Nonrecurring Income Taxes: Do Analysts and Investors Identify and Adjust for Transitory Tax Expense Items?

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ABSTRACT

This study examines whether analysts identify transitory tax items and the effect of transitory tax items on the information content of earnings. Compustat identifies nonrecurring income taxes, with data relatively well populated beginning in 2005. Based on a hand-collected sample, nonrecurring income taxes arise from the most complex elements of tax expense such as valuation allowance changes, tax law changes, foreign earnings repatriations, and tax audits. Nonrecurring income taxes lack strong predictive power for future earnings, confirming their transitory nature. In contrast to prior literature, analysts and investors appear to recognize transitory tax items, as analysts exclude nonrecurring income taxes from Street earnings and the earnings response coefficient is lower for firms with material nonrecurring income taxes compared to firms without material nonrecurring income taxes. This finding suggests that analysts and investors identify and adjust for transitory components of tax expense in the form of nonrecurring income taxes.

Keywords: Nonrecurring income taxes; Transitory components of tax expense; Non-GAAP earnings; Information content of earnings

I. INTRODUCTION

This study examines whether analysts and investors understand and use transitory components of tax expense. Transitory and persistent components of earnings have differential information content about firm performance (Elliott and Hanna 1996). Thus, successfully distinguishing between the two is essential for equity valuation (Dechow, Ge, and Schrand 2010). However, analysts and investors appear to misinterpret tax information in financial statements (Graham, Raedy, and Shackelford 2012; Chen and Schoderbek 2000; Plumlee 2003; Schmidt 2006; Thomas and Zhang 2011). Therefore, it is unclear whether analysts identify transitory tax components and whether investors use such information.

We employ Compustat's recently cataloged nonrecurring income tax data item to investigate whether analysts and investors distinguish transitory components of tax expense. Unlike a research design that identifies transitory tax expenses based on ex-post analysis, Compustat's coding avoids hindsight bias in identifying transitory tax items. A second advantage is that our findings readily compare to those of studies examining special items. Because the special item literature focuses on pre-tax transitory items, this study also contributes a new examination of the disclosure and presentation of after-tax transitory items, non-GAAP earnings, and investors' use of the information. To our knowledge, this is the first study that comprehensively examines transitory components of tax expense.

We first examine characteristics of nonrecurring income taxes, including their frequency, materiality, and determinants. To describe these features, we use a sample of 78,284 firm-quarters in the intersection of the Compustat, I/B/E/S, and CRSP databases between 2005 and 2012. In our sample, 6% of firms have a nonzero nonrecurring income tax and the average quarterly nonrecurring income tax for these 4,642 observations is 5.6 cents per share, or 0.14%

of beginning market value of equity. Thus, although nonrecurring income taxes are relatively infrequent items, they can have a material effect on earnings when present. To determine tax accounts associated with nonrecurring income taxes, we sample 1,289 nonrecurring income tax observations in Compustat and read earnings announcements and financial statements. We find that Compustat commonly identifies nonrecurring income taxes for valuation allowance changes, tax law changes, foreign earning repatriations, and tax audits. In summary, we provide qualitative evidence that Compustat's nonrecurring income taxes are transitory items and that nonrecurring income taxes differ from the transitory items that prior literature examines.

We formally test whether nonrecurring income taxes can be considered transitory items by examining their predictive power for future earnings. While prior literature generally finds pre-tax transitory items are still predictive of future earnings, it is not clear ex-ante whether transitory tax items have predictive power for future earnings. Relying on our hand-collected categorization of transitory tax items, we hypothesize that some transitory tax items such as valuation allowance changes can have predictive power for future earnings. We also predict that other transitory tax items such as those from tax law changes will have less predictive power for future earnings.

In a pooled regression, we find nonrecurring income taxes significantly predict future earnings, but the economic magnitude is small. Specifically, each 1% of quarterly change in book equity from nonrecurring income taxes predicts, on average, only 1.04% ROE of future earnings in the subsequent year. As expected, this predictive power is significantly and substantively lower than the predictive power of GAAP earnings, excluding special items and nonrecurring income taxes. Interestingly, the empirical predictive power of nonrecurring income taxes for future earnings is similar to that of special items, although we do not predict this

similarity. Using our hand-collected nonrecurring income tax type subsample, we find that valuation allowances are the only nonrecurring income tax type with statistically significant predictive power for future earnings, although the predictive power is small. Thus, our quantitative evidence supports the perspective that nonrecurring income taxes are transitory components of earnings.

Given that nonrecurring income taxes have little predictive power for future earnings, it is important to analyze whether and how analysts and investors incorporate this information. We test whether analysts exclude nonrecurring income taxes from Street earnings. Street earnings are non-GAAP earnings that I/B/E/S constructs by adjusting reported earnings for items commonly excluded from analyst forecasts. Thus, our test also implies whether nonrecurring income taxes are excluded from analyst forecasts, which are an important ex-ante performance benchmark.

Earlier studies find that analysts misinterpret specific transitory tax items such as tax law changes (Chen and Schroderbek 2000; Plumlee 2003) and are less likely to exclude tax items than other nonrecurring items (Gu and Chen 2004). However, more recent evidence finds that analysts are adept at forecasting tax expense (Bratten, Gleason, Larocque, and Mills 2015) and even suggests they monitor tax aggressive behavior (Allen, Francis, Wu, and Zhao 2015; Chen, Chiu, and Shevlin 2015). Therefore, in our more recent time period, we predict that analysts will recognize transitory tax items and exclude them from Street earnings. We find that nonrecurring income taxes incrementally explain the difference between Street and GAAP earnings after controlling for special items, indicating analysts exclude nonrecurring income taxes from Street earnings and thus earnings forecasts as well. Because analysts exclude components of earnings they believe are nonrecurring (Brown, Call, Clement, and Sharp 2015), our evidence suggests that analysts distinguish between recurring and nonrecurring components of tax expense.

Finally, we examine whether investors view unexpected earnings differently in the presence of nonrecurring income taxes. Consistent with this query, firms with nonmissing nonrecurring income tax have lower Street earnings persistence overall, suggesting that the presence of such items contains information. Consequently, we predict the presence of a nonrecurring income tax will affect investors' perceptions of unexpected earnings. We use earnings response coefficients (ERCs) centered on earnings announcement dates to investigate whether the information content of earnings decreases in the presence of nonrecurring income taxes. We find the ERC is weaker in the presence of material nonrecurring income taxes. We interpret this evidence as nonrecurring income taxes providing information about prior managerial decisions and adding value-relevant information with the disclosure of transitory tax items.

This study contributes to the literature and informs standard-setters and regulators in several ways. First, our results have implications for standard-setters considering how to improve income tax disclosures. The FASB is currently re-examining the income tax disclosure as part of the disclosure framework project. For example, in October 2015, the FASB tentatively decided that entities would be required to disclose "an explanation of the nature and amounts of the valuation allowance recorded and released during the period" (FASB 2015). This study suggests that users can benefit from the disclosure of any material transitory tax item that impacts earnings during the period. Although ASC 225-20: Extraordinary and Unusual Items codifies standards on the presentation and disclosure of unusual or infrequent events, ASC 740: Accounting for Income Taxes is quiet on presentation and disclosure of unusual or infrequent tax events. Thus, while ASC 225-20 presumably applies to transitory tax items as well, prior literature and our reading of notes to the financial statements suggest that managers have

significant discretion over the presentation and disclosure of transitory tax items.

Second, we contribute to the non-GAAP literature by finding that analysts adjust for tax expense items in constructing non-GAAP earnings measures. It is important to identify items excluded from GAAP earnings because analysts' non-GAAP earnings are a commonly used benchmark to evaluate firm performance (Ramnath, Rock, and Shane 2008). We also find that the tax items excluded from GAAP earnings are empirically nonrecurring in nature, which contributes to the debate over whether analysts' non-GAAP earnings inform investors (Ramnath, Rock, and Shane 2008). Specifically, analysts' non-GAAP earnings can decrease investors' processing costs of transitory tax items because FASB standards on the presentation and disclosure of transitory tax items in financial statements permit managerial discretion.

Third, this study contributes to the financial accounting literature by identifying a novel setting to examine the impact of transitory components of earnings and whether the primary goal of their disclosure is to inform or mislead. Prior research often relies on Compustat's "special items" data item, which is dominated by pre-tax income-decreasing items. Curtis, McVay, and Whipple (2014) note that regardless of whether the managerial intent is to inform or mislead, managers are incentivized to exclude income-decreasing items. Unlike special items, nonrecurring income taxes are predominantly income increasing. Thus, they provide an ideal setting to examine the "inform versus mislead" debate because managers do not have incentives to draw attention to income-increasing transitory items. Although we do not directly test whether managers' use of transitory taxes is to inform or to mislead, we find that material nonrecurring income taxes alter investors' perceptions of earnings. Therefore, our evidence suggests that investors benefit from the voluntary disclosure of transitory gains.

