Income Statement Reporting Discretion Allowed by FIN 48: Interest and Penalty Expense Classification

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Abstract:

Financial Accounting Standards Board (FASB) Interpretation No. 48 (FIN 48) provides guidance on accounting for uncertain tax positions including the accrual of interest and penalty expense on unrecognized tax benefits (UTB). However, FIN 48 allows managers discretion over the classification of UTB interest and penalty expenses on the income statement. We use this unique setting to investigate whether tax avoidance behavior influences managers' financial reporting decisions and determine whether these decisions have implications for financial reporting transparency. Managers of firms engaged in more tax avoidance may have an incentive to include UTB interest and penalties in tax expense, which can inflate the reported tax expense on the income statement, to better obfuscate their tax avoidance behavior and avoid increased scrutiny and reputational costs. We find firms with low effective tax rates (ETR) and firms engaged in tax disputes are more likely to include UTB interest and penalties as components of tax expense. We also find the inclusion of all UTB interest and penalties in tax expense is associated with less accurate analyst forecasts. This suggests that income statement classification of interest and penalties have an effect on financial statement transparency.

Key words: *FIN 48, unrecognized tax benefits, financial reporting transparency, income statement expense classification*

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1. Introduction

In response to concerns about the lack of transparency and opportunity for earnings management associated with accounting for tax liabilities, the Financial Accounting Standards Board (FASB) passed FASB Interpretation No. 48, Accounting for Uncertainty in Income Taxes (FIN 48). FIN 48 required significant changes to firms' recognition and disclosure of unrecognized income tax benefits (UTBs) within the financial statements.[1] One of the reasons for the passage of FIN 48 was to provide consistency and comparability in measuring income taxes (FASB 2006). However, firms are allowed discretion over where the accrued interest and penalty expenses associated with UTBs are classified on the income statement (e.g., income tax expense, interest expense, selling, general and administrative expense or other).[2] While respondents to the exposure draft requested guidance on classification of penalties and interest, the FASB determined that further guidance on classification, if any, should be more properly considered in the short-term convergence project (FASB 2006). Based on prior literature that suggests tax aggression and financial reporting incentives influence FIN 48 reporting (e.g. Hanlon and Heitzman 2010), we investigate how tax avoidance behavior influences managers' financial

[1] Unrecognized tax benefits (UTBs) are also referred to as uncertain tax benefits, tax contingency, tax reserve, tax contingency reserve and tax cushion by practitioners and prior literature.

[2] Paragraph 19 of FIN 48 states: "Interest recognized in accordance with paragraph 15 of this Interpretation may be classified in the financial statements as either income taxes or interest expense, based on the accounting policy election of the enterprise. Penalties recognized in accordance with paragraph 16 of this Interpretation may be classified in the financial statements as either income taxes or another expense classification, based on the accounting policy election of the enterprise. Those elections shall be consistently applied." (FASB 2006).

reporting decisions with respect to UTB interest and penalty expense and determine whether these decisions have implications for financial reporting transparency. [3]

Recently, Caterpillar, Inc.'s (Caterpillar) executives and tax consultants, PricewaterhouseCoopers (PwC), were questioned recently by a Senate subcommittee about Caterpillar's use of foreign operations to decrease its tax liability (Hagerty 2014). Caterpillar executives used the company's ETR as a defense, stating the company's ETR was 29% which was three percentage points higher than the average of U.S. corporations. This setting provides an incentive to include all of UTB interest and penalty expenses in tax expense on the income statement in order to mask the company's tax avoidance behavior. Through investigation of Caterpillar's financial statement footnotes, we discovered that Caterpillar includes all of UTB interest and penalty expenses in tax expense which increases the company's ETR.[4] This anecdotal evidence suggests companies' tax avoidance behavior creates financial reporting incentives to include the UTB interest and penalty expenses in tax expense. That is, when comparing the ETR to that of other U.S. companies, the tax avoidance behavior may not appear as egregious.

Given the ambiguous nature of certain tax laws, firms take uncertain positions on their tax returns that may require payment of additional taxes in the future if the firm is audited by taxing authorities and the taxing authorities disagree with the position taken. Prior to FIN 48, there was little guidance on the recognition and disclosure of these uncertain positions. In

[3] Starting in the summer of 2011, COMPUSTAT began reporting unrecognized tax benefit (UTB) details reported in the tax footnote as required by FIN 48. In 2009, Pfizer reported the largest accrued interest and penalties of $1.9 billion. Over 24 other firm-year observations also reported accruals of at least $1 billion. In 2009, Tyco Electronics Ltd. reported the largest interest and penalty expense at $1.2 billion; 13 firm-year observations reported annual expenses over $200 million. For all firms, the average interest and penalties accrual is 22% of UTBs and the absolute value of interest and penalties expense is approximately 10% of net income.

[4] Over the past seven years, the exclusion of UTB interest and penalty expense from Caterpillar's tax expense would have changed GAAP ETR by anywhere from approximately .4% to 2.3% in the aggregate.

particular, the contingent liabilities that originated from the uncertain positions taken by the firm were rarely disclosed as a separate item in the footnotes.[5] In addition, the amount of the interest and penalty expense associated with these positions was not disclosed separately. FIN 48 provides a unique opportunity to investigate management's voluntary decisions regarding expense classification on the income statement. By understanding what motivates a firm to include interest and penalty expenses in certain classifications on the income statement, we look to provide insight on how tax avoidance behavior and financial reporting incentives help determine firms' financial reporting.

Many worried that the increased disclosures required by FIN 48 would expose controversial tax positions (Frischmann, Shevlin, and Wilson 2008). While these positions may be legal, they may subject the firm to reputational costs.[6] For example, a 2011 Ernst & Young report describes how activist groups and the media bring attention to companies for not paying 'their fair share' of taxes (Ernst & Young 2011). Graham, Hanlon, Shevlin, and Schroff (2012) provide survey evidence that managers believe tax avoidance can impair a firm's reputation.[7] Further, Hanlon and Slemrod (2009) find investors respond negatively to news that firms are engaged in a tax shelter. Finally, Mauler (2014) provides evidence that investors discount earnings that have been managed through the tax account when pre-tax earnings forecasts are available. Collectively, the findings suggest there is potentially a cost to firms that manage earnings through the tax account and therefore, a benefit to mask the tax avoidance behavior.

[5] Disclosure would only be required if the reserves were material under FAS 5.
[6] For example, General Electric has been labeled a tax avoider in the popular press despite using legal tax planning to maintain a low tax rate (Kocieniewski 2011).
[7] While Graham et al. (2012) document managers' belief of reputational costs related to tax avoidance, empirical evidence has not provided support for those views (Gallemore, Maydew, and Thornock 2014; Austin and Wilson 2013).

Because of the potential increase in transparency of a firms' tax avoidance behavior, firms may look for other ways to increase information asymmetry to avoid additional tax assessments or public scrutiny. Northcut and Vines (1998) suggest firms with low ETR engage in earnings management to increase their reported ETR in order to avoid political scrutiny. Further, Frank, Lynch, and Rego (2009) provide evidence of a positive relation between tax reporting aggressiveness and financial reporting aggressiveness. Their results are consistent with firms engaging in tax aggressive behavior (i.e. tax shelters) to decrease taxable income and, at the same time, managing earnings (i.e. discretionary accruals) to increase book income. In addition, Robinson and Schmidt (2013) provide evidence suggesting firms use low quality FIN 48 disclosures to mask aggressive tax behavior. Similarly, choosing to classify all of the interest and penalty as tax expense can increase firms' ETR which may obfuscate their tax avoidance behavior and reduce scrutiny by taxing authorities, political organizations, media outlets, and other outside financial statement users concerned with firms paying an appropriate amount of taxes.[8] Accordingly, we predict a positive relation between tax avoidance (i.e., lower ETR and higher tax disputes) and classification of all UTB interest and penalty expenses in tax expense.

Consistent with the Caterpillar example, one such controversial tax avoidance strategy that firms may be trying to hide is shifting profits to foreign countries with lower tax rates (e.g. Hallman 2013). Prior research provides evidence that U.S. multinational corporations shift income to low tax foreign subsidiaries to avoid U.S. income tax (Collins, Kemsley, and Lang 1998; Klassen and Laplante 2012; Dyreng and Markle 2013). However, firms that employ such

[8] While information in the firms' footnotes could provide clarity, unsophisticated financial statement users often rely on the heuristic method of effective tax rate (i.e., tax expense divided by pre-tax income) to identify tax aggressiveness. For example, recently Carl Levin, Chairman of the Senate Permanent Subcommittee on Investigations, equated effective tax rate with "the tax they actually pay" when arguing to close tax loopholes (Levin 2013). Increasing the effective tax rate could potentially alleviate some political scrutiny and reputational consequences of tax avoidance.

strategies are often subject to Congressional scrutiny (e.g. Apple, Inc. and Caterpillar, Inc.) and negative publicity (Austin and Wilson 2013). Akamah, Hope, and Thomas (2014) provide evidence supporting multinational firms attempting to decrease transparency of tax avoidance behavior through the aggregation of geographic reporting segments. Firms may also be able to mask tax avoidance behavior from foreign operations and decrease scrutiny by including all of UTB interest and penalty expenses in tax expense.

The second objective of this study is to determine whether the decision to include all of UTB interest and penalty expense in tax expense has implications for financial reporting transparency. Specifically, we investigate whether management's financial reporting decisions influence the accuracy of analysts' forecasts. Barth and Schipper (2008, p.174) define financial reporting transparency as "the extent to which financial reports reveal an entity's underlying economics in a way that is readily understandable by those using the financial reports."

