04	-0.03	<b>0.03</b>	<b>0.04</b>	0.00	-0.01	0.00	0.04	<b>0.05</b>		<b>0.04</b>	0.00	0.02	-0.02	-0.01	0.08	0.03	-0.06	0.00
SIZE	-0.34	-0.02	-0.03	<b>0.04</b>	-0.13	<b>0.06</b>	-0.01	-0.01	0.24	0.12	<b>0.04</b>		-0.07	0.12	0.45	0.33	0.13	0.06	0.15	-0.10
LIT	-0.14	-0.13	-0.05	-0.02	0.06	<b>0.02</b>	0.00	0.02	-0.02	-0.10	0.00	-0.06		0.08	-0.15	-0.19	0.16	0.02	-0.10	-0.03
MTB	-0.17	-0.04	-0.09	0.07	0.06	<b>0.03</b>	-0.03	-0.03	-0.05	0.04	<b>0.03</b>	0.09	0.06		0.00	-0.23	0.18	0.08	-0.09	-0.07
LEV	-0.04	<b>0.04</b>	<b>0.02</b>	-0.03	-0.07	0.00	0.02	0.06	0.12	0.07	-0.02	0.44	-0.15	0.10		0.79	-0.17	-0.12	0.21	-0.02
DISTR	<b>0.08</b>	0.01	-0.03	-0.05	-0.08	-0.06	0.02	0.16	0.08	0.08	-0.02	0.29	-0.20	-0.11	0.78		-0.18	-0.08	0.21	0.02
VOL	-0.08	-0.13	-0.18	0.05	0.03	<b>0.07</b>	-0.04	0.03	0.08	-0.02	0.08	0.13	0.16	0.14	-0.15	-0.16		0.25	-0.24	-0.04
SHARE	<b>0.06</b>	-0.06	-0.11	0.04	0.02	<b>0.03</b>	-0.03	0.02	0.04	0.07	0.04	0.05	0.01	0.08	-0.12	-0.06	0.25		-0.19	-0.03
PPE	-0.05	0.02	-0.04	0.09	-0.06	0.00	0.03	-0.04	0.07	0.08	-0.05	0.14	-0.15	-0.09	0.20	0.19	-0.20	-0.17		0.05
ACC	<b>0.10</b>	<b>0.03</b>	-0.05	<b>0.14</b>	0.12	-0.02	0.00	-0.07	-0.02	0.00	0.00	-0.10	-0.03	-0.06	-0.02	0.02	-0.04	-0.03	<b>0.03</b>	

This table presents correlation coefficients for the variables defined in Table 1. Pearson (Spearman) correlation coefficients are reported below (above) the diagonal. Bolded correlation coefficients denote significance at the 5 % level or less using a two-sided test

**Table 4** Multivariate analyses of tax avoidance as a determinant of financial reporting delay

Variable	TAX = BTD		TAX = DTAX	
	Estimate	Prob >  t	Estimate	Prob >  t
Intercept	97.730	<.0001	97.593	<.0001
TAX	3.246	0.096	5.985	0.024
UE	-147.994	<.0001	-149.231	<.0001
EXTR	2.171	0.018	2.171	0.018
LOSS	1.599	0.018	1.638	0.017
OPIN	0.846	0.005	0.848	0.005
FYE	-0.340	0.475	-0.336	0.479
BIG4	-0.655	0.113	-0.669	0.105
SIZE	-4.399	<.0001	-4.372	<.0001
LIT	-2.331	0.026	-2.359	0.024
MTB	-0.573	<.0001	-0.573	<.0001
LEV	5.803	0.005	5.683	0.006
DISTR	1.702	<.0001	1.710	<.0001
VOL	-1.639	<.0001	-1.637	<.0001
SHARE	0.228	0.067	0.228	0.067
PPE	-5.977	<.0001	-5.931	<.0001
ACC	11.142	<.0001	11.138	<.0001
F values	36.72	<.0001	36.80	<.0001
Adj. R <sup>2</sup>	0.320		0.320	
N	16,340		16,340	