Fourth, we contribute to the tax literature by identifying and categorizing transitory tax

items. Concurrent work examines the accuracy of ETR (effective tax rates) forecasts and this study suggests transitory tax items materially affect ETR forecast accuracy. For example, Beardsley (2015) considers interim tax reporting accuracy and Hutchens (2015) examines analysts' implied ETR forecasts. Although the literature has long suspected transitory components in income tax expense, this is the first study to explicitly identify and examine economic properties of such transitory items. Schmidt (2006, p. 594) writes, "The view that earnings generated from ETR changes contain some transitory elements is reasonable because the ETR can be used for period-specific earnings management." We list tax events and transactions considered to be transitory by expert financial statement users such as analysts. Although prior research examines transitory tax events and transactions such as valuation allowances, our analysis suggests that these tax events can also be examined collectively as transitory tax items. In addition, these studies often examine how earnings management relates to a specific tax event or transaction. Our hand-collected categorization of nonrecurring income taxes suggests that not all transitory tax items constitute earnings management.

Finally, transitory tax items have implications for research that uses GAAP tax expense. Studies that examine attributes of the ETR, such as persistence or earnings management, could be re-examined for how nonrecurring income taxes affect their results. For example, Gleason and Mills (2008) acknowledge that the tax effect of special items can impact their results, but could not easily analyze the role of nonrecurring income taxes during their sample period. Their measurement of earnings management is based on a comparison of third and fourth quarter ETRs. We find nonrecurring income taxes are most common in the fourth quarter, suggesting that controlling for nonrecurring income taxes is potentially important.

II. BACKGROUND AND HYPOTHESES DEVELOPMENT

Prior Research on Special Items

Investors, analysts, and academics attempt to distinguish persistent from transitory components of earnings. Prior research often uses Compustat's "special items" data item as a proxy for transitory components of earnings (e.g., Cready et al. 2010, 2012; Curtis et al. 2014; Jones and Smith 2011). Yet Burgstahler, Jiambalvo, and Shevlin (2002) note that special items are "determined not by a formal definition specified in GAAP, but rather by Compustat's own definition." This self-definition could raise concern over the data validity of Compustat's special items, including whether they are nonrecurring components of earnings (Frankel 2009; Johnson, Lopez, and Sanchez 2011). Thus, researchers consider it an important question to determine whether Compustat's special items are less persistent than other earning components (Fairfield et al. 2009; Reidl and Shrinivasan 2007; Burgstahler et al. 2002). Based on the decreased persistence, Frankel (2009) explains that special items are a reasonable proxy for nonrecurring items. He notes support for this view is bolstered by Bradshaw and Sloan's (2002) finding that special items are significantly associated with amounts excluded from analysts' Street earnings because analysts are presumably adept at identifying nonrecurring items.

Another way to identify nonrecurring items, and capture more than special items, is to hand collect differences between Street and GAAP earnings. Analysts try to forecast and report recurring earnings for equity valuation.[1] Thus, the difference between Street and GAAP earnings should represent analysts' belief that the items are nonrecurring (Brown et al. 2015). However, analysts may opportunistically exclude recurring items (Baik, Farber, and Petroni 2009). Thus, academics and regulators continue to question whether differences between Street and GAAP earnings are truly nonrecurring items.

[1] I/B/E/S receives analyst forecasts with nonrecurring items excluded. I/B/E/S adjusts reported earnings to reflect exclusions made by the majority of analysts (Baik et al. 2009).

Gu and Chen (2004) hand collect nonrecurring items identified by analysts to examine whether analysts have expertise in processing earnings information. They show that, on average, nonrecurring items included in Street earnings have greater predictive power for future earnings and higher valuation multiples than those excluded. They conclude that analysts exert "professional judgement and provide a value-added service to investors." Among the 22 categories of nonrecurring items they examine, Gu and Chen (2004) identify "tax adjustments" and "tax settlements" as nonrecurring items. But their sample period of 1990 to 2003 precedes the common occurrence of nonrecurring income taxes or Compustat's cataloging of nonrecurring income taxes. Consequently it is no surprise when they find tax items are relatively infrequent, comprising 6% of their sample of nonrecurring items. In their analysis, Gu and Chen (2004) also find that analysts exclude the tax items less often than other items, consistent with analysts being less certain tax items are nonrecurring.[2] The current decade permits an expanded analysis of nonrecurring income taxes that should yield a larger sample from different sources (repatriations, valuation allowance releases) than the sample used by Gu and Chen (2004) and arguably improved awareness of tax matters by investors and analysts.

Prior Research on Transitory Tax Items

Prior research primarily examines the relationship between specific transitory tax items and earnings management. Schmidt (2006) predicts transitory components of tax expense because there are tax accounts related to period-specific earnings management. For example, valuation allowance changes are associated with earnings management (Bauman, Bauman, and

[2] Gu and Chen's (2004) table 4 shows three categories of nonrecurring tax items: tax adjustment gain, tax adjustment loss, and tax settlement gain. The total exclusions are 1,160 out of 1,583 total tax items from the three categories. Thus, 73% of tax items are excluded compared to 85% for all nonrecurring items. Tax adjustment losses are the least excluded of the three categories, with only 52% being excluded while tax adjustment gains and tax settlement gains are slightly underexcluded compared to other nonrecurring items at 79% and 83%, respectively. For comparison, restructuring charges, the most common nonrecurring item, are excluded over 90% of the time.

Halsey 2001; Frank and Rego 2006; Schrand and Wong 2003). Other specific tax accounts associated with earnings management are foreign earnings repatriations (Krull 2004) and the tax contingency reserve (Gupta, Laux, and Lynch 2015; Cazier, Rego, Tian, and Wilson 2015). Dhaliwal, Gleason, and Mills (2004) argue that the tax expense provides the final opportunity for earnings management before the earnings release date. They find evidence that managers appear to use small decreases in tax expense to achieve analysts' forecasts.

However, earnings management through tax accounts does not always imply such management is transitory. Sometimes management can achieve *higher* earnings persistence in the short run by managing earnings (Dechow et al. 2010). Thus, earnings management itself need not imply transitory effects. However, Gleason and Mills (2008) document that market rewards for beating analysts' targets through tax expense decreases are substantially lower than beating the targets without a tax decrease. Finally, managers would like to describe additional expenses as transitory, but additional income as persistent. Consistent with that preference, McVay (2006) presents evidence of the shifting of core expenses to special items. Thus, we might observe managers describing negative tax items as nonrecurring but not applying that label to positive tax items, making the challenge of identifying transitory versus persistent elements more difficult.

Real effects could also be either transitory or persistent. Chen and Schroderbek (2000) examine a statutory tax rate change as a type of nonrecurring income tax event. When tax rates change, a firm must revalue deferred tax assets and the revaluation amount is recognized in the tax expense. Chen and Schroderbek (2000) assume that the deferred tax adjustment is entirely transitory to future earnings, but they do not test this. While the tax rate change can have a persistent element, whether the remeasurement of deferred taxes is transitory to future earnings is an empirical question.

Compustat Definition of Nonrecurring Income Taxes

We use Compustat's nonrecurring income tax data item as a proxy for transitory tax items. Compustat defines the *nonrecurring income tax data item* as "the amount of income taxes that are reported as nonrecurring by the company or appear to be nonrecurring based on the description. These amounts are assumed to be after-tax because they are included in the income tax line item by the company" (Compustat 2015). Compustat's nonrecurring income tax data are collected by financial researchers reading financial statements, notes to financial statements, and management discussions. Nonrecurring income tax data were added to Compustat in 2001, but are relatively well populated starting in 2005. In addition, conversations with S&P Client Relations confirm that Compustat's special item data excludes nonrecurring income taxes.

Hypotheses

Overall, given the prior evidence on special items and specific examinations on transitory tax items, it is unclear whether nonrecurring income taxes have predictive power for future earnings. Thus, the first goal of this paper is to establish whether nonrecurring items are less persistent components of earnings. Similar to Frankel (2009), we assert that nonrecurring income taxes are transitory if they have lower predictive power for future earnings than do other components of earnings. Based on prior research showing that Compustat identifies nonrecurring items in pretax items, we predict the following hypothesis, stated in the alternative form:

H1: Nonrecurring income taxes are less predictive for future earnings than are GAAP earnings, excluding special items and nonrecurring income taxes.

We next examine how nonrecurring income taxes impact analyst behavior and investors' use of earnings. As previously discussed, Gu and Chen (2004) find that analysts exclude tax items from Street earnings. But tax items are a small portion of their sample and tax items are

excluded less often than other items they categorize. As such, their evidence on the average nonrecurring item may not generalize to recent and more frequent nonrecurring income taxes.

Prior research on tax law changes increases the ambiguity over whether analysts exclude transitory tax items from Street earnings. Chen and Schroderbek (2000) find a significant association between analyst forecast error and deferred tax adjustment. This outcome suggests that analysts did not adjust for the tax law change in their forecasts. Chen and Schroderbek (2000) conclude that "further study will be necessary to understand the degree of [analyst] sophistication" in excluding nonrecurring items. Plumlee (2003) discovers that analysts' forecast revisions appear to be updated for less complex tax law changes, but not for complex changes. Furthermore, Hoopes (2013) shows that extensions of temporary tax laws decrease the accuracy of analysts' earnings forecasts. Thus, current literature suggests that analysts lack either ability or incentives to incorporate complex tax information into their forecasts.