Prior research documents several benefits of financial reporting transparency including reduced information asymmetry and information risk (Barth and Schipper 2008). We suggest that the income statement classification discretion of UTB interest and penalty expense afforded by FIN 48 reduces financial reporting transparency. The reduction in transparency results from a lack of comparability between companies of income statement line items (i.e., tax expense) and the aggregation of dissimilar items in the same income statement classification. Further, Robinson (2010) suggests tax expense is generally more opaque and less understood than other items on the income statement. Therefore, by including UTB interest and penalty expense in the less understood tax expense classification, managers may be increasing the opacity of tax expense. Accordingly, we predict a positive relation between including all of UTB interest and penalty expense in tax expense and analyst forecast error.

With a hand collected sample of firms, we use logistic regression analysis to investigate determinants of firms classifying all of UTB interest and penalty expenses as a tax expense on the income statement. Specifically, we examine whether low ETRs and tax disputes influence the firm's financial reporting decisions. We provide support for a positive relation between tax avoidance behavior and the classification all of UTB interest and penalty expenses as tax expense. We also investigate two settings where firms are more likely engaging in tax avoidance behavior, greater income mobility (DeSimone, Mills, and Stomberg 2014) and more tax havens (Dyreng and Lindsey 2009). In both settings, firms are more likely to include all UTB interest and penalty expenses in tax expense. The results suggest financial reporting incentives created by external third parties influence firms' voluntary expense classifications. In particular, firms appear to include all UTB interest and penalty expenses in tax expense to disguise their aggressive tax behavior. This is consistent with firms making financial reporting decisions in response to tax related incentives (Robinson 2010; Akamah, Hope, and Thomas 2014).

Next, using OLS regression analysis and a propensity score matched sample, we investigate the association between firms' decisions to include all UTB interest and penalty in tax expense and the accuracy of analysts' forecasts. Analyst forecast accuracy is measured as the absolute value of the difference between the implied analyst effective tax rate forecast and the actual GAAP effective tax rate reported on the income statement. Consistent with Baik, Choi, Jung, and Morton (2013), the implied effective tax rate is based on the implied tax expense, which is the difference between analysts' forecasted net income and pre-tax income. Our results provide support for a negative relation between including all UTB interest and penalty expense in tax expense on the income statement and analyst forecast accuracy. These results suggest the

income statement classification decision to include UTB interest and penalty expense in tax expense decreases financial reporting transparency.

Our research makes several contributions to the literature. First, we contribute to a growing body of research on the determinants and implications of FIN 48 reporting. One aspect of FIN 48 yet to be investigated is the voluntary UTB interest and penalty expense classification. Examining determinants of the expense classification provides insight on what influences firms' FIN 48 financial reporting decisions.

Second, FIN 48 created an opportunity to examine, on a broader scale, what influences firms' financial reporting decisions. Prior research has provided evidence of firms' using both, tax reporting and financial reporting aggressiveness (Frank et al. 2009). However, we investigate a method where firms use income statement classification choices with the sole benefit of obscuring tax avoidance behavior. As a result, this provides a salient setting to understand the financial reporting incentives created by tax and political authorities in order to better help users of the financial statements make more informed decisions.

Third, we contribute to literature addressing the financial statement comparability resulting from the issuance of FIN 48. FIN 48 was intended to improve the comparability of how firms reported income taxes (Frischmann et al. 2008). Phillips and Tellez (2013) provide evidence supporting improved comparability after the issuance of FIN 48. However, we investigate a different aspect of FIN 48, UTB interest and penalty expense, and provide evidence that the income statement classification discretion allowed by FIN 48 does not improve financial statement transparency and comparability. This finding should be of particular interest to tax researchers who use tax avoidance measures that incorporate tax expense. We also contribute to the analyst forecast literature by addressing a different aspect of income taxes (i.e., accuracy of

ETR forecasts) than has traditionally been addressed (e.g., Amir and Sougiannis 1999, Chen and Schoderbek 2000, Plumlee 2003, Bauman and Shaw 2005, Shane and Stock 2006, and Weber 2009). Our results suggest that the FASB could further improve the financial transparency and comparability of income tax reporting by restricting options for income statement classification of UTB interest and penalty expense.

Finally, prior literature suggests managers use discretion in accounting for tax reserves to meet earnings targets and smooth earnings (Dhaliwal, Gleason, and Mills 2004; Blouin and Tuna 2007; Gupta, Laux, and Lynch 2011; Cazier, Rego, Tian, and Wilson 2014). In addition, prior research provides evidence that suggests firms advantageously use income statement classifications to manage the perception of earnings (McVay 2006). We provide evidence of another way in which firms could use expense classifications to manage stakeholder and shareholder impressions. In particular, we provide evidence suggesting firms may strategically classify UTB interest and penalty expenses as tax expense to obfuscate aggressive tax behavior.

The next section reviews the relevant literature and develops the hypotheses. Section 3 presents the research design and sample selection. Section 4 discusses the empirical results. Finally, Section 5 concludes the paper.

2. Prior Literature and Hypotheses Development

Prior to the issuance of FIN 48, there was significant diversity regarding the quality of financial reporting associated with the recognition and measurement in accounting for income taxes (Blouin. Gleason, Mills, and Sikes 2007). Consequently, contingent liabilities related to tax reserves were rarely reported or disclosed in financial statements (Gleason and Mills 2002). The FASB issued FIN 48 to reduce the diversity and improve the quality associated with the accounting for and reporting of income taxes (FASB 2006). The new guidance, effective in

2007, changed the process for evaluating a firm's tax position and required separate disclosure of unrecognized tax benefits (UTBs). In addition, FIN 48 required firms to accrue interest and penalties assessed on all UTBs, and to make an election of where the UTB interest and penalty expenses are classified on the income statement (e.g., income tax expense, interest expense, selling, general and administrative expense or other) (FASB 2006).

The new interpretation was met with significant criticism. Opponents to FIN 48 raised concerns that the new disclosure requirements would provide a roadmap for taxing authorities and in turn increase the transparency of controversial tax positions (Frischmann et al. 2008). However, Frischmann et al. (2008) examine the economic consequences surrounding the implementation of FIN 48 and find a positive stock market reaction which does not support the concerns regarding potential negative consequences.[9]

While the early stock market reaction to FIN 48 did not seem to support a negative view of the new guidance, firm managers' actions immediately prior to the required adoption date indicated their concerns about the impending additional tax disclosures (Blouin, Gleason, Mills, and Sikes 2010). For example, Blouin et al. (2010) investigate the number of IRS settlements made between the enactment and adoption of FIN 48. They find firms were more likely to settle IRS disputes during that period than the period preceding the enactment. In addition, they find firms were more likely to release tax related reserves during the period between enactment and adoption compared to the preceding period. Their results suggest firms potentially were trying to

[9] Frischmann et al. (2008) do find a significant negative stock market reaction to subsequent news of a Senate inquiry into the consistency of the disclosures which suggests investors may have revised their beliefs regarding the potential impact on additional tax costs. Consistent with the concern about providing a roadmap for taxing authorities, Abernathy, Davenport and Rapley (2013) show a negative market reaction to the IRS's initial announcement regarding Schedule UTP, a required annual report detailing FIN 48 information.

decrease visibility and scrutiny from taxing authorities. In addition, the results indicate firm managers may be influenced by third party perceptions of their aggressive tax behavior.

This view is supported by recent research suggesting managers believe that negative attention from the press will be costly to the firm. Specifically, Graham et al. (2013), document that 69% of executives surveyed cite "potential harm to firm reputation" as a reason for not adopting a tax planning strategy. They further note that concerns over reputation are the second most prevalent reason cited by tax executives for not participating in tax shelters. [10]

The discretion afforded by the UTB interest and penalty expense classification provides a unique opportunity to investigate the impact of financial reporting incentives on managers' decisions. Because FIN 48 allows managers discretion over where they include UTB interest and penalty expenses on the income statement, (tax expense, interest expense, selling, general, and administrative expenses), managers may be motivated to include UTB interest and penalty expenses in tax expense to mask their tax avoidance behavior.[11] Accordingly, we investigate how tax avoidance behavior influences managers' financial reporting decisions and whether those decisions have implications on financial reporting transparency.

2.1 Determinants of UTB Interest and Penalty Expense Classification

First, we investigate the influence of tax avoidance behavior on financial reporting decisions. Specifically, we investigate whether firms with more tax avoidance behavior are more likely to include all of UTB interest and penalty expense in tax expense. One of the main concerns expressed by firms prior to the issuance of FIN 48 was that the new disclosure

[10] While Graham et al. (2012) document managers' belief of reputational costs related to tax avoidance, empirical evidence has not provided support for those views (Gallemore, Maydew, and Thornock 2014; Austin and Wilson 2013).

[11] See Appendix A for 10-K examples of similar companies' disclosure of different interest and penalty expense classifications.

requirements would highlight firms' aggressive tax behavior (Frischmann et al. 2008). To counteract the increase in transparency, firms may look for other ways to increase the opacity of their tax avoidance behavior. Toward that end, Robinson and Schmidt (2013) suggest firms mask aggressive tax behavior by using low quality FIN 48 disclosures. Further, Northcut and Vines (1998) suggest political scrutiny influences firms with lower ETR to use earnings management to increase reported ETR. We suggest that another way to potentially obfuscate firms' tax avoidance behavior is to classify all of UTB interest and penalty expenses in tax expense on the income statement to inflate the appearance of taxes paid. Accordingly, because of firms' incentives to hide their tax avoidance behavior, we predict a positive relation between tax avoidance and classification of all UTB interest and penalty expenses in tax expense. Therefore, we formally state the following hypothesis:

> ***H1:*** Other things being equal, firms with more tax avoidance are more likely to classify all of UTB interest and penalty expenses in tax expense on the income statement.