This table reports results from estimating the following multivariate regression:

$$\begin{aligned}
 DELAY_{i,t} = & \beta_0 + \beta_1 TAX_{i,t} + \beta_2 UE_{i,t} + \beta_3 EXTR_{i,t} + \beta_4 LOSS_{i,t} + \beta_5 OPIN_{i,t} + \beta_6 FYE_{i,t} + \beta_7 BIG4_{i,t} \\
 & + \beta_8 SIZE_{i,t} + \beta_9 LIT_{i,t} + \beta_{10} MTB_{i,t} + \beta_{11} LEV_{i,t} + \beta_{12} DISTRESS_{i,t} + \beta_{13} VOL_{i,t} + \beta_{14} SHARE_{i,t} \\
 & + \beta_{15} PPE_{i,t} + \beta_{16} ACC_{i,t} + \delta_{ind} + \tau_t + \varepsilon_{i,t}
 \end{aligned}$$

$TAX_{i,t}$  represents one of two measures of firm-level tax avoidance (*BTD* or *DTAX*). For brevity, industry ( $\delta_{ind}$ ) and time ( $\tau_t$ ) indicators are not reported. All other variables are defined in Table 1. SEs are clustered by firm

with the earnings management hypothesis of Trueman (1990). The highly significant coefficient loadings on the control variables support their inclusion in the model.<sup>18</sup>

Overall, Table 4 presents results consistent with the hypothesis that tax avoidance results in a less timely annual earnings announcement.<sup>19</sup> This result is robust to controlling for the magnitude of the earnings surprise at the announcement date, profitability, audit-related influence, size, leverage, financial condition, shareholder-related influence, capital intensity, and financial reporting aggressiveness. This result is consistent with the hypothesis developed in Sect. 2 in that firms exhibiting higher levels of tax avoidance face incrementally greater demands on the information production within the firm resulting in a less timely annual earnings announcement. This hypothesized relation is also consistent

<sup>18</sup> Results do not change when *FYE* and *SHARE* are omitted from the analysis.

<sup>19</sup> In untabulated analyses, all multivariate regressions are estimated using the Fama and French (1997) industry classification scheme in lieu of two-digit SIC code. Results are unchanged. Statistical significance of the parameter estimates on *BTD* and *DTAX*, however, are higher (less than 5% significance level).

**Table 5** Multivariate analyses of the impact of tax avoidance on the value relevance of earnings

Variable	Q1			Q2			Q3			Q4			Q5		
	Estimate	Prob >  t		Estimate	Prob >  t		Estimate	Prob >  t		Estimate	Prob >  t		Estimate	Prob >  t	
<i>Panel A: Total book-tax differences (BTD) as the tax avoidance proxy used to construct quintiles each industry-year</i>															
Intercept	0.002	0.815		0.005	0.364		0.005	0.324		0.012	0.025		0.003	0.663	
UE	1.125	<0.001		0.971	<0.001		1.527	<0.001		1.387	<0.001		1.384	<0.001	
SIZE	0.000	0.917		-0.001	0.052		-0.001	0.376		0.000	0.584		-0.001	0.335	
BM	-0.006	0.033		-0.004	0.127		-0.004	0.123		-0.005	0.031		-0.003	0.261	
LEV	0.012	0.151		0.025	0.000		0.016	0.023		0.001	0.889		0.018	0.012	
F values	10.330	<0.001		11.840	<0.001		13.840	<0.001		7.630	<0.001		12.180	<0.001	
Adj. R <sup>2</sup>	0.02			0.02			0.03			0.02			0.02		
N	3,038			3,373			3,380			3,373			3,154		
<i>Panel B: Discretionary tax planning (DTAX) as the tax avoidance proxy used to construct quintiles each industry-year</i>															
Intercept	0.001	0.826		0.003	0.612		0.005	0.378		0.010	0.055		0.007	0.178	
UE	0.937	<0.001		1.625	<0.001		1.409	<0.001		1.670	<0.001		0.894	<0.001	
SIZE	-0.001	0.313		-0.001	0.414		-0.001	0.551		0.000	0.658		-0.001	0.183	
BM	-0.002	0.354		-0.003	0.241		-0.007	0.013		-0.005	0.024		-0.003	0.168	
LEV	0.020	0.008		0.019	0.005		0.018	0.014		0.002	0.720		0.012	0.123	
F values	7.420	<0.001		16.550	<0.001		8.530	<0.001		18.310	<0.001		7.990	<0.001	
Adj. R <sup>2</sup>	0.01			0.03			0.02			0.03			0.01		
N	3,038			3,373			3,380			3,373			3,154		