In contrast, other research suggests that analysts have become aware of the effect of taxes on forecasts. For example, Bratten et al. (2015) find analysts are less likely to mimic management's ETR estimate when the environment is complex. Allen et al. (2015) and Chen et al. (2015) find a negative association between tax avoidance and analyst coverage. One interpretation of the results from Allen et al. (2015) and Chen et al. (2015) is that the monitoring role of analysts prevents tax aggressive behavior. Analysts may be more attentive to taxes today because researchers, financial statement users, and regulators are increasingly interested in the material effect of income taxes on firm performance and reporting. For example, a second "one-time" repatriation of foreign earnings is gathering business media attention (Monga and Lublin 2015), and the economic downturn of 2008 resulted in many firms generating significant tax losses (Sikes, Tian, and Wilson 2014). In addition, public awareness of corporate taxation has

likely increased recently due to growing media attention over the policy implications of corporate tax avoidance (Chen, Powers, and Stomberg 2015). Paralleling greater awareness by market participants of tax matters, the IRS has become more conscious of financial statement disclosures about tax matters, as demonstrated by their frequent use of SEC-Edgar to search financial statements (Bozanic, Hoopes, Thornock, and Williams 2015).

Given the conflicting evidence on analysts' ability to process financial statement tax information, it is difficult to predict whether nonrecurring income taxes are excluded from Street earnings. However, because Gu and Chen (2004) find some tax items are excluded, we predict the following hypothesis, stated in the alternative form:

H2: Nonrecurring income taxes are excluded from Street earnings.

The final goal of this paper is to examine whether the presence of nonrecurring income taxes impacts investors' evaluation of firm performance. We consider this question because Elliott and Hanna (1996) find investors place less weight on unexpected earnings before special items in the presence of material special items.[3] They hypothesize that nonrecurring items can "impair an investors' ability to assess firm performance." Specifically, nonrecurring items obfuscate the information contained in earnings because managers can opportunistically shift operating expenses to special items or nonrecurring items can be correlated with real economic events that increase information-processing costs to determine recurring earnings.

Thus, we examine whether nonrecurring income taxes include value-relevant information, using the association between abnormal returns around earnings announcements and unexpected Street earnings. Prior literature examines whether specific nonrecurring tax items contain incremental value-relevant information. Givoly and Hayn (1992) find a positive

[3] Elliott and Hanna (1996) measure unexpected earnings before special items using a seasonal random walk model (the difference between quarterly earnings before special items and the four-quarter-ago equivalent).

association between stock returns and changes in deferred tax liabilities due to a one-time tax rate decrease. Their evidence suggests that investors respond to transitory tax expenses. Dhaliwal, Kaplan, Laux, and Weisbrod (2013) find that valuation allowance changes contain information about the persistence of accounting earnings, consistent with managers using private information about the firm's future prospects in determining the valuation allowance. In addition, anecdotal evidence on foreign earnings repatriations suggests that market participants respond to value-relevant information at the repatriation announcement date. For example, when eBay removed its permanently reinvested designation on foreign earnings and accrued a $3 billion tax expense, the stock price fell 4.3% (Bensinger 2014). The fact that eBay also lowered its earnings forecast at the same time could indicate that it hoped to hide the persistent bad news by revealing it along with an arguably nonrecurring tax event.

Given Elliott and Hanna's (1996) evidence, and data on certain nonrecurring income taxes revealing value-relevant information, we predict that the association between abnormal returns and unexpected Street earnings from fiscal quarters without nonrecurring income taxes is higher than the association between unexpected earnings and returns from fiscal quarters with nonrecurring income taxes. We restate this hypothesis in the alternative form as follows:

H3: The ERC of Street earnings without a nonrecurring income tax is greater than the ERC of Street earnings with a nonrecurring income tax.

III. RESEARCH DESIGN

Test of Predictive Power for Future Earnings of Nonrecurring Income Taxes

To examine the predictive power for future earnings of nonrecurring income taxes, we modify a basic persistence equation of future earnings regressed on current earnings. For future earnings performance, we examine one-year-ahead GAAP earnings (cumulative earnings over

the following four quarters), consistent with Gu and Chen (2004). *Current earnings* are defined as Compustat's income before extraordinary items (IBQ). We regress the cumulative earnings for the next four quarters on current quarterly earnings because we want to learn whether nonrecurring income taxes predict future earnings in the following year. We do not regress a specific future quarter's earnings on current quarterly earnings because such a model assumes that nonrecurring income tax items persist only to a specific quarter in the following year (Curtis et al. 2014). The basic equation is as follows:

$$\Sigma_{k=1}^{4} GAAP_{i,q+k} = \alpha_0 + \alpha_1 GAAP_{i,q} + \varepsilon_{i,q+k} \quad (1)$$

for firm i, fiscal quarter q, and where $GAAP_{i,q}$ represents GAAP earnings. We decompose GAAP earnings into GAAP earnings, excluding special items and nonrecurring income taxes. We test predictive power for future earnings of nonrecurring income taxes using the following model:

$$\begin{aligned}\Sigma_{k=1}^{4} GAAP_{i,q+k} = \alpha_0 + \alpha_1 (GAAP_{i,q} - SPI_{i,q} - NRTAX_{i,q}) \\ + \alpha_2 SPI_{i,q} + \alpha_3 NRTAX_{i,q} + \gamma_t + \delta_j + \varepsilon_{i,q+k},\end{aligned} \quad (2)$$

for firm i and fiscal quarter q. $GAAP_{i,q}$ equals Compustat's income before extraordinary items quarterly data item (IBQ). $SPI_{i,q}$ are special items (SPIQ), and $NRTAX_{i,q}$ are nonrecurring income taxes (NRTXTQ), also from Compustat. We scale all variables by beginning-of-period market value of equity, calculated as the common shares outstanding multiplied by the share price, consistent with Burgstahler et al. (2002).

Hypothesis 1 predicts that the coefficient on GAAP earnings, excluding special items and nonrecurring income taxes, will be larger than the coefficient on nonrecurring income taxes ($\alpha_1 > \alpha_3$).

We use ordinary least squares regression and calculate Huber-White robust standard errors to control for heteroscedasticity of residuals (Froot 1989; Rogers 1993). We cluster residuals by quarter to mitigate cross-sectional correlation (Petersen 2009). Cross-sectional

correlation may be a concern due to macroeconomic influences on firm performance. Year fixed effects, which control for unobserved heterogeneity within the year such as macroeconomic changes, are designated by γ_t, while δ_j represents industry fixed effects (based on the Fama-French 17 industry classification), which control for unobserved industry heterogeneity.

Test for the Extent to Which Nonrecurring Income Taxes Explain the Difference Between Street and GAAP Earnings

Bradshaw and Sloan (2002) regress the difference between Street and GAAP earnings on special items. They find a negative and statistically significant coefficient on special items. This result suggests that special items are excluded from Street earnings. They also examine amortization expense, research and development expense, and nonoperating income—but find only a moderate increase in explanatory power over the difference between Street and GAAP earnings.

In the spirit of their model, we test whether nonrecurring income taxes incrementally explain the difference of Street and GAAP earnings, after controlling for special items. To do so, we estimate the following model:

$$DIFF_{i,q} = \alpha_0 + \alpha_1 SPI_{i,q} + \alpha_2 NRTAX_{i,q} + \gamma_t + \varepsilon_{i,q} \quad (3)$$

for firm i, fiscal quarter q, and where γ_t are year fixed effects. $DIFF_{i,q}$ is the difference of Street earnings (I/B/E/S actual earnings) and Compustat's income before extraordinary items quarterly data item (IBQ).[4] $SPI_{i,q}$ is special items (SPIQ), and $NRTAX_{i,q}$ is nonrecurring income taxes (NRTXTQ), both from Compustat. All variables are scaled by beginning-of-period market value of equity, calculated as common shares outstanding multiplied by share price, consistent with Bradshaw and Sloan (2002) and equation 2 above.

[4] We use split-unadjusted data from I/B/E/S so that I/B/E/S Street earnings are comparable to Compustat GAAP earnings (Payne and Thomas 2003; Bradshaw et al. 2015).

Our second hypothesis predicts a statistically significant negative coefficient on NRTAX ($\alpha_2 < 0$). As before, we use ordinary least squares regression and calculate Huber-White robust standard errors and cluster residuals by quarter to mitigate heteroscedasticity and cross-sectional correlation of residuals.