2.2 Financial Reporting Transparency

The second objective of this study is to investigate the impact of managers' financial reporting decisions regarding income statement classification on financial reporting transparency. Specifically, we examine whether the inclusion of all UTB interest and penalty expense in tax expense influences the accuracy of analysts' forecasts. One of the main objectives of FIN 48 was to improve transparency and comparability with respect to tax reporting and disclosure (FASB 2006). However, the income statement classification discretion of UTB interest and penalty expense allowed by FIN 48 could in fact decrease financial reporting transparency. According to Barth and Schipper (2008, p.174), financial reporting transparency is defined as "the extent to which financial reports reveal an entity's underlying economics in a

way that is readily understandable by those using the financial reports." Financial reporting transparency provides several benefits to users of financial statements including reduced information asymmetry and information risk (Barth and Schipper 2008).

The income statement classification discretion allowed by FIN 48 could create comparability issues between firms as different firms include the UTB interest and penalty expenses in different income statement line items. Furthermore, by including all of UTB interest and penalty expense in tax expense, the manager is aggregating dissimilar items into one income statement classification which could create additional transparency concerns. Akamah et al. (2014) suggests managers aggregate geographic disclosures in an effort to conceal the use of foreign operations to reduce their tax liability. In addition, Robinson (2010) suggests tax expense is generally more opaque and less understood than other items on the income statement. Therefore, managers may be increasing the opacity of tax expense by including UTB interest and penalty expense in the tax expense classification. Accordingly, we predict a negative relation between including all of UTB interest and penalty expense in tax expense and the accuracy of analysts' forecasts. We formally state the following hypothesis:

H2: Other things being equal, classification of all of UTB interest and penalty expenses in tax expense on the income statement is positively associated with the analysts' forecast error.

3. Research Design

3.1 Sample Selection

Our sample begins with all non-financial and non-utility firms in COMPUSTAT with non-missing values of interest and penalty expense. We eliminated all firms reporting zero penalty and interest expense every year. From this sample, we select the earliest fiscal year available for each firm and hand collect information regarding UTB interest and penalty expense

classification from 10-K FIN 48 disclosures.[12] The fiscal years covered by the sample are from 2007 to 2011.[13] In addition, observations without all data requirements for our analysis were eliminated. Our final sample consists of 963 firms.

[Insert Table 1 Here]

3.2 Determinants of UTB Interest and Penalty Expense Classification

To test our first hypotheses (H1), we use a logistic regression that models the probability that a firm will classify all of UTB interest and penalty expenses as tax expense on the income statement. The dependent variable (*All_Tax*) is an indicator variable that takes the value of one if the firm includes all of UTB interest and penalty expense in tax expense and zero otherwise. The regression model is formally stated as follows:

$$\begin{aligned}\text{Prob}(\textit{All\_Tax}=1) = \text{F}(&\beta_0 + \beta_1 \textit{GAAP\_ETR}_{\text{i}} + \beta_2 \textit{Tax\_Disputes}_{\text{i}} \\ &+ \beta_3 \textit{Foreign\_Income}_{\text{i}} + \beta_4 \textit{Leverage}_{\text{i}} \\ &+ \beta_5 \textit{Inst\_Own}_{\text{i}} + \beta_6 \textit{FirmSize}_{\text{i}} \\ &+ \beta_7 \textit{BTM}_{\text{i}} + \beta_8 \textit{IntPenMagnitude}_{\text{i}} \\ &+ \beta_9 \textit{IntPenVolatility}_{\text{i}} + \beta_{10} \textit{FR\_Quality}_{\text{i}} \\ &+ \beta_{10} \textit{FR\_Aggression}_{\text{i}} + \text{Industry Indicators} \\ &+ \text{Year Indicators}) \qquad (1)\end{aligned}$$

The first potential determinant of firms' UTB interest and penalty expense classification decision is their level of tax avoidance. We measure tax avoidance in two ways. First, we use a firm's effective tax rate (*GAAP_ETR*) which is a common measure of tax avoidance in prior literature (Hanlon and Heitzman 2010) and appropriate in this setting where the classification of

[12] Paragraph 20 of FIN 48 states: "An enterprise shall disclose its policy on classification of interest and penalties in accordance with paragraph 19 of this Interpretation in the footnotes to the financial statements."

[13] Ideally, all observations would be for fiscal year 2007 when FIN 48 became effective. However, this limits our sample based on non-compliant firm reporting, missing tax footnote disclosure data in COMPUSTAT and additional data requirements for analysis. We expand the sample to subsequent years to capture the first year a firm has necessary data available.

interest and penalty expense is hypothesized to be determined by incentive to inflate reported tax expense. Furthermore, it is readily utilized even by unsophisticated financial statement users to assess how much firms pay in tax. *GAAP_ETR* is measured by dividing the total of the previous three years' tax expense by the total of the previous three years' pre-tax income.[14] Next, we measure tax avoidance using a measure from the Kinder, Lydenberg and Domini's (KLD) Stats database. *Tax_Disputes* is an indicator variable that takes the value of one if the KLD database indicates a rating of concern regarding a firm's disputes with tax authorities.[15]

We also include several control variables in our logistic regression analysis. Research suggests U.S. firms shift income out of the U.S. to low tax foreign subsidiaries to avoid U.S. income tax (Collins et al. 1998; Klassen and Laplante 2012; Dyreng and Markle 2013). Furthermore, Dyreng and Lindsey (2009) and Markle and Shackelford (2012) find that firms with operations in countries considered tax havens have lower ETRs. Foreign operations are just one method that firms could use to avoid U.S. income taxes and therefore, we include *Foreign_Income* in the model. *Foreign_Income* is an indicator variable that takes the value of one if the firm reports income from foreign operations, and zero otherwise. We expect a positive and significant coefficient on *Foreign_Operations* which would be consistent with firms masking their tax avoidance behavior. *Leverage* (total debt divided by total assets) is used as a proxy for debtholder influence on a firm. Prior research suggests that debtholders demand a higher level of transparency and conservatism to alleviate default risk (Leftwich 1983; Watts and

[14] For sensitivity analysis, we also reduce the numerator and denominator of *GAAP_ETR* by the UTB interest and penalty expense for firms that classify interest and penalty as tax expense. The regression results are consistent in magnitude and direction.

[15] Prior literature uses the KLD's tax dispute indicator as both part of composite measures (Hong and Kostovetsky 2012; Koh and Tong 2013; Lanis and Richardson 2014) and as an individual measure of tax avoidance (Jiao 2013; Zhou 2012).

Zimmerman 1986; Watts 1993, 2003a, b; Holthausen and Watts 2001). Furthermore, research also supports a decrease in information asymmetry in debt securities' trading from conservative financial reporting (Wittenberg-Moerman 2008). Therefore, in order to meet the demands of debt holders and obtain debt financing, firms may be incentivized to increase financial reporting transparency and decrease information asymmetry by not including UTB interest and penalty expenses in the less clearly understood tax expense classification.

Robinson and Schmidt's (2013) findings suggest shareholders reward firms' efforts to hide their aggressive tax behavior. Sophisticated investors can potentially better recognize the benefits associated with masking firm's aggressive tax behavior. Accordingly, we include institutional ownership as a proxy for sophisticated investors. *Inst_Own* is calculated as the number of shares held by institutions divided by total shares outstanding. We also control for the firm size (*FirmSize*) which is calculated as the natural log of the beginning balance of total assets. We control for firm growth using the book to market ratio (*BTM*) which is measured as the book value of equity divided by the market value of equity. We control for the magnitude and volatility of the UTB interest and penalty expense by including *IntPenMagnitude*, which is measured as the absolute value of UTB interest and penalty expense scaled by pre-tax income, and *IntPenVolatility*, which is the natural log of the standard deviation of the current and subsequent two years' UTB interest and penalty expense scaled by the absolute value of the mean for the corresponding three years of UTB interest and penalty expenses. We control for financial reporting quality to ensure a firm's quality of earnings is not confounding our results. We control for financial reporting quality using *FR_Quality* which is based on the Dechow and Dichev (2002) accruals quality measure. It is multiplied by negative one so that the measure is increasing in financial reporting quality. Finally, we control for financial reporting

aggressiveness using *FR_Aggression* which is the performance-matched measure of pre-tax discretionary accruals based on Frank et al. (2009). In addition, we include industry and year indicator variables to ensure particular industries or years do not confound the results. All variable descriptions are included in Appendix B.

A negative and significant β_1 and a positive and significant β_2 provide support for H1. This finding would suggest managers may be trying to mask their tax avoidance behavior by including all of UTB interest and penalty expenses in tax expense. The determinants should help provide insight into whether tax avoidance behavior influences managers' financial reporting decisions.