This table reports results from estimating the following multivariate regression:  $r_{i,t} = \alpha_0 + \alpha_1 UE_{i,t} + \alpha_2 SIZE_{i,t} + \alpha_3 BM_{i,t} + u_{i,t}$ .  $r_{i,t}$  is computed as firm  $i$ 's cumulative abnormal stock return measured during the 3 day window surrounding the annual earnings announcement date.  $UE_{i,t}$  is firm  $i$ 's earnings surprise described in Table 1.  $SIZE_{i,t}$  is computed as the natural logarithm of firm  $i$ 's market value of equity at the end of the fiscal year.  $BM_{i,t}$  is computed as the natural logarithm of firm  $i$ 's book-to-market value of equity ratio at the end of the fiscal year.  $LEV_{i,t}$  is computed as the ratio of total long term debt to total assets. All variables are winsorized at the 1 and 99 % level. Standard errors are clustered by firm. Observations for tax avoidance are ranked each industry-year and placed into quintiles. Quintiles (Q<sub>1</sub>) are tabulated in the direction of greater tax avoidance for each tax avoidance proxy

with an agency theory of tax avoidance (Desai and Dharmapala 2006) and related earnings management theories (Trueman 1990; Frank et al. 2009) documented in the literature.

#### 4.4 Supplemental analysis

Using the sample for Eq. (1), Table 5 presents results on earnings informativeness when firms are segmented in book-tax quintiles.<sup>20</sup> Tax avoidance quintiles ranked on *BTD* (Panel A) do not exhibit a systematic relationship, perhaps because *BTD* is also influenced by the degree of capital intensity within the firm (i.e., through timing differences in the treatment of depreciable fixed assets). Panel B, reporting results based on *DTAX*, documents the largest difference in earnings response coefficients, with the earnings response coefficient most diminished in the highest quintile. Overall, the earnings response coefficients appear to exhibit a U-shaped pattern across quintiles, with firms in the extreme quintiles reporting less value-relevant earnings to investors during the 3 day window surrounding the annual earnings announcement date. Firms with notably ‘low’ and ‘high’ tax avoidance are perhaps more difficult to analyze. As discussed previously, one possible explanation of the diminished earnings response coefficient is that it takes longer for investors to evaluate the risks and prospects of firms with *relatively* higher (and lower) exhibited tax avoidance and industry reference points are often required. Such requirements appear to decay the value relevance of the annual earnings announcement across tax avoidance portfolios. Thus, not only does tax avoidance result in a less timely annual earnings announcement, it also takes longer to assess the risk of tax avoidance thereby reducing the value-relevance of the annual earnings announcement.<sup>21</sup>

## 5 Conclusion

The purpose of this paper is to investigate the extent to which corporate tax avoidance results in a less timely annual earnings announcement. Evidence is presented in favor of this hypothesis. Following prior literature, a robust set of controls are used in order to isolate the effect of tax avoidance on the timeliness of the annual earnings announcement. Investigating the extent to which tax avoidance impacts the timeliness of the annual earnings announcement is important for several reasons. First, it extends the literature examining the ‘good news early, bad news late’ hypothesis by including the proposition that corporate tax avoidance aids management in hoarding bad news within the firm up to a point at which it meets a certain threshold and then is released at once (Kothari et al. 2009; Kim et al. 2011). Second, tax avoidance as an explanation for a delay in the annual earnings announcement sheds additional light on explanations for information asymmetry that is particularly acute during the largest annual information production period within the firm. Finally, there is increasing evidence that corporate tax avoidance impacts the firm’s information risk and hence is becoming a significant risk characteristic that should be considered in evaluating firm-specific risk.

<sup>20</sup> In untabulated tests, one observes a diminished earnings response coefficient using *ETR* as a tax avoidance proxy. When examining only quintile 1 (lowest tax avoidance) and quintile 5 (highest tax avoidance). A similar finding is observed for *CETR*, though the smallest earnings response coefficient is obtained in the highest tax avoidance quintile.

<sup>21</sup> Results are similar using the Fama and French (1997) industry classification scheme in lieu of two-digit SIC code.

Our study also contributes to the debate over book-tax conformity (Hanlon and Heitzman 2010; Atwood et al. 2010). Specifically, we provide evidence suggesting that one consequence of decreased book-tax conformity (i.e., greater book-tax differences) is a delayed annual earnings announcement. Moreover, we show that high levels of exhibited tax avoidance are associated with less informative annual earnings announcements. Although our focus is on the relation between tax avoidance and the timing of the *mandatory* annual earnings announcement, we look to future research to explore possible relations between *voluntary* disclosure policy and tax avoidance. Specifically, it would also be of interest to examine the link between changes in a firm's level of tax avoidance and changes in a firm's *voluntary* disclosure pattern.

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