Test of the Information Content of Street Earnings

We examine the earnings response coefficient (ERC) to assess the information content of Street earnings in the presence of nonrecurring income taxes. Researchers use ERCs to examine information content earnings because ERCs describe the mapping of time-series properties found in earnings into stock returns, as well as test for the arrival of information (Kothari 2001). Researchers typically construct ERCs by regressing unexpected returns on unexpected earnings, and they assume market efficiency (Dechow et al. 2010). The basic model is as follows:

$$CAR_{i,[t-1,t+1]} = \alpha_0 + \alpha_1 Unexpected\ Earnings_{i,t} + \varepsilon_{i,t} \quad (4)$$

for firm i and fiscal quarter t. $CAR_{i,[t\text{-}1,t+1]}$ is the cumulative three-day stock return around the earnings announcement (day -1 to day +1), minus the cumulative return for a value-weighted portfolio of firms in the same CRSP-size decile. A short-window stock return centered on the earnings announcement date increases confidence that any discovered relationship is related to the hypothesis because earnings announcement dates are dispersed throughout the calendar, and a short-window return measurement period decreases the probability of confounding events (Kothari 2001). $Unexpected\ Earnings_{i,t}$ equals the difference between Street earnings (I/B/E/S actual earnings) and the consensus analyst earnings forecast (I/B/E/S median analyst estimate). We scale Unexpected Earnings by end-of-quarter market value of equity, consistent with Elliott and Hanna (1996). We estimate ordinary least squares regressions and calculate Huber-White robust standard errors and cluster residuals by earnings announcement date, consistent with

Bradshaw, Christensen, Gee, and Whipple (2015).

The advantage of ERCs is that they directly link earnings to decision making, such as equity valuation. The primary weaknesses of ERCs are correlated omitted variables and measurement error of unexpected earnings (Dechow et al. 2010; Bradshaw et al. 2015). As such, our main test does not include nonrecurring income taxes because analysts historically have not forecast nonrecurring items (Bradshaw et al. 2015). To allow comparison to Elliott and Hanna (1996), we include nonrecurring income taxes as an explanatory variable in equation 4, but note this action assumes investors' expectation of nonrecurring income taxes to be zero. This test is mis-specified to the extent investors have nonzero expectations.

Hypothesis 3 predicts the coefficient on Unexpected Earnings when nonrecurring income taxes are absent will be greater than the coefficient on Unexpected Earnings when nonrecurring income taxes are present. We also create two separate subsamples based on nonrecurring income taxes. The first subsample examines differences in ERCs based on whether nonrecurring income taxes are zero versus not equal to zero. The second subsample examines differences in ERCs based on material versus immaterial nonrecurring income taxes. We define *material nonrecurring income taxes* as those with absolute value greater than 0.6% of market value of equity. Assuming a 40% tax rate, our threshold of materiality for after-tax nonrecurring income taxes is consistent with Elliott and Hanna (1996) and Burgstahler et al. (2002), who use 1% of market value of equity for the pretax special items. We expect the examination of material nonrecurring income taxes should provide more power than the test of whether nonrecurring taxes are merely present.

IV. SAMPLE

Our sample consists of US corporations in the quarterly Compustat database that have

positive total assets between 2005 and 2012.[5] Our sample begins in 2005 because the nonrecurring income tax data item is sparsely populated prior to that year. Nonrecurring income taxes likely received more attention starting in 2005 due to the American Jobs Creation Act (AJCA) of 2004, which allowed firms to repatriate foreign earnings to the United States at a reduced tax rate in 2005, but this tax rate still represented an incremental tax over the typically low foreign-tax rate. The additional US tax expense from earnings repatriations had a material negative influence on earnings, and the numerous firms taking advantage of AJCA 2004 likely raised awareness of nonrecurring income taxes.

Table 1 shows our sample beginning with 188,520 firm-quarters. We exclude 97,899 firm-quarters missing Street earnings (I/B/E/S actual earnings) necessary for our tests. We require observations to have beginning and ending quarterly market value of equity greater than $1 million to mitigate denominator effects in our scalar. Market value of equity equals the Compustat stock price multiplied by common shares outstanding. This requirement eliminates 2,238 firm-quarters.

We follow Burgstahler et al. (2002) and remove 183 firm-quarters with extreme values of earnings, where the absolute value of earnings is greater than the beginning market value. Those observations likely represent data coding errors or unusual firms. We also require firm-quarter observations to have the following four consecutive quarters of GAAP earnings, defined as Compustat's income before extraordinary items variable (IBQ). This condition excludes 4,925 firm-quarters. We remove 71 observations missing CRSP unique identifiers because we will not be able to calculate stock returns for these observations. We also exclude 498 observations missing SIC industry codes because we use industry fixed effects. Finally, in order to mitigate

[5] We exclude mutual funds, trusts, REITs, and limited partnerships because these entities have different reporting requirements and tax-planning incentives (Schmidt 2006). In addition, inferences are robust to excluding financial institutions, as is common in prior research examining earnings persistence.

the influence of outliers, we trim observations at the 1 and 99 percentile for all independent and dependent regression variables except cumulative abnormal stock returns.[6] Similar to Gu and Chen (2004), we trim special items and nonrecurring income taxes at the 1 and 99 percentile of nonzero observations. Our full sample consists of 78,284 firm-quarter observations.

[Insert Table 1 here]

We create a "nonmissing NRTAX" subsample that excludes observations with missing nonrecurring income taxes in Compustat. This subsample contains 7,291 firm-quarters. In the full sample, we set missing nonrecurring income taxes to zero. Figure 1 shows the frequency of nonrecurring income taxes by fiscal quarter and year for the nonmissing nonrecurring income tax subsample. Compustat identifies nonrecurring income taxes most often in the fourth quarter, similar to special items (Bradshaw and Sloan 2002). The highest number of nonrecurring income taxes by quarter and year occurs in the fourth quarter of 2005 with 297 observations, and the highest number of nonrecurring income taxes by year occurs in 2005 with 669 total observations. Although the number of nonrecurring income taxes decreases in 2011 and 2012, figure 1 shows that numerous nonrecurring income taxes occur in each fiscal quarter and year.

[Insert Figure 1 here]

V. DESCRIPTIVE STATISTICS

Table 2A presents descriptive statistics for all regression variables, with earnings variables shown as a percentage of beginning-of-period market value of equity. The mean (median) of GAAP quarterly earnings is 0.45 (1.13). By converting the median GAAP quarterly earnings into an annualized PE ratio, we obtain a median PE ratio of about 22, which seems reasonable for the time period. The mean difference between Street and GAAP earnings is 0.33, although the median difference is zero. This result agrees with the intuition that Street earnings

[6] Inferences are unchanged when we trim cumulative abnormal returns, as in Burgstahler et al. (2002).

are generally greater than GAAP earnings because analysts exclude typically negative special items from Street earnings. The mean (median) of *unexpected earnings*, defined as Street earnings less the median analyst forecast, is -0.03 (0.05), consistent with some firms missing earning targets by large amounts and most firms beating earning targets. Finally, the mean of nonrecurring income taxes is 0.09, with a median of zero. These statistics show the sample of nonrecurring income taxes contain large income-increasing items. Further, figure 2 shows that nonrecurring income taxes are mostly income-increasing—unlike special items, which are mostly income-decreasing. Over 15% of nonrecurring income taxes are material to earnings, compared to special items being material to earnings for about 12% of observations.

[Insert Table 2A here]

[Insert Figure 2 here]

Table 2B presents a correlation matrix of regression variables. It is helpful to compare the correlation coefficients of nonrecurring items with the difference between Street and GAAP earnings, because the latter represents what analysts believe are nonrecurring items. Consistent with prior research, the difference between Street and GAAP earnings is correlated with special items having a Pearson correlation coefficient of -0.69. The correlation between nonrecurring income taxes and the difference between Street and GAAP earnings is smaller, with a Pearson correlation coefficient of -0.21, but statistically significant at the 5% alpha level.

The Pearson (Spearman) correlation coefficient between special items and nonrecurring income taxes is 0.02 (-0.02). Although statistically significant at the 5% level, the small correlation coefficients and inconsistent signs suggest that nonrecurring income taxes and special items describe different economic transactions and are not mechanically related.

[Insert Table 2B here]

Table 2C shows the industry composition of nonmissing nonrecurring income taxes in

Compustat. We also present the full sample for comparison. Nonrecurring income taxes are most prevalent in the machinery and business equipment industry, with 19% of nonrecurring income tax observations coming from this industry compared to 14% of the full sample's observations from this industry. But nonrecurring income taxes appear in each industry, and their frequency by industry is roughly consistent with the full sample.

[Insert Table 2C here]

Table 3 categorizes nonrecurring income taxes so that we understand what causes nonrecurring income taxes. We create these categories by hand-collecting plausible reasons why Compustat identifies nonrecurring income taxes. We construct our sample of nonrecurring income taxes based on firm-quarters in Compustat with a nonzero nonrecurring income tax. We collapse these firm-quarter observations into unique firms. There are 2,123 unique firms in Compustat with a nonrecurring income tax. We randomly select 400 of these firms and collect all observations of nonrecurring income taxes of these firms identified by Compustat. In total, we examine 1,289 observations of nonrecurring income taxes. We categorize the nonrecurring income tax amount reported in Compustat by reading the quarterly earnings announcements (8-K), interim financial statements (10-Q), and annual financial statements (10-K) from the SEC's EDGAR database. See Appendix B for examples.

Audit resolutions represent nearly 23% of all nonrecurring income taxes and are the most common reason for a nonrecurring income tax in our sample. Valuation allowances, tax law changes, foreign earnings repatriations, and acquisitions/mergers are the next four most common transactions, comprising 21.7%, 9.3%, 6.1%, and 4.0% of the sample respectively. In total, the leading five categories represent 63.8% of the sample. This outcome provides evidence that nonrecurring income taxes include items the literature previously examined individually for

earnings management. Management often calls attention to these categories in their disclosures, suggesting that management believes these tax accounts have transitory effects on earnings, and investors are informed by their distinction as nonrecurring.