3.3 Financial Reporting Transparency

In order to test our final hypothesis (H2), we use an OLS regression to determine the implications of firms' financial reporting decisions to include all UTB interest and penalty expense in tax expense. The dependent variable is the absolute value of analysts' forecast error (*AbsETRerror*) which is measured as the absolute value of the difference between the consensus implied analysts ETR forecast minus the actual GAAP ETR. Consistent with Baik et al. (2013), the implied analyst forecast of ETR is based on forecasted income tax expense, which is the difference between the consensus analyst forecast for pre-tax income minus the consensus analyst forecast of earnings. The regression model is formally stated as follows:

$$\begin{aligned} AbsETRerror_i = {} & \beta_0 + \beta_1 All\_Tax_i + \beta_2 IntPenMagnitude_i \\ & + \beta_3 Abs\_PreTax\_For\_Err_i + \beta_4 Analyst\_Dispersion_i \\ & + \beta_5 Analyst\_Following_i + \beta_6 Forcasted\_ETR_i \\ & + \beta_7 Foreign\_Income_i + \beta_8 Leverage_i \\ & + \beta_9 Inst\_Own_i + \beta_{10} FirmSize_i + \beta_{11} BTM_i \\ & + \beta_{12} ROA_i + \beta_{13} NOL_i + \beta_{14} DNOL_i + \beta_{15} EarningsVolatility_i \\ & + \beta_{16} UTB_i + \beta_{17} SGA_i + \beta_{18} Cap\_Intensity_i \\ & + \beta_{19} Intang_i + \beta_{20} RandD_i + \beta_{21} Advertise_i + \beta_{22} Inventory_i \\ & + \text{Industry Indicators} + \text{Year Indicators} + \varepsilon_i \end{aligned} \quad (2)$$

The variable of interest is *All_Tax* which is an indicator variable that takes the value of one if the firm includes all UTB interest and penalty expense in tax expense and zero otherwise. A positive and significant coefficient on β_1 provides support for H2. We also include several control variables. *Foreign_Income*, *Leverage*, *Inst_Own*, *FirmSize*, and *BTM* are defined above. In addition, we control for both pre-tax analyst forecast error (*Abs_PreTax_For_Err*) and analyst forecast dispersion (*Analyst_Dispersion*). *Abs_PreTax_For_Err* is calculated by taking the absolute value of the difference between the consensus analysts' pre-tax forecast minus the actual pre-tax earnings scaled by the pre-tax forecast. *Analyst_Dispersion* is the standard deviation of analysts' EPS forecasts as reported by I/B/E/S. The number of analysts following a firm is controlled for using *Analyst_Following* which is determined by taking the natural log the number of analysts providing implied ETR forecasts. We also include *Forecasted_ETR* in the regression which is the mean implied analyst ETR forecast. We also control for financial performance using *ROA* which is measured as current year net income divided by lagged assets. We control for tax loss carry-forwards by including *NOL* which is an indicator variable that takes the value of one when the firm has a tax loss carry-forward and zero otherwise. In addition, we include *DNOL* to control for the change in tax loss carryforwards. *DNOL* is calculated by dividing the change in tax loss carryforwards from prior year scaled by lagged assets. We also control for volatility of earnings (*EarningsVolatility)* which is measured as the standard deviation of the past three years of pre-tax income scaled by the absolute value of the mean of the past three years of pre-tax income. Controls are also included for the magnitude of unrecognized tax benefits (*UTB*) and selling, general, and administrative expenses (*SGA*). *UTB* is calculated by dividing UTB by lagged assets. *SGA* is measured by dividing total selling, general, and

administrative expenses by sales. Capital intensity of a firm is controlled for with *Cap_Intensity* which is measured by scaling capital expenditures by lagged assets. Finally, we include controls for intangible assets (*Intang*), research and development expenses (*RandD*), advertising expenses (*Advertise*), and inventory (*Inventory*). Each of these variables is measured by their respective account balances divided by lagged total assets.

Whenever investigating the effects of an accounting choice, an important issue to address is self-selection (Oswald and Zarowin 2007). A firm's decision to include all UTB interest and penalty expense in tax expense may introduce self-selection bias into the observed sample. For example, firms that do not include all UTB interest and penalty expense in tax expense may be firms that provide better disclosures in general. Accordingly, we control for the firm's decision to include all UTB interest and penalty expense in tax expense using a propensity score matched sample of firms based on the determinant model (1) above.

4. Empirical Results

4.1 Descriptive Statistics

Table 2 presents the descriptive statistics for the 963 firms included in our sample. Panel A provides a breakdown of the number of firms that classify the UTB interest and penalty expenses in the different income statement classifications (e.g., income tax expense, interest expense, selling, general and administrative expense or other). The first column provides information on where the firms in our sample classify UTB interest expense on the income statement. Eighty-seven percent (87%) of firms include UTB interest as tax expense on the income statement. The second column identifies where the firms classify UTB penalties on the income statement. Again, a large majority of firms include penalties in tax expense (89%). Interestingly, three percent (3%) of firms classify penalties in selling, general and administrative

expenses which reduces operating income and EBITDA. The final column provides information on whether firms include both UTB interest and penalty expenses in the same classification or if the classifications are mixed. Approximately nine percent of firms include interest and penalty expense in different classifications on the income statement.

[Insert Table 2 Here]

Panel B of Table 2 provides the descriptive statistics for the variables used in our logistic regression analysis.[16] Of our sample, 86% of the firms include all of the UTB interest and penalty expenses in tax expense (*All_Tax*).[17] [18] The mean (median) of *GAAP_ETR* is 32% (34%). The KLD database identifies eight percent of the firms having a rating of concern regarding disputes with tax authorities. On average, 70% of firms engage in foreign operations and 73% of their shares are owned by institutions. In addition, the mean (median) of *Leverage* is 21% (19%).

Panel C of Table 2 includes descriptive statistics by UTB interest and penalty expense classification. The difference in mean for *GAAP_ETR* is negative but not statistically significant which is inconsistent with H1. However, *Tax_Disputes* is positive and marginally significant which provides univariate support for H1. Additionally, *Foreign_Income* is positive and significant suggesting firms with foreign operations are more likely to include all UTB interest and penalty expense in tax expense. These mixed results underscore the importance of examining such relations in a multivariate setting.

The Pearson correlation matrix is included in Table 3. None of the correlation coefficients among the regression variables is at a level considered to be highly correlated (i.e.,

[16] All variables are winsorized at the 1 and 99 percentage levels to mitigate the influence of extreme observations.
[17] In our sample, on average, UTB interest and penalty expense are approximately two percent of pre-tax income.
[18] We also investigate the distribution of firms by industry that include all of UTB interest and penalty expense in tax expense (*All_Tax* = 1) compared with firms that do not (*All_Tax* = 0). Each industry classifications is consistent with the aggregate percentage of firms that include UTB interest and penalty expense in tax expense.

greater than 0.80). Therefore, none of the regression variables should be omitted to prevent multi-collinearity concerns.

[Insert Table 3 Here]

4.2 Determinants of UTB Interest and Penalty Expense Classification

Table 4 reports the results of the logistic regression used to test our first hypothesis (H1). In column 1, we include results from estimating the regression with our first measure of tax avoidance (*GAAP_ETR*) using the full sample. When we include *IntPenVolatility* in column 2, our sample size is reduced to 778 firms because of data requirements. Inclusion of *FR_Quality* in column 3 and *FR_Aggression* in column 4 further reduces our sample size to 680 firms and 600 firms, respectively. The sample size is 449 firms in columns 5 and 6 because of data requirements for the *Tax_Disputes* variable. In addition, column 6 includes the full model with both measures of tax avoidance (*GAAP_ETR* and *Tax_Disputes*).

[Insert Table 4 Here]

H1 predicts a positive relation between tax avoidance and classifying all UTB interest and penalty expenses as tax expense. *GAAP_ETR* is our first measure of tax avoidance. The coefficient on *GAAP_ETR* is negative and significant in all columns (1, 2, 3, 4, and 6) (column 1: -1.3930, p=0.0135; column 2: -1.8029, p=0.0130; column 3: -2.0215, p=0.0170; column 4: -1.9056, p=0.0395; column 6: -2.8101, p=0.0326) which provides support for H1.[19] The second measure of tax avoidance used is *Tax_Disputes*. The positive and significant coefficients in column 5 and 6 (column 5: 1.9358, p=0.0308; column 6: 1.9204, p=0.0329) also provide support for H1. The interpretation of the *GAAP_ETR* coefficient in column 6 suggests a 1% decrease in

[19] Significance tests are two-tailed for all variables.

GAAP_ETR increases the likelihood of the firm including all UTB interest and penalty expense in tax expense by 2.77%. Likewise, if a firm has tax disputes (*Tax_Disputes*), the likelihood of the firm including UTB interest and penalty expense in tax expense is 6.82 times higher. Lower ETR and higher concern for disputes with taxing authorities suggest more tax avoidance. Therefore, the results indicate firms with more tax avoidance (lower ETR and concern for disputes with taxing authorities) are more likely to include all UTB interest and penalty expenses as tax expense to mask their tax avoidance behavior.

In addition, the results of the *Foreign_Operations* control variable are worth noting because it is one method potentially used by firms to avoid taxes. The coefficient on *Foreign_Operations* is positive and significant in columns 1, 2, 3, 4, and 6 (column 1: 0.9485, p=0.0004; column 2: 0.8813, p=0.0071; column 3: 0.7041, p=0.0422; column 4: 1.0018, p=0.0137; column 6: 0.9235, p=0.0833). The coefficient in column 6 suggests that firms with foreign income are 2.52 times more likely to include all UTB interest and penalty expense in tax expense. The findings provide support for firms with foreign operations being more likely to include all UTB interest and penalty expenses in tax expense. By including all UTB interest and penalty expense in tax expense, firms may be obscuring their efforts to use foreign operations to reduce their tax liability.