The undetermined category is 25.6% of the sample. We categorize nonrecurring income taxes as "undetermined" when it is difficult to reconcile the Compustat nonrecurring income tax figure with a specific nonrecurring income tax category. The difficulty typically arises due to three reasons: (1) 8-K, 10-Q, and 10-K do not appear to mention a nonrecurring income tax, (2) there are two or more nonrecurring income taxes disclosed and a reconciliation to Compustat's figure is unclear, or (3) a nonrecurring income tax is identified for a peculiar event that did not fit into a general nonrecurring income tax category. Note that special items are similarly difficult for researchers to classify. For example, Johnson et al. (2011) report that 24.9% of special items from 2001–2009 are classified in Compustat's subtype category "other."

[Insert Table 3 here]

VI. EMPIRICAL RESULTS AND DISCUSSION

Tests of Predictive Power of Future Earnings

Table 4 presents the results of estimating equation 2 to test the predictive power of quarterly earnings for future earnings. This model provides evidence on whether nonrecurring income taxes are in fact nonrecurring. Columns 1–3 of table 4 present results based on the full sample, with missing values of nonrecurring income taxes set to zero.[7] Using one quarter's earnings to predict the following year's earnings in column 1, we estimate that the coefficient on earnings is 2.24 and therefore highly statistically significant. This finding suggests that each 1% of change in equity from GAAP quarterly earnings predicts 2.24% ROE of earnings in the subsequent year.

[7] As discussed in section 7, we find that Compustat conservatively reports nonrecurring income taxes.

Column 2 separates special items from GAAP earnings. The coefficient on GAAP earnings excluding special items is 2.61 and the coefficient on special items is 1.1. Consistent with prior literature (Burgstahler et al. 2002; Gu and Chen 2004; Hsu and Kross 2011), we find that special items have statistically significant predictive power for future earnings. However, because the predictive power for future earnings of special items is less than the predictive power of GAAP earnings excluding special items (F-statistic = 150.6; p-value < 0.001), special items are often considered a nonrecurring item (Frankel 2009; Hsu and Kross 2011).

Column 3 excludes nonrecurring income taxes and special items from GAAP earnings. The coefficient on the modified GAAP earnings figure slightly increases to 2.65 and the coefficient on special items is 1.13, similar to the coefficient on special items in column 2. The coefficient on nonrecurring income taxes is 1.04 and significantly different from the coefficient on GAAP earnings, excluding special items and nonrecurring income taxes (F-statistic = 19.3; p-value < 0.001). This result suggests that each 1% of change in equity from nonrecurring income taxes predicts 1.04% ROE of earnings in the subsequent year. Thus, while nonrecurring income taxes predict future earnings, they display economic properties similar to transitory items.

Finally, we examine whether the explanatory power of the model improves by decomposing earnings into its recurring and nonrecurring components. Using a Vuong test, we find that decomposing GAAP earnings for nonrecurring income taxes slightly improves the model's explanatory power to predict future earnings (a statistically significant increase in R^2 of 0.3% from column 2 to 3).

The results discussed above for columns 1–3 hold for the nonmissing nonrecurring income tax sample, shown in columns 4–6. Specifically, the coefficient on modified GAAP earnings increases with nonrecurring items also excluded, while the coefficient on nonrecurring

income taxes is statistically different from the coefficient on GAAP earnings, excluding special items and nonrecurring income taxes (*F*-statistic = 6.56; *p*-value = 0.016). The explanatory power of the model to predict future earnings increases by a statistically significant 1.6% when excluding nonrecurring income taxes. This result suggests that when nonrecurring income taxes are present, they can have economically significant effects.

[Insert Table 4 here]

Tests for the Extent to Which Nonrecurring Income Taxes Explain the Difference Between Street and GAAP Earnings

The prior section provides evidence that Compustat's identified nonrecurring income taxes are in fact nonrecurring. Thus, nonrecurring income taxes provide a setting to examine whether analysts distinguish these transitory items. Table 5 presents the results of estimating equation 3. If analysts exclude all special items from Street earnings and we assume a 40% tax rate, pretax special items should have a coefficient of -0.60 $(100\% \times (1 - 40\%))$. In column 1, we estimate a coefficient of -0.76 on special items, which is significantly different from -0.60 (*F*-statistic = 96.4; *p*-value < 0.001). The larger (i.e., more negative) than predicted coefficient estimated on special items suggests not all special items are tax deductible. For example, in their fourth-quarter earnings announcement of 2012, Microsoft reported a "non-cash, non-tax-deductible income statement charge of $6.19 billion for the impairment of goodwill."

Column 2 adds nonrecurring income taxes to the model. The coefficient on nonrecurring income taxes is -0.75 and highly statistically significant. The coefficient is statistically different from -1 (*F*-statistic = 24.9; *p*-value < 0.001). This finding suggests that analysts retain some of the nonrecurring income taxes identified by Compustat in Street earnings. The explanatory power of the model is improved by 3.8% when we add nonrecurring income taxes as an

explanatory variable, and the increase in explanatory power of the model compared to special items alone is statistically significant (z-statistic = -6.74; p-value < 0.001). Column 3 shows that the results hold in the nonmissing nonrecurring income tax sample, and the R^2 increase to 77%.[8]

Overall, these results provide evidence that analysts examine firms' tax expense for nonrecurring components. Combined with Gu and Chen's (2004) evidence that analysts selectively exclude nonrecurring items, our results suggest that the exclusion of nonrecurring income taxes is deliberate. These findings add support to new evidence about analysts and taxes (Allen et al. 2015; Bratten et al. 2015; Chen et al. 2015). Today's analysts appear to have the ability or incentives to process complex tax expense disclosures.

[Insert Table 5 here]

Tests of the Information Content of Street Earnings

Table 6 presents results of tests on the information content of Street earnings. Column 1 shows the ERC is 1.8 and highly statistically significant, and the R^2 of the model is 4.7%. This finding suggests that each 1% of unexpected earnings is associated with a 1.8% abnormal stock return. Column 2 re-estimates the regression for the nonmissing nonrecurring income tax sample with consistent results. Next we examine whether ERCs differ if nonrecurring income taxes are present.

We split the nonmissing nonrecurring income tax sample between nonrecurring income taxes that equal zero and those that do not equal zero (columns 3 and 4). The ERC appears larger when nonrecurring income taxes equal zero, but this difference is insignificant (a Chow test comparing the ERCs cannot reject the null hypothesis of equality; F-statistic = 0.99; p-value = 0.32).

Because we do not have an expectation of nonrecurring income taxes, including the entire

[8] Inferences are robust to excluding zero values of nonrecurring income taxes.

amount as unexpected nonrecurring income taxes creates measurement error (Bradshaw et al., 2015). Thus, we omit nonrecurring taxes from columns 1–4. However, with the caveat that market participants are likely to expect some amount of nonrecurring income taxes, we add nonrecurring income taxes as an explanatory variable in column 5. The ERC is similar to that of column 4 and the coefficient on nonrecurring income taxes is not statistically significant.

These results do not show that investors value unexpected earnings differently in the mere presence of a nonrecurring income tax. This consequence may occur because many nonzero nonrecurring income taxes are immaterial to the market and thus may not influence the judgment of earnings.

We next examine whether the ERC is different in the presence of a material nonrecurring income tax (columns 6 and 7). Prior literature focuses on examining material versus immaterial transitory items (e.g., Burgstahler et al. 2002). Material nonrecurring income taxes likely communicate more substantive information to market participants than immaterial nonrecurring income taxes. We define a *nonrecurring income tax* as material if its absolute value is greater than 0.6% of the beginning market value of equity. We find that the nonmaterial nonrecurring tax sample has an ERC of 2.2. In the material nonrecurring tax sample, we find a smaller ERC of 1.3. A Chow test rejects the equality of ERCs (F-statistic = 8.31; p-value = 0.004). Thus, we find evidence that the information content of earnings is weaker in the presence of material nonrecurring income taxes.[9] In column 8, we add nonrecurring income taxes as an explanatory variable. This variable again carries the caveat that it lacks an expectation and thus can induce measurement error. The ERC is similar to column 7 and the coefficient on nonrecurring income taxes is not statistically significant. We also control for firms' information environment and risk factors by adding variables for analyst following, size, beta, stock return over past twelve

[9] Inferences are robust to using decile-ranked cumulative abnormal returns and unexpected earnings.

months, growth, and book-to-market ratio (Kothari 2001; Dechow et al. 2010). After adding control variables, estimated ERCs are similar to the regressions presented and inferences are unchanged in an untabulated regression.