In order to provide additional support for our findings, we investigate two settings where firms are more likely to exhibit tax avoidance behavior. Specifically, we investigate firms with greater income mobility (DeSimone, Mills, and Stomberg 2014) and more tax havens (Dyreng and Lindsey 2009). Firms with greater income mobility and more tax havens may face more public scrutiny and therefore, be more likely to include all of UTB interest and penalty expense in tax expense to hide their tax avoidance behavior. Table 5 presents the results for investigating

specific settings where firms are more likely to exhibit tax avoidance behavior. We augment model (1) by separating *GAAP_ETR* into two variables based on the level of *Income Mobility* and amount of *Tax Havens*. *Income Mobility* is a variable developed by DeSimone, Mills and Stomberg (2014) to measure firms' abilities to exploit opportunities in different tax jurisdictions. *Tax Havens* is the number of tax havens that a firm operates in (Dyreng and Lindsey 2009). In column (1), we separate the *GAAP_ETR* variable into two variables based on whether the level of *Income Mobility* of the firm is greater than the median. The coefficient for *GAAP_ETR* of firms with *Income Mobility* greater than the median is negative and significant (-2.5824, p=0.0283). In column (2), we separate the *GAAP_ETR* variable in two variables based on whether the number of *Tax Havens* of the firm is greater than the median. The coefficient for *GAAP_ETR* of firms with a higher number of *Tax Havens* than the median is negative and significant (-3.1506, p=0.0151). The results are consistent with our expectations and provide additional support for our conjecture that firms engaging in tax avoidance behavior are more likely to include all of UTB interest and penalty expense in tax expense. Accordingly, firms that are more likely to face scrutiny from tax avoidance behavior are motivated to obfuscate their tax avoidance behavior.

[Insert Table 5 Here]

Together the results suggest firms strategically classify UTB interest and penalty expenses on the income statement to mask their tax avoidance behavior. These results are specific to expense classification on the income statement, but also provide insight, on a broader level, to the potential effects of third parties' influences on a firm's reporting decisions.

4.3 Financial Reporting Transparency

Table 6 presents the descriptive statistics and results for testing our final hypothesis (H2). Panel A of table 6 includes the descriptive statistics for all variables used in our regression analysis to test H2. We use propensity score matching based on model (1) to match the sample of firms that include all of UTB interest and penalty expense in tax expense (*All_Tax* = 1) with firms that do not (*All_Tax* = 0). The matched sample includes 118 firms. Panel B of table 6 presents the descriptive statistics by UTB interest and penalty expense classification. The lack of significant differences in mean of the variables suggests the sample is well matched.

[Insert Table 6 Here]

Panel C of table 6 presents the results for the OLS regression testing H2, which predicts that including all UTB interest and penalty expense in tax expense decreases the accuracy of analysts' forecasts. Specifically, H2 predicts a positive relation between including all UTB interest and penalty expense in tax expense (*All_Tax*) and analysts' implied ETR forecasted error. Column (1) includes the results of the regression analysis using model (2). However, *All_Tax* is not significant (t=0.06) which does not provide support for H2. In column (2), we take a step further and segregate *IntPenMagnitude* into two variables based on whether the firm includes all UTB interest and penalty expenses in tax expense (*All_Tax* = 1) or not (*All_Tax* = 0). The *IntPenMagnitude* variable for firms that include all UTB interest and penalty expense in tax expense is positive and significant (1.8235, *t*=3.45). This provides support for H2 and suggests that both the size and location of UTB interest and penalty expenses increase analysts' implied ETR forecast error. For firms that include all UTB interest and penalty expense in tax expense, a 1% increase in the magnitude of penalties and interest corresponds to a 1.82% increase in implied ETR analyst forecast error. Accordingly, consistent with our expectation, management's decision to include all UTB interest and penalty expense in the more opaque and less understood

tax expense is associated with a decrease in financial reporting transparency. This result is counter to the stated purpose of FIN 48 put forth by the FASB.

4.4 Additional Analysis

To investigate whether a particular audit firm or type of audit firm is influencing firms' decisions to classify UTB interest and penalty expenses as tax expense, we first examine the correlation coefficients between *All_Tax* and indicator variables for the different audit firms (i.e., Ernst & Young, Deloitte, KPMG, PricewaterhouseCoopers, etc.) that audit our sample of firms. In untabulated results, none of the firms have a significant correlation with *All_Tax*. We also investigate whether Big 4 audit firms, collectively, influence the decision and again find no significant relation. Finally, we examine whether national audit specialists (Reichelt and Wang 2010) are influencing the reporting decision and again do not find a significant correlation. These results help ensure that a particular audit firm or firms is not driving the results.

5. Concluding Remarks

The objectives of this study are to first examine whether tax avoidance behavior influences managers' financial reporting decisions and second, to determine whether those financial reporting decisions have implications on firms' financial reporting transparency. We investigate the income statement classification discretion of UTB interest and penalty expenses permitted by FIN 48. FIN 48 allowed firms to make an election as to where UTB interest and penalty expenses are included on the income statement (e.g., income tax expense, interest expense, selling, general and administrative expense or other). As such, we investigate how tax avoidance behavior impacts managers' decision of where to include UTB interest and penalty expense on the income statement and whether the income statement classification decision to include all UTB interest and penalty expense in tax expense increases analysts' forecast error.

First, we examine how tax avoidance behavior (lower GAAP ETR, more tax disputes) potentially influences firms' financial reporting decisions. Because of the additional transparency required by FIN 48, managers are likely looking for other ways to hide their tax avoidance behavior. Therefore, we predict a positive relation between tax avoidance behavior and including all UTB interest and penalty expenses as tax expense.

Next, we investigate the implications of firm management's income statement classification decision on financial reporting transparency. Tax expense is generally considered more opaque and less understood than other items on the income statement (Robinson 2010). As a result, managers may be increasing the opacity of tax expense by including UTB interest and penalty expense in the less understood tax expense classification. Therefore, we predict a positive relation between including all of UTB interest and penalty expense in tax expense and analyst forecasted ETR error.

Using a hand collected sample of firms, we use logistic regression analysis to test our first set of hypotheses. We find a positive relation between tax avoidance behavior and the classification of all UTB interest and penalty expenses in tax expense. The results suggest that managers strategically place UTB interest and penalty expense in tax expense on the income statement in an effort to mask their tax avoidance behavior. Furthermore, our results for our second hypothesis indicate including all UTB interest and penalty expense in tax expense is positively associated with analyst forecast error. Accordingly, the income statement classification discretion afforded by FIN 48 decreases financial reporting transparency.

We make several contributions to literature. First, while there is a growing stream of research surrounding FIN 48, we are the first to investigate the discretion allowed regarding the classification of UTB interest and penalty expenses on the income statement. Next, we provide

support for the effects of financial reporting incentives on firm managers' decisions. Our results suggest third party stakeholders of a firm influence manager's financial reporting decisions. In addition, while one of the main objectives of FIN 48 was to improve reporting and disclosure of tax expense, we provide evidence suggesting the UTB interest and penalty expense classification discretion does not improve the transparency of tax expense. Finally, prior research has identified several methods firms use to manage financial statement users' impressions of firms' performance. We identify another method, UTB interest and penalty expense classification, that managers can use to manage financial statement users' impressions.

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Appendix A

Examples of Interest and Penalty Expense Disclosures

PEPSICO INC

In addition, we accrue interest related to reserves for income taxes in our provision for income taxes and any associated penalties are recorded in selling, general and administrative expenses. The gross amount of interest accrued, reported in other liabilities, was $670 million as of December 29, 2012, of which $10 million was recognized in 2012. The gross amount of interest accrued, reported in other liabilities, was $660 million as of December 31, 2011, of which $90 million was recognized in 2011.

COCA COLA CO

The Company recognizes accrued interest and penalties related to unrecognized tax benefits in income tax expense. The Company had $113 million, $110 million and $112 million in interest and penalties related to unrecognized tax benefits accrued as of December 31, 2012, 2011 and 2010, respectively. Of these amounts, $33 million of expense, $2 million of benefit and $17 million of expense were recognized through income tax expense in 2012, 2011 and 2010, respectively. If the Company were to prevail on all uncertain tax positions, the reversal of this accrual would also be a benefit to the Company's effective tax rate.

CONOCOPHILLIPS

Interest related to unrecognized tax benefits is reflected in interest expense, and penalties in production and operating expenses.

CHEVRON CORP

On the Consolidated Statement of Income, the company reports interest and penalties related to liabilities for uncertain tax positions as “Income tax expense.” As of December 31, 2012, accruals of $293 for anticipated interest and penalty obligations were included on the Consolidated Balance Sheet, compared with accruals of $118 as of year-end 2011. Income tax expense (benefit) associated with interest and penalties was $145, $(64) and $40 in 2012, 2011 and 2010, respectively.