[Insert Table 6 here]

Because our first test in table 4 provides evidence that nonrecurring income taxes are transitory components of earnings, we interpret the smaller ERC in the presence of material nonrecurring income taxes as investors using information from the reporting of nonrecurring income taxes to evaluate managerial performance or prior decision making. An alternative perspective is that nonrecurring income taxes impair investors' ability to evaluate firm performance, similar to the argument made in Elliott and Hanna (1996) about material special items. Although we cannot disprove Elliott and Hanna's alternative perspective for nonrecurring income taxes, we believe that our research design favors the first interpretation, because we use unexpected Street earnings in the return-earnings regression. Thus, the smaller ERC in the presence of material nonrecurring income taxes is unlikely to be due strictly to measurement error. Instead, nonrecurring income taxes can provide information investors use to evaluate managerial performance or prior decision making, which decreases the association between earnings and returns. Similar to analysts, this outcome suggests that investors are mindful of nonrecurring income taxes in equity valuation.

VII. ADDITIONAL ANALYSES

Cross-Sectional Analysis of Nonrecurring Income Taxes by Type of Event

Using our hand-collected categorization of nonrecurring income taxes, we examine whether the results in section 6 depend on type of nonrecurring income tax event. Tables 7A, 7B, and 7C present these results. For comparison, column 1 of each table shows a pooled regression

similar to those presented in tables 4–6, but using the hand-collected subsample. Thus, we focus on column 2, where we add explanatory variables for nonrecurring income taxes by type.

Table 7A presents the results of analyzing the predictive power of nonrecurring income taxes by event type. We find that each 1% of quarterly change in book equity from valuation allowance changes predicts 1.01% of cumulative earnings in the subsequent four quarters. The positive coefficient suggests that the typically income-increasing valuation allowance changes are associated with greater future earnings. This result is consistent with evidence from Dhaliwal et al. (2013), who find that changes in valuation allowances reveal information about the persistence of accounting losses. However, we do not find that nonrecurring income taxes due to foreign earnings repatriations, audit resolutions, law changes, and other nonrecurring income taxes have significant predictive power for future earnings.

[Insert Table 7A here]

In table 7B, we examine the extent to which nonrecurring income taxes explain the difference between Street and GAAP earnings by type of nonrecurring income tax. Because nonrecurring income taxes are presented after tax, the predicted coefficient is -1 if analysts exclude all nonrecurring income taxes. A *F*-test cannot reject a joint test of equality for the coefficients on repatriation, valuation allowance, audit resolution, and law change equal -1 (*F*-statistic = 1.98; *p*-value = 0.122). Thus, analysts appear to exclude the most common nonrecurring income tax events. However, we find a statistically significant difference between the coefficient on "other nonrecurring income taxes" and -1 (*F*-statistic = 120.9; *p*-value < 0.001), suggesting analysts are less likely to exclude unusual nonrecurring income taxes that can have more complexity or higher processing costs, which extends evidence from Plumlee (2002) to all transitory income tax items.

[Insert Table 7B here]

Table 7C presents our empirical results from regressing abnormal returns on unexpected earnings and nonrecurring income taxes by type. As discussed in section 6, this regression should be interpreted with caution because the empirical model does not capture the expectation the market has for nonrecurring income taxes. To the extent that the market has a zero expectation for nonrecurring income taxes, we find repatriations have a statistically significant positive association with abnormal returns. Note that earning repatriations are typically income-decreasing. Thus, a 1% increase in tax expense due to earnings repatriation is associated with a negative 0.87% abnormal return. This finding is consistent with Albring, Mills, and Newberry (2011), who find that firms repatriate earnings when faced with liquidity issues. Another interpretation is that the market reacts to the tax expense for repatriation and corresponding decrease in book value, but this interpretation requires the market to lack an expectation of a repatriation tax expense. For other nonrecurring income tax types, we find no evidence that valuation allowance changes, audit resolutions, law changes, and other nonrecurring income taxes are associated with abnormal returns.

[Insert Table 7C here]

Implications for the Persistence of ETR

We next examine the impact of nonrecurring income taxes on the persistence of ETRs. Understanding the persistence of ETRs is important because GAAP ETRs are a common measure of tax avoidance (Hanlon and Heitzman 2010). Given that we find nonrecurring income taxes have little persistence to future earnings, we predict that the persistence of ETRs is weaker in the presence of nonrecurring income taxes.

Table 8 presents univariate regressions of a future quarter's ETR on a past quarter's ETR.

In panel A, we use the full sample and find that ETRs are persistent to the next quarter. For example, the third-quarter ETR persists to the fourth-quarter ETR with a coefficient of 0.696.

In panel B, we restrict our sample to quarters with a nonrecurring income tax. We find that the presence of nonrecurring income taxes in the current quarter is significantly associated with less persistent ETRs to all future quarters, except for third-quarter ETR persistence to fourth quarter of the same fiscal quarter. For example, second-quarter ETRs persist to the fourth quarter with an estimated coefficient of 0.429, which is significantly lower than quarters without nonrecurring income taxes (t-statistic = -5.37; p-value < 0.001). We also examine whether a "clean" ETR, excluding the nonrecurring income tax from the tax expense before dividing by pretax income, will increase the persistence of quarterly ETR. In panel C, however, we do not find evidence that excluding nonrecurring income taxes from tax expenses increases persistence of the ETR. Thus, nonrecurring income taxes indicate when persistence of the ETR is low.

[Insert Table 8 here]

Further Analysis on the Frequency of Nonrecurring Income Taxes

Our evidence relies on Compustat's financial researchers to identify transitory components of tax expenses. As previously discussed, the special-item literature also relies on Compustat's identification of transitory pretax items. Several studies have examined the relationship between Compustat's coding of special items and the information in earnings announcements and 10-Q/Ks. In a similar vein, we check whether Compustat's nonrecurring income tax data item is a lower limit of the frequency of nonrecurring income taxes reported by firms as we examine 200 out-of-sample firm-quarters for the largest 100 US corporations.

We construct our sample by selecting the largest 100 US corporations by market value of equity in 2013. For each of these firms, we read fourth-quarter 8-K earnings announcements and

10-K income-tax footnotes in 2013 and 2014. We identify nonrecurring income taxes if management portrays components of the income tax expense as nonrecurring or a material tax expense was recorded as a result of audit resolutions, valuation allowances, law changes, and restructurings. We identify 53 observations of nonrecurring income taxes compared to Compustat's 29. This result suggests that Compustat's collection of nonrecurring income taxes is conservative and underreports the number of firms with nonrecurring income taxes.

VIII. CONCLUSION

This paper examines whether analysts and investors distinguish nonrecurring income taxes from recurring income taxes. Nonrecurring income taxes provide a setting to evaluate the ability of analysts and investors to identify transitory components of tax expense. We validate the idea that nonrecurring income taxes identified by Compustat should indeed be considered nonrecurring items, because we find they have a lower predictive power to future earnings. Further, using a hand-collected sample, we find the specific economic events that Compustat identifies as nonrecurring income taxes include plausibly infrequent or one-time events such as valuation allowance changes, tax law changes, and foreign earnings repatriations. We examine whether nonrecurring income taxes are excluded from Street earnings, consistent with analysts' beliefs that these items are not persistent. We find that analysts appear to distinguish nonrecurring income taxes as a nonrecurring component of earnings, based on a strong association of the difference between Street and GAAP earnings with nonrecurring income taxes. Investors also appear to distinguish material nonrecurring income taxes and use them to evaluate firm performance, based on a lower ERC for Street earnings when firms have nonrecurring income taxes. In summary, this study provides evidence of transitory components in tax expense and shows that analysts and investors pay attention to them.

APPENDIX A: Variable Definitions

Variable	Description
$GAAP_{i,t}$	Income before extraordinary items (IBQ), scaled by beginning market value of equity.
$SPI_{i,t}$	Special items per share (SPIQ), scaled by beginning market value of equity.
$DIFF_{i,t}$	Street earnings (I/B/E/S actual) minus GAAP Earnings (IBQ), scaled by beginning market value of equity.
$GAAP_{i,1year}$	Summed GAAP Earnings (IBQ) over the following four quarters, scaled by market value of equity at beginning of period.
$NRTAX_{i,t}$	Nonrecurring income taxes (NRTXTQ), scaled by beginning market value of equity.
$UE_{i,t}$	Street earnings (I/B/E/S actual) minus median forecast (MEDEST), scaled by beginning market value of equity.
$CAR_{i,[t-1.t+1]}$	Cumulative 3-day stock return around the earnings announcement (day -1 to day +1) minus the cumulative return for a value-weighted portfolio of firms in the same CRSP size decile.