Appendix B
Variable Definitions

Variable	Definition	Calculation
Dependent Variables:		
All_Tax	Indicator variable for UTB interest and penalty expenses both reported within tax expense	Based on hand collecting from 10K filings, the indicator variable equals one when the firm includes all UTB interest and penalty expenses within the tax expense line item on the income statement, and zero otherwise.
AbsETRerror	Difference between analysts' implied ETR forecast and actual GAAP ETR.	Absolute value of the difference between the implied analyst ETR forecast and the actual *GAAP ETR.* Implied analyst ETR is determined by subtracting forecasted net income from forecasted pre-tax income and scaling the resulting implied forecasted tax expense by the forecasted pre-tax income. This calculation is performed each month that IBES reports consensus adjusted net income and pre-tax income forecasts with the forecast period indicator equal to 1. The firm's average for these monthly calculations is used as the implied analyst ETR forecast. *GAAP* ETR is calculated with COMPUSTAT data for taxes paid (*TXT*) divided by pre-tax income (*PI*).
Independent Variables:		
GAAP_ETR	Three year GAAP effective tax rate	Previous three years' tax expense/ previous three years' pre-tax income [$\sum TXT/\sum PI$]. For comparability, the numerator of the *GAAP_ETR* is reduced by the interest and penalty expense when *All_Tax*=1. *GAAP_ETR* is only calculated when the three year cumulative pre-tax income is positive; additionally, *GAAP_ETR* is constrained to be between 0 and 1.

Appendix B (Continued)
Variable Definitions

Variable	Definition	Calculation
Tax_Disputes	Indicator variable for outstanding tax disputes	Indicator variable equals one when Kinder, Lydenberg and Domini's (KLD) Stats database indicates a rating of concern regarding a firm's disputes with tax authorities, and zero when KLD indicates there is not a rating of concern (Zhou 2013). KLD is a leading corporate social responsibility monitor.
Controls:		
Foreign_Income	Indicator variable for firms with foreign income	Indicator variable equal to 1 when a firm has non-zero pre-tax foreign income (*PIFO*) and zero otherwise.
Leverage	Leverage ratio	Total debt divided by total assets [(*DLTT + DLC*)/*AT*].
Inst_Own	Institutional ownership percentage	Percent of the institutional ownership, calculated as the number of shares held by institutions at year end divided by total shares outstanding.
FirmSize	Log of total assets	The natural log of the beginning balance of total assets [*AT*].
BTM	Book to market ratio	The book value of equity [*CEQ*] divided by market value of equity [*CSHO* * *PRCC_F*].
IntPenMagnitude	UTB interest and penalty expense size scaled by pre-tax income	Absolute value of UTB interest and penalty expense [*TXTUBXINTIS*] scaled by pre-tax income [PI].
IntPenVolatility	Three year prospective volatility of the interest and penalty expense	The natural log of (standard deviation of current and subsequent two years' interest and penalty expense [*TXTUBXINTIS*] scaled by the absolute value of the mean for the corresponding three years interest and penalty expense).
FR_Quality	Financial reporting quality	Based on the Dechow and Dichev (2002) accruals quality measure. It is multiplied by negative one so that the measure is increasing in financial reporting quality.
FR_Aggression	Financial reporting aggression	Based on the Frank et al. (2009) performance-matched measure of pre-tax discretionary accruals.

Appendix B (Continued)
Variable Definitions

Variable	Definition	Calculation
Abs_PreTax_ For_Err	Percentage difference between actual and analyst forecasted pre-tax earnings	Absolute value of the difference between the consensus analysts pre-tax forecast minus the actual pre-tax earnings (PI) scaled by the pre-tax forecast.
Analyst_Dispersion	Standard deviation of analyst forecasts	Standard Deviation of analysts' EPS forecasts as reported by I/B/E/S.
Analyst_Following	Number of analyst following the firm	Analyst following normalized by taking the natural log of the number of analysts providing implied ETR forecasts
Forecasted_ETR	Analyst forecasted implied effective tax rate	The mean of the implied analyst ETR forecasts.
ROA	Return on assets	Return on Assets measured as current year net income (*NI*) scaled by lagged assets (*AT*).
NOL	Indicator variable for firms with a tax loss carryforward	Indicator variable equal to 1 when the firm has a tax loss carry forward (*TLCF* > 0) and zero otherwise.
DNOL	Change in tax loss carryforward	Change in tax loss carryforward (*TLCF*) from the prior year scaled by lagged assets (*AT*).
EarningsVolatility	Standard deviation of pre-tax income	Standard deviation of the past three years of pre-tax income (*PI*) scaled by the absolute value of the mean of the past three years of pre-tax income.
UTB	Unrecognized tax benefits	UTB (*TXTUBEND*) scaled by lagged assets
SGA	Selling, general, and administrative expenses	Selling, General and Administrative expenses (*XSGA*) scaled by sales (*SALE*).
Cap_Intensity	Capital intensity	Capital intensity measured by capital expenditures (*CAPX*) scaled by lagged assets
Intang	Intangible assets	Intangible assets (*INTAN*) scaled by lagged assets (*AT*).
RandD	Research and Development Expense	Research and development expense (*XRD*) scaled by lagged assets (*AT*).
Advertise	Advertising Expense	Advertising expense (*XAD*) scaled by lagged assets (*AT*). Missing COMPUSTAT values are set to zero.
Inventory	Inventory	Inventory (*INVT*) scaled by lagged assets (*AT*)

TABLE 1
Sample Selection

	Firms
Unique COMPUSTAT firms with non-missing interest and penalty expense (2007-2011)	2,986
Less firms in the Financial and Utility industries	(346)
Less firms reporting zero penalty and interest expense every year	(1,326)
Less missing data needed for Model (1)	(351)
Final Sample	963

TABLE 2
Descriptive Statistics

Panel A: Classification of UTB Interest and Penalty Expenses

Income Statement Classification	Interest		Penalties		Interest and Penalties Both Classified	
Selling, General, and Admin.	1	0.00%	36	3.24%	1	0.00%
Other	36	3.70%	61	6.78%	31	3.24%
Interest	92	9.72%	10	1.39%	10	1.23%
Tax Provision	834	86.57%	856	88.60%	830	86.11%
Mixed Reporting					91	9.41%
	963	100.00%	963	100.00%	963	100.00%

Panel B: Variables Used in Regression Analysis

Variable	N	Mean	Median	Standard Deviation	25%	75%
All_Tax	963	0.8619	1.0000	0.3452	1.0000	1.0000
GAAP_ETR	963	0.3217	0.3351	0.1869	0.2402	0.3829
Tax_Disputes	412	0.0801	0.0000	0.2718	0.0000	0.0000
Foreign_Income	963	0.7009	1.0000	0.4581	0.0000	1.0000
Leverage	963	0.2098	0.1942	0.1762	0.0455	0.3208
Inst_Own	963	0.7342	0.7959	0.2389	0.6248	0.9094
FirmSize	963	7.4872	7.3715	1.7779	6.2818	8.6471
BTM	963	0.5235	0.4366	0.3671	0.2770	0.6874
ROA	963	0.0826	0.0693	0.0684	0.0348	0.1107
NOL	963	0.5244	1.0000	0.4997	0.0000	1.0000
IntPenMagnitude	963	0.0163	0.0054	0.0359	0.0020	0.0134
IntPenVolatility	778	0.0647	-0.0925	1.3294	-0.8370	0.7162
FR_Quality	680	-0.1377	-0.0666	0.1807	-0.1624	-0.0352
FR_Aggression	600	0.1282	-0.0015	1.2315	-0.0605	0.0526

TABLE 2 (continued)
Descriptive Statistics

Panel C: Descriptive Statistics by UTB Interest and Penalty Expense Classification

	All_Tax = 0			All_Tax = 1				
Variable	**N**	**Mean**	**Median**	**N**	**Mean**	**Median**	**Difference in Mean**	**T-Stat**
GAAP_ETR	133	0.3448	0.3515	830	0.3180	0.3338	-0.0268	-1.53
Tax_Disputes	58	0.0345	0.0000	354	0.0876	0.0000	0.0531*	1.86
Foreign_Income	133	0.5865	1.0000	830	0.7193	1.0000	0.1328***	2.91
Leverage	133	0.2351	0.2223	830	0.2057	0.1909	-0.0294*	-1.79
Inst_Own	133	0.7225	0.7932	830	0.7361	0.7960	0.0136	0.57
FirmSize	133	7.7066	7.6923	830	7.4521	7.3432	-0.2545	-1.45
BTM	133	0.4975	0.3634	830	0.5277	0.4439	0.0301	0.80
ROA	133	0.0938	0.0774	830	0.0808	0.0670	-0.0130**	-2.07
NOL	133	0.5263	1.0000	830	0.5241	1.0000	-0.0022	-0.05
IntPenMagnitude	133	0.0117	0.0039	830	0.0171	0.0055	0.0054*	1.94
IntPenVolatility	102	0.0948	-0.0472	676	0.0602	-0.1110	-0.0346	-0.24
FR_Quality	90	-0.1236	-0.0601	590	-0.1398	-0.0670	-0.0162	-0.83
FR_Aggression	74	0.0727	-0.0053	526	0.1360	-0.0003	0.0633	0.47

See Appendix B for variable definitions. Panel A presents the UTB interest and penalty expense income statement classifications for the sample of firms. Panel B presents the descriptive statistics for the sample of firms. Panel C includes the descriptive statistics of the sample of firms that do not include all of UTB interest and penalty expense in tax expense (All_Tax = 0) versus the sample of firms that do (All_Tax = 1). *, **, and *** denote statistical significance at 10%, 5%, and 1% percent, respectively.

TABLE 3
Pearson Correlation Matrix

	All_Tax	*GAAP_ ETR*	*Tax_ Disputes*	*Foreign_ Income*	*Leverage*	*Inst_ Own*	*FirmSize*	*BTM*	*ROA*	*NOL*	*IntPen Magnitude*	*IntPen Volatility*	*FR_ Quality*
GAAP_ETR	-0.0495												
	(0.1250)												
Tax_Disputes	0.0720	-0.0621											
	(0.0722)	(0.1211)											
Foreign_Income	0.1001	-0.0070	0.1018										
	(0.0019)	(0.8272)	(0.0109)										
Leverage	-0.0576	0.0515	0.0401	-0.0655									
	(0.0742)	(0.1100)	(0.3172)	(0.0420)									
Inst_Own	0.0196	0.0131	-0.0929	0.1067	0.0683								
	(0.5438)	(0.6843)	(0.0202)	(0.0009)	(0.0340)								
FirmSize	-0.0494	-0.0951	0.3219	0.2608	0.0964	0.2108							
	(0.1254)	(0.0031)	(<.0001)	(<.0001)	(0.0028)	(<.0001)							
BTM	0.0283	0.0727	-0.0996	-0.1387	-0.1063	-0.1712	-0.4407						
	(0.3797)	(0.0241)	(0.0127)	(<.0001)	(0.0010)	(<.0001)	(<.0001)						
ROA	-0.0656	-0.1452	0.0679	0.0201	-0.2181	-0.0301	0.2257	-0.3825					
	(0.0419)	(<.0001)	(0.0897)	(0.5333)	(<.0001)	(0.3514)	(<.0001)	(<.0001)					
NOL	-0.0015	-0.0313	-0.0617	0.1636	0.0624	0.0305	-0.0411	0.0289	-0.1322				
	(0.9621)	(0.3313)	(0.1232)	(<.0001)	(0.0531)	(0.3451)	(0.2028)	(0.3708)	(<.0001)				
IntPenMagnitude	0.0520	0.0105	0.0853	0.0712	0.0235	-0.0154	-0.1226	0.1014	-0.2483	0.0948			
	(0.1069)	(0.7450)	(0.0330)	(0.0271)	(0.4665)	(0.6331)	(0.0001)	(0.0016)	(<.0001)	(0.0032)			
IntPenVolatility	-0.0088	-0.0088	0.0689	0.0059	-0.0150	0.0287	0.0247	-0.0282	-0.0164	0.0390	0.0162		
	(0.8065)	(0.8061)	(0.1130)	(0.8695)	(0.6765)	(0.4243)	(0.4914)	(0.4320)	(0.6477)	(0.2776)	(0.6512)		
FR_Quality	-0.0350	-0.0390	0.0012	-0.1632	0.1040	0.0256	0.1041	0.0014	-0.0293	-0.0994	-0.0762	0.0414	
	(0.3130)	(0.2615)	(0.9777)	(<.0001)	(0.0027)	(0.4608)	(0.0027)	(0.9678)	(0.3991)	(0.0041)	(0.0280)	(0.2809)	
FR_Aggression	-0.0075	-0.0466	-0.0309	0.0305	0.0025	-0.0448	-0.0666	-0.0068	-0.0035	0.0757	-0.0180	-0.0028	-0.0731
	(0.8305)	(0.1801)	(0.4759)	(0.3808)	(0.9426)	(0.1980)	(0.0552)	(0.8450)	(0.9211)	(0.0293)	(0.6039)	(0.9433)	(0.0484)

TABLE 4

Determinants of Reporting
UTB Interest and Penalty Expense as Tax Expense

Variable	Pred. Sign	(1)	(2)	(3)	(4)	(5)	(6)
Intercept		3.0942***	4.1831***	3.8178**	3.6715**	2.9546	4.2987**
		(0.0021)	(0.0024)	(0.0121)	(0.0266)	(0.1078)	(0.0288)
GAAP_ETR	-	-1.3930**	-1.8029**	-2.0215**	-1.9056**		-2.8101**
		(0.0135)	(0.0130)	(0.0170)	(0.0395)		(0.0326)
Tax_Disputes	+					1.9358**	1.9204**
						(0.0308)	(0.0329)
Foreign_Income		0.9485***	0.8813***	0.7041**	1.0018**	0.8489	0.9235*
		(0.0004)	(0.0071)	(0.0422)	(0.0137)	(0.1002)	(0.0833)
Leverage		-1.4523**	-1.8803**	-1.2071	-1.5182	-1.6696	-1.8997
		(0.0210)	(0.0119)	(0.1544)	(0.1044)	(0.1546)	(0.1125)
Inst_Own		0.6904	1.0964**	1.1795**	1.0462	-0.1163	-0.00303
		(0.1203)	(0.0390)	(0.0485)	(0.1131)	(0.9200)	(0.9980)
FirmSize		-0.1055	-0.1220	-0.1070	-0.1000	-0.2523*	-0.2934**
		(0.1323)	(0.1244)	(0.2186)	(0.3125)	(0.0702)	(0.0397)
BTM		-0.1474	0.1911	0.4143	0.3848	1.6495*	1.5772*
		(0.6633)	(0.6901)	(0.4678)	(0.5476)	(0.0780)	(0.0950)
ROA		-2.7064	-2.2641	-2.8179	-0.2779	5.7273	4.8005
		(0.1163)	(0.2923)	(0.2287)	(0.9193)	(0.1237)	(0.2097)
NOL		-0.2748	-0.1169	-0.1699	-0.2022	-0.0834	-0.1474
		(0.1895)	(0.6275)	(0.5148)	(0.4868)	(0.8125)	(0.6789)
IntPenMagnitude		2.6089	3.9740	1.6712	4.6889	5.1997	6.6776
		(0.5067)	(0.4162)	(0.7358)	(0.4076)	(0.4309)	(0.3450)
IntPenVolatility			-0.0596	-0.0235	-0.0271	-0.0162	-0.0164
			(0.5060)	(0.8087)	(0.8058)	(0.9019)	(0.9018)
FR_Quality				1.5344	1.6000	1.8789	1.9673
				(0.1801)	(0.1905)	(0.2028)	(0.1809)
FR_Aggression					0.0178	-0.0273	-0.0598
					(0.8876)	(0.8499)	(0.6854)
Industry Indicators		Yes	Yes	Yes	Yes	Yes	Yes
Year Indicators		Yes	Yes	Yes	Yes	Yes	Yes
Obs.		963	778	680	600	412	412
% Correctly Classified		72.8%	75.6%	76.5%	78.0%	81.2%	82.3%
Log likelihood ratio		83.26	86.03	80.50	75.35	70.92	75.52
(Pr > c^2)		(0.0083)	(0.0061)	(0.0088)	(0.0149)	(0.0174)	(0.0088)

Table 4 presents the coefficient estimates and significance levels from estimating the following logit regression modeling the decision to report UTB interest and penalty expense as all tax expense:

$$\text{Prob}(All\_Tax=1) = F(\beta_0 + \beta_1 GAAP\_ETR_{i,t} + \beta_2 Tax\_Disputes_{i,t} + \beta_3 \text{Foreign\_Income}_{i,t} + \beta_4 Leverage_{i,t} + \beta_5 Inst\_Own_{i,t} + \beta_6 FirmSize_{i,t} + \beta_7 BTM_{i,t} + \beta_8 IntPenMagnitude_{i,t} + \beta_9 IntPenVolatility_{i,t} + \beta_{10} FR\_Quality_{i,t} + \beta_{11} FR\_Aggression_{i,t} + \text{Industry Indicators} + \text{Year Indicators})$$

See Appendix B for variable definitions. P-values are presented in parentheses below the coefficients. Significance levels are based on Chi-squared tests. "% Correctly Classified" reports the percentage of observations we define as correctly classified; an observation that reports All_Tax. See Table 1 for variable definitions. *, **, and *** denote statistical significance at 10%, 5%, and 1% percent, respectively. Significance tests are two-tailed for all variables.

TABLE 5

Determinants of Reporting
UTB Interest and Penalty Expense as Tax Expense – Specific Settings

Variable	Pred. Sign	(1)	(2)
Intercept		4.1069**	0.9784
		(0.0274)	(0.6367)
GAAP_ETR (*Income Mobility* > Median)	-	-2.5824**	
		(0.0283)	
GAAP_ETR (*Income Mobility* <= Median)		-1.6490	
		(0.1575)	
GAAP_ETR (*Tax Havens* > Median)	-		-3.1506**
			(0.0151)
GAAP_ETR (*Tax Havens* <= Median)			-1.0347
			(0.4478)
Foreign_Income		0.8385*	1.1218**
		(0.0606)	(0.0389)
Leverage		-1.7906*	-0.9212
		(0.0857)	(0.4455)
Inst_Own		1.3280*	0.4262
		(0.0754)	(0.6883)
FirmSize		-0.0912	-0.0305
		(0.3834)	(0.8224)
BTM		0.5488	2.1100*
		(0.4735)	(0.0262)
ROA		-1.2546	6.7528
		(0.6838)	(0.1083)
NOL		-0.1895	0.0701
		(0.5459)	(0.8435)
IntPenMagnitude		9.5880	9.0063
		(0.2569)	(0.2471)
IntPenVolatility		-0.0006	-0.0168
		(0.9963)	(0.8978)
FR_Quality		1.7613	1.0907
		(0.1553)	(0.4430)
FR_Aggression		0.00287	-0.0685
		(0.9824)	(0.6426)
Industry Indicators		Yes	Yes
Year Indicators		Yes	Yes
Obs.		540	425
% Correctly Classified		72.4%	82.8%

Log likelihood ratio	72.28	68.88
($Pr > \chi^2$)	(0.0329)	(0.0482)

Table 5 presents the coefficient estimates and significance levels from estimating the following logit regression modeling the decision to report UTB interest and penalty expense as all tax expense:

Prob(*All_Tax*=1) = F(β_0 + β_1*GAAP_ETR*$_{i,t}$ + β_2*Tax_Disputes*$_{i,t}$ + β_3*Foreign_Income*$_{i,t}$ + β_4*Leverage*$_{i,t}$ + β_5*Inst_Own*$_{i,t}$ + β_6*FirmSize*$_{i,t}$ + β_7*BTM*$_{i,t}$ + β_8*IntPenMagnitude*$_{i,t}$ + β_9*IntPenVolatility*$_{i,t}$ + β_{10}*FR_Quality*$_{i,t}$ + β_{10}*FR_Aggression*$_{i,t}$ + Industry Indicators + Year Indicators)

See Appendix B for variable definitions. P-values are presented in parentheses below the coefficients. Significance levels are based on Chi-squared tests. "% Correctly Classified" reports the percentage of observations we define as correctly classified; an observation that reports All_Tax. See Table 1 for variable definitions. *, **, and *** denote statistical significance at 10%, 5%, and 1% percent, respectively. Significance tests are two-tailed for all variables.