APPENDIX B: Examples of Nonrecurring Income Tax Disclosures

Company Name and Date	Nonrecurring Income Tax in Compustat	Reason	Company's Disclosure
Cadence Design Systems, Inc.; 06/30/2010	$66.707 million	Valuation Allowance	"Because the increase in deferred tax liabilities from the intangible assets … Cadence released a corresponding amount of its deferred tax asset valuation allowance. The $66.7 million release of the valuation allowance was recognized as a Benefit for income taxes for the three and six months ended July 3, 2010. The pro forma net income (loss) presented above does not include this non-recurring Benefit for income taxes." *From Cadence's 8-K filed on SEC EDGAR on 08/04/2010*
Eli Lilly and Company; 03/31/2010	$-85.1 million	Tax Law Change	"The increase in the effective tax rate was driven by a one-time charge of $85.1 million associated with the imposition of tax on the prescription drug subsidy of the company's retiree health plan as part of U.S. health care reform, as well as the expiration of the research and development tax credit." *From Eli Lilly's 8-K filed on SEC EDGAR on 04/19/2010*
Edison International; 06/30/2006	$81 million	Audit/Tax Authority Resolution	"Southern California Edison Company's (SCE) earnings … include an $81 million, or 25-cents-per-share, one-time benefit from resolution of an outstanding state income tax issue." *From Edison's 8-K filed on SEC EDGAR on 08/08/2006*

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Figure 1: Frequency of Nonrecurring Income Taxes by Fiscal Quarter and Year

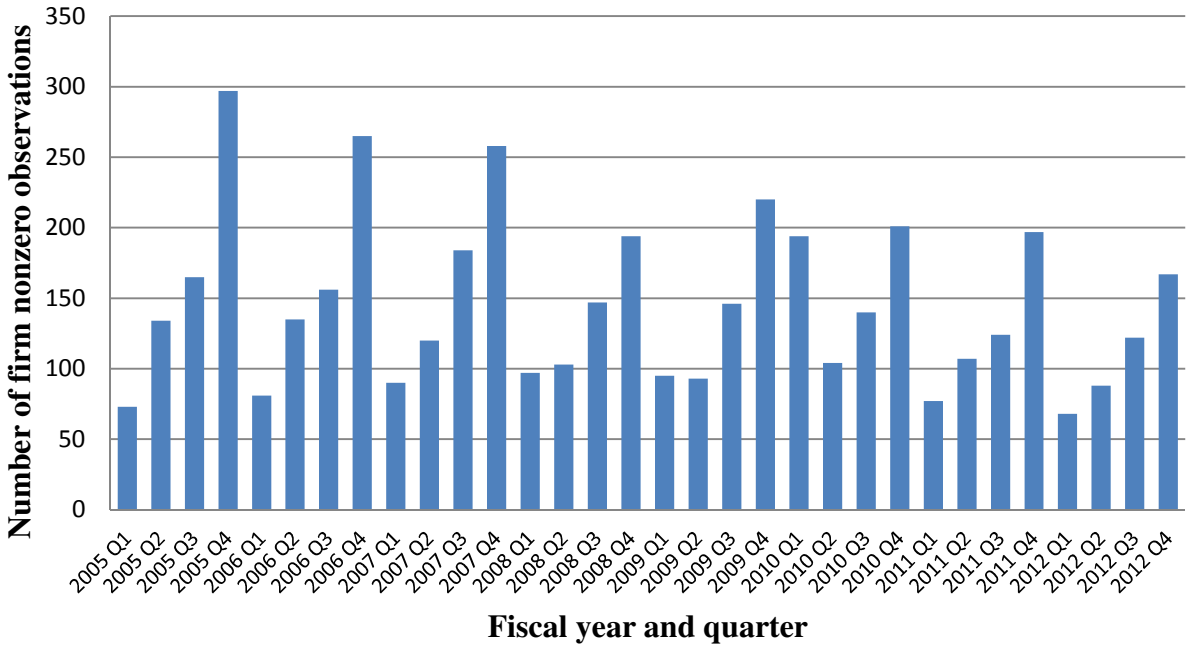

Figure 1 presents the frequency of quarterly nonrecurring income taxes by fiscal quarter and year.

Figure 2: Distribution of Special Items and Nonrecurring Income Taxes

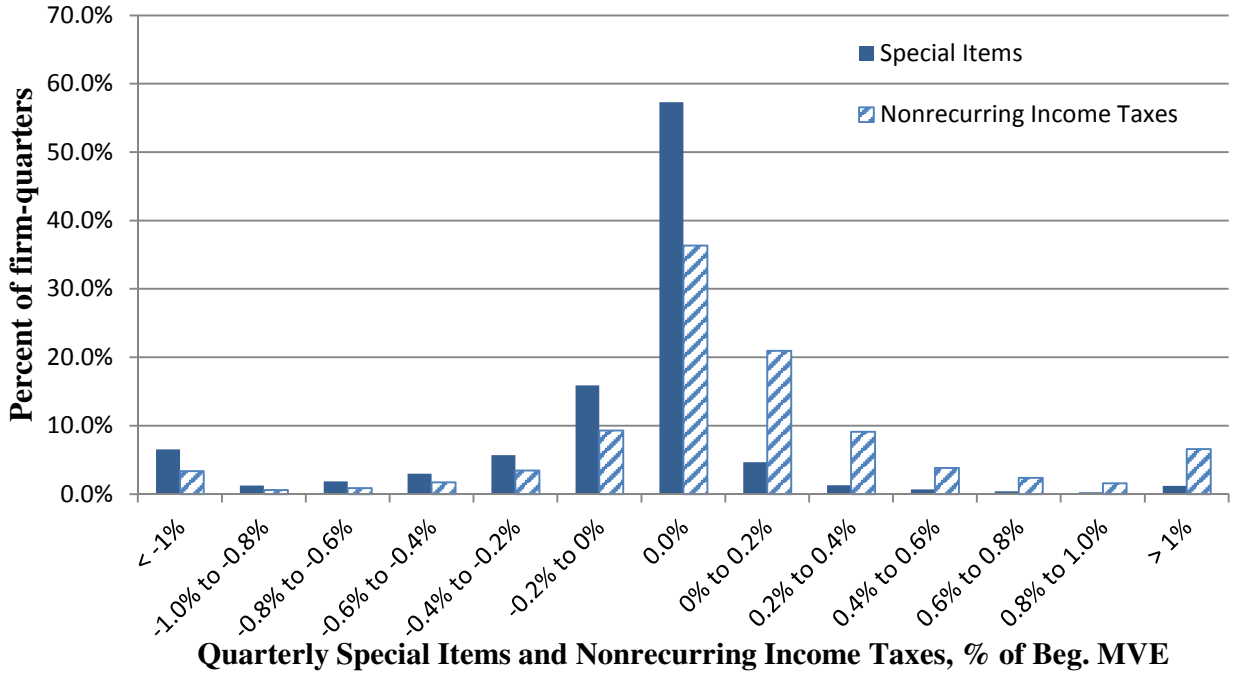

Figure 2 presents the distribution of nonmissing quarterly special items and nonrecurring income taxes, scaled by beginning-of-quarter market value of equity.

Table 1: Sample Selection Procedure

	Observations
Firms on Compustat incorporated in the United States with positive assets and nonmissing GAAP earnings, between 2005 and 2012	188,520
Less: firms missing Street earnings from I/B/E/S	(97,899)
Less: firms missing beginning and end-of-quarter market value of equity	(2,238)
Less: firms with quarterly earnings greater than 100% of beginning market value of equity	(183)
Less: firms missing next four quarters of GAAP earnings	(4,925)
Less: firms missing CRSP unique identifier	(71)
Less: firms missing Compustat SIC industry code	(498)
Less: firms with extreme values (1 and 99 percentile) for all regression variables except stock returns	(4,422)
Sample of all firm-quarters	**78,284**
Less: missing values of NRTAX	(70,993)
Sample of firm-quarters, not missing NRTAX	**7,291**

Table 2A: Descriptive Statistics

Variable	*N*	Mean	Std Dev	P10	P25	Median	P75	P90
$GAAP_{i,t}$	78,284	0.4474	2.9864	-2.6672	0.1087	1.1255	1.8147	2.6622
$SPI_{i,t}$	78,284	-0.2812	1.5731	-0.5682	-0.0823	0	0	0
$DIFF_{i,t}$	78,284	0.3294	1.7341	-0.1427	0	0	0.1733	0.9177
$GAAP_{i,1\text{-}year}$	78,284	0.7229	13.6038	-13.5709	-0.2001	4.5489	7.1369	10.0270
$UE_{i,t}$	78,284	-0.0309	1.0296	-0.7488	-0.1577	0.0452	0.2579	0.6886
$CAR_{i,t}$	76,377	0.0002	0.0875	-0.0940	-0.0403	0.0000	0.0433	0.0958
$NRTAX_{i,t}$	7,291	0.0934	1.4757	-0.1991	0	0	0.1772	0.6431
Nonzero $NRTAX_{i,t}$	4,642	0.1467	1.8474	-0.4142	-0.0461	0.0987	0.3522	1.0449

Variable definitions: $GAAP_{i,t}$ is income before extraordinary items (IBQ). $SPI_{i,t}$ is special items (SPIQ). $DIFF_{i,t}$ is the difference of Street earnings (I/B/E/S actual earnings) and income before extraordinary items (IBQ). $GAAP_{i,1\text{-}year}$ is the summed following four quarters of income before extraordinary items. $UE_{i,t}$ is unexpected earnings defined as the difference of Street earnings (I/B/E/S actual earnings) and I/B/E/S median analyst forecast (MEDEST). $CAR_{i,t}$ is the *cumulative abnormal return* defined as cumulative three-day stock return around the earnings announcement (day -1 to day +1) minus the cumulative return for a value-weighted portfolio of firms in the same CRSP size decile. $NRTAX_{i,t}$ is nonrecurring income taxes (NRTXTQ). All earnings variables are scaled by their beginning of period market value of equity (PRCCQ*CSHOQ) and multiplied by 100.