Table 6

Analyst Forecast Error

Panel A: Variables Used in Regression Analysis – Matched Sample

Variable	N	Mean	Median	Standard Deviation	25%	75%
AbsETRerror	118	0.0331	0.0155	0.0527	0.0070	0.0378
All_Tax	118	0.5000	0.5000	0.5021	0.0000	1.0000
IntPenMagnitude	118	0.0113	0.0046	0.0256	0.0014	0.0098
Abs_PreTax_For_Err	118	0.1027	0.0656	0.1336	0.0234	0.1182
Analyst_Dispersion	118	0.0519	0.0200	0.0946	0.0100	0.0400
Analyst_Following	118	1.9232	2.0265	0.7210	1.6094	2.4423
Forecasted_ETR	118	0.3281	0.3443	0.0748	0.2945	0.3811
Foreign_Income	118	0.6949	1.0000	0.4624	0.0000	1.0000
Leverage	118	0.2203	0.2049	0.1589	0.1064	0.3165
Inst_Own	118	0.7778	0.8172	0.1814	0.7034	0.9066
FirmSize	118	8.3513	8.2701	1.6591	7.2748	9.4756
BTM	118	0.4091	0.3479	0.2604	0.2468	0.4848
ROA	118	0.1026	0.0822	0.0811	0.0532	0.1181
NOL	118	0.4746	0.0000	0.5015	0.0000	1.0000
DNOL	118	-0.0072	0.0000	0.0416	-0.0002	0.0000
EarningsVolatility	118	0.8177	0.2954	1.7361	0.1644	0.5784
UTB	118	0.0146	0.0112	0.0145	0.0054	0.0166
SGA	118	0.2203	0.1702	0.1678	0.0920	0.3223
Cap_Intensity	118	0.6039	0.5118	0.4012	0.2809	0.9067
Intang	118	0.2881	0.1729	0.3185	0.0501	0.4650
RandD	118	0.0240	0.0018	0.0435	0.0000	0.0262
Advertise	118	0.0187	0.0000	0.0527	0.0000	0.0171
Inventory	118	0.1089	0.0794	0.1135	0.0190	0.1712

Table 6 (Continued)
Analyst Forecast Error

Panel A: Variables Used in Regression Analysis by UTB Interest and Penalty Expense Classification

	All_Tax = 0			All_Tax = 1				
Variable	**N**	**Mean**	**Median**	**N**	**Mean**	**Median**	**Difference in Mean**	**T-Stat**
AbsETRerror	59	0.02832	0.01546	59	0.03786	0.01558	0.0095	0.98
IntPenMagnitude	59	0.00820	0.00444	59	0.01439	0.00468	0.0062	1.32
Abs_PreTax_For_Err	59	0.10029	0.07912	59	0.10504	0.05372	0.0048	0.19
Analyst_Dispersion	59	0.05407	0.02000	59	0.04966	0.02000	-0.0044	-0.25
Analyst_Following	59	2.00789	2.16905	59	1.83858	1.89712	-0.1693	-1.28
Forecasted_ETR	59	0.31987	0.33558	59	0.33626	0.34456	0.0164	1.19
Foreign_Income	59	0.71186	1.00000	59	0.67797	1.00000	-0.0339	-0.40
Leverage	59	0.24040	0.23134	59	0.20024	0.18392	-0.0402	-1.38
Inst_Own	59	0.79410	0.82436	59	0.76156	0.81399	-0.0325	-0.97
FirmSize	59	8.55793	8.42288	59	8.14469	8.09885	-0.4132	-1.36
BTM	59	0.37080	0.31686	59	0.44733	0.38824	0.0765	1.61
ROA	59	0.10519	0.08113	59	0.09996	0.08252	-0.0052	-0.35
NOL	59	0.50847	1.00000	59	0.44068	0.00000	-0.0678	-0.73
DNOL	59	-0.00856	0.00000	59	-0.00578	0.00000	0.0028	0.36
EarningsVolatility	59	0.65409	0.23397	59	0.98135	0.36892	0.3273	1.02
UTB	59	0.01409	0.00906	59	0.01511	0.01236	0.0010	0.38
SGA	59	0.21446	0.18379	59	0.22615	0.16228	0.0117	0.38
Cap_Intensity	59	0.64690	0.52592	59	0.56093	0.46614	-0.0860	-1.17
Intang	59	0.26063	0.15756	59	0.31565	0.19529	0.0550	0.94
RandD	59	0.02728	0.00100	59	0.02078	0.00256	-0.0065	-0.81
Advertise	59	0.01345	0.00000	59	0.02401	0.00000	0.0106	1.09
Inventory	59	0.11028	0.07885	59	0.10761	0.07995	-0.0027	-0.13

Table 6 (Continued)
Analyst Forecast Error
Panel C: Analyst Forecast Error Regression Analysis

Variable	Pred. Sign	(1)	(2)
Intercept		-0.0225	-0.0282
		(-0.22)	(-0.28)
All_Tax	+	0.0006	-0.0148
		(0.06)	(-1.07)
IntPenMagnitude		1.5497***	
		(2.93)	
IntPenMagnitude (*All_Tax*=1)	+		1.8235***
			(3.45)
IntPenMagnitude (*All_Tax*=0)			0.3924
			(0.58)
Abs_PreTax_For_Err		-0.1484*	-0.1373*
		(-1.76)	(-1.74)
Analyst_Dispersion		0.1446*	0.1318*
		(1.82)	(1.75)
Analyst_Following		-0.0028	-0.0029
		(-0.25)	(-0.25)
Forecasted_ETR		0.1324	0.0973
		(0.9)	(0.73)
Foreign_Income		0.0023	0.0087
		(0.16)	(0.55)
Leverage		-0.0088	-0.0179
		(-0.22)	(-0.45)
Inst_Own		0.0074	-0.0061
		(0.26)	(-0.22)
FirmSize		0.0055	0.0044
		(0.97)	(0.82)
BTM		-0.0277	-0.0349
		(-1.21)	(-1.41)
ROA		0.1175	0.0551
		(1.34)	(0.61)
NOL		0.0086	-0.0004
		(0.75)	(-0.04)
DNOL		0.2176*	0.2168*

	(1.78)	(1.84)
EarningsVolatility	0.0025	0.0058
	(0.52)	(1.02)
UTB	-0.7609*	-0.5368
	(-1.86)	(-1.36)
SGA	0.0445	0.0585
	(0.62)	(0.79)
Cap_Intensity	-0.0179	-0.0050
	(-0.81)	(-0.26)
Intang	-0.0216	-0.0049
	(-1.09)	(-0.25)
RandD	0.4600*	0.3270
	(1.83)	(1.41)
Advertise	-0.1102	-0.1378
	(-1.09)	(-1.34)
Inventory	-0.0299	-0.0302
	(-0.47)	(-0.50)
Industry Indicators	Yes	Yes
Year Indicators	Yes	Yes
Obs.	118	118
R Squared	59.3%	61.9%

See Appendix B for variable definitions. Panel A presents the descriptive statistics for the variables used in the regression for analyst forecast error. Panel B divides the sample by UTB interest and penaly classification and presents the difference in mean for each variable. Panel C presents the coefficient estimates and significance levels from estimating the following OLS regression:

$$AbsETRerror_i = \beta_0 + \beta_1 All\_Tax_i + \beta_2 IntPenMagnitude_i + \beta_3 Abs\_PreTax\_For\_Err_i + \beta_4 Analyst\_Dispersion_i + \beta_5 Analyst\_Following_i + \beta_6 Forcasted\_ETR_i + \beta_7 Foreign\_Income_i + \beta_8 Leverage_i + \beta_9 Inst\_Own_i + \beta_{10} FirmSize_i + \beta_{11} BTM_i + \beta_{12} ROA_i + \beta_{13} NOL_i + \beta_{14} DNOL_i + \beta_{15} EarningsVolatility_i + \beta_{16} UTB_i + \beta_{17} SGA_i + \beta_{18} Cap\_Intensity_i + \beta_{19} Intang_i + \beta_{20} RandD_i + \beta_{21} Advertise_i + \beta_{22} Inventory + \text{Industry Indicators} + \text{Year Indicators} + \varepsilon_i$$

Reported t-values (shown in parentheses below the coefficients) are based on White (1980) standard errors clustered by firm. See Appendix B for variable definitions and calculations. *, **, and *** denote statistical significance at 10%, 5%, and 1% percent, respectively. Significance tests are two-tailed for all variables.