Table 2B: Correlations Matrix

	$GAAP_{i,t}$	$SPI_{i,t}$	$DIFF_{i,t}$	$GAAP_{i,1\text{-year}}$	$UE_{i,t}$	$CAR_{i,t}$	$NRTAX_{i,t}$
$GAAP_{i,t}$	1	0.4524*	-0.5715*	0.5142*	0.3276*	0.1146*	0.1521*
$SPI_{i,t}$	0.1590*	1	-0.6931*	0.0909*	0.0918*	0.0136*	0.0178*
$DIFF_{i,t}$	-0.2827*	-0.3780*	1	-0.1174*	0.0112*	-0.0176*	-0.2077*
$GAAP_{i,1\text{-year}}$	0.6048*	0.0439*	-0.1133*	1	0.1797*	0.1233*	0.0320*
$UE_{i,t}$	0.3009*	0.0489*	0.0514*	0.1947*	1	0.2164*	0.0401*
$CAR_{i,t}$	0.1554*	0.0182*	-0.0207*	0.1589*	0.3180*	1	0.0141*
$NRTAX_{i,t}$	0.0950*	-0.0185*	-0.1110*	0.0301*	0.0384*	0.0147*	1

Pearson (Spearman) correlations are above (below) the diagonal. Coefficients significant at the 5% level are denoted with a *.

Variable definitions: $GAAP_{i,t}$ is income before extraordinary items (IBQ). $SPI_{i,t}$ is special items (SPIQ). $DIFF_{i,t}$ is the difference of Street earnings (I/B/E/S actual earnings) and income before extraordinary items (IBQ). $GAAP_{i,1\text{-year}}$ is the summed following four quarters of income before extraordinary items. $UE_{i,t}$ is *unexpected earnings* defined as the difference of Street earnings (I/B/E/S actual earnings) and I/B/E/S median analyst forecast (MEDEST). $CAR_{i,[t-1,t+1]}$ is the *cumulative abnormal return* defined as cumulative three-day stock return around the earnings announcement (day -1 to day +1) minus the cumulative return for a value-weighted portfolio of firms in the same CRSP size decile. $NRTAX_{i,t}$ is nonrecurring income taxes (NRTXTQ). All earning variables are scaled by their beginning-of-period market value of equity (PRCCQ*CSHOQ).

Table 2C: Nonrecurring Income Tax Industry Classification

Fama-French 17 Industry Code and Name	Full Sample	Nonmissing NRTAX Sample
1. Food	2.4%	3.1%
2. Mining and Minerals	1.0%	1.1%
3. Oil and Petro Products	4.3%	2.9%
4. Textiles, Apparel, and Footwear	1.7%	1.9%
5. Consumer Durables	1.6%	2.9%
6. Chemicals	1.8%	3.5%
7. Drugs, Soaps, Perfumes, and Tobacco	4.2%	4.3%
8. Construction	2.7%	2.5%
9. Steel	1.2%	2.2%
10. Fabricated Products	0.8%	1.1%
11. Machinery and Business Equipment	13.5%	19.2%
12. Automobiles	1.3%	2.2%
13. Transportation	3.9%	4.5%
14. Utilities	3.1%	3.7%
15. Retail Stores	6.2%	5.0%
16. Financial Institutions	16.1%	8.0%
17. Other	34.4%	31.8%

Table 3: Categorization of Nonrecurring Income Taxes in Compustat

Category	#	%
Audit resolution	293	22.7%
Valuation allowance	280	21.7%
Law change	120	9.3%
Repatriation	79	6.1%
Acquisition/Merger/Sale	52	4.0%
Restructuring	32	2.5%
Contingency (UTB/UTP)	29	2.2%
Credit	14	1.1%
Tax refund	13	1.0%
NOL	13	1.0%
Court ruling	13	1.0%
Estimate/Method Change or Error	10	0.8%
Tax authority guidance	8	0.6%
Tax return amendment	3	0.2%
Undetermined	330	25.6%
Total	1,289	100%

Table 4: Tests of Predictive Power for Future Earnings of Nonrecurring Income Taxes

$$GAAP_{i,1\,year} = \alpha_0 + \alpha_1\left(GAAP_{i,t} - SPI_{i,t} - NRTAX_{i,t}\right) + \alpha_2 SPI_{i,t} + \alpha_3 NRTAX_{i,t} + \gamma_t + \delta_j + \varepsilon_{i,t}$$

	Full Sample			Nonmissing NRTAX Sample		
	(1)	(2)	(3)	(4)	(5)	(6)
GAAP	2.236***			1.391***		
	(19.7)			(9.8)		
(GAAP – SPI)		2.605***			1.838***	
		(28.3)			(13.0)	
(GAAP – SPI – NRTAX)			2.653***			2.261***
			(28.0)			(8.8)
SPI		1.113***	1.128***		0.792***	0.863***
		(8.8)	(8.9)		(6.7)	(6.9)
NRTAX			1.039***			0.990***
			(3.0)			(3.1)
Intercept	0.024***	0.017***	0.016***	0.023**	0.01	0.01
	(5.7)	(4.4)	(4.1)	(2.3)	(1.4)	(0.6)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	78,284	78,284	78,284	7,291	7,291	7,291
R-squared	0.292	0.315	0.318	0.180	0.201	0.217
Vuong test		$R^2_{(GAAP-SPI)} = R^2_{(GAAP-SPI-NRTAX)}$			$R^2_{(GAAP-SPI)} = R^2_{(GAAP-SPI-NRTAX)}$	
z-statistic		z-statistic = -3.506***			z-statistic = -2.220***	
p-value		p-value = 0.001			p-value = 0.026	

Variable definitions: $GAAP_{i,1\text{-}year}$ is the summed following four quarters of income before extraordinary items. $GAAP_{i,t}$ is income before extraordinary items (IBQ). $SPI_{i,t}$ is special items (SPIQ). $NRTAX_{i,t}$ is nonrecurring income taxes (NRTXTQ). All earnings variables are scaled by their beginning-of-period market value of equity (PRCCQ*CSHOQ). Huber-White robust *t*-statistics are in parentheses. Standard errors are clustered by quarter. ***, **, and * indicate a significant coefficient at the 1, 5, or 10% level, respectively, alpha level or better based on a two-tailed test.

Table 5: Tests for the Extent to Which Nonrecurring Income Taxes Explain the Difference Between Street and GAAP Earnings

$$DIFF_{i,t} = \alpha_0 + \alpha_1 SPI_{i,t} + \alpha_2 NRTAX_{i,t} + \gamma_t + \varepsilon_{i,t}$$

	Full Sample		Nonmissing NRTAX Sample
	(1)	(2)	(3)
SPI	-0.762***	-0.758***	-0.831***
	(-46.2)	(-47.7)	(-44.9)
NRTAX		-0.750***	-0.747***
		(-14.9)	(-14.6)
Intercept	0.001***	0.001***	0.001***
	(4.6)	(5.7)	(5.2)
Year Fixed Effects	Yes	Yes	Yes
Observations	78,284	78,284	7,291
R-squared	0.482	0.520	0.768
Vuong test	$R^2_{SPI\ only} = R^2_{SPI\ \&\ NRTAX}$		
z-statistic	*z*-statistic = -6.736***		
p-value	*p*-value < 0.001		

Variable definitions: $DIFF_{i,t}$ is the difference of Street earnings (I/B/E/S actual earnings) and income before extraordinary items (IBQ). $SPI_{i,t}$ is special items (SPIQ). $NRTAX_{i,t}$ is nonrecurring income taxes (NRTXTQ). All earnings variables are scaled by their beginning-of-period market value of equity (PRCCQ*CSHOQ). Huber-White robust *t*-statistics are in parentheses. Standard errors are clustered by quarter. ***, **, and * indicate a significant coefficient at the 1, 5, or 10% level, respectively, alpha level or better based on a two-tailed test.

Table 6: Tests of the Information Content of Street Earnings in the Presence of Nonrecurring Income Taxes

$$CAR_{i,[t-1,t+1]} = \alpha_0 + \alpha_1 Unexpected\ Earnings_{i,t} + \varepsilon_{i,t}$$

	Full Sample (1)	Nonmissing NRTAX Sample (2)	NRTAX=0 Sample (3)	NRTAX≠0 Sample (4)	NRTAX≠0 Sample (5)	Nonmaterial NRTAX Sample (6)	Material NRTAX Sample (7)	Material NRTAX Sample (8)
UE	1.842***	1.817***	2.078***	1.691***	1.651***	2.244***	1.278***	1.197***
	(37.8)	(11.2)	(6.2)	(9.0)	(8.5)	(9.4)	(5.6)	(4.9)
NRTAX					0.121			0.159
					(1.2)			(1.5)
Intercept	0.001*	0.001*	0.002	0.001	0.001	0.002*	-0.001	-0.001
	(1.7)	(1.6)	(1.5)	(0.9)	(0.8)	(1.6)	(-0.1)	(-0.4)
Chow test			$\alpha_1^{NRTAX=0} = \alpha_1^{NRTAX\neq 0}$			$\alpha_1^{Nonmaterial} = \alpha_1^{Material}$		
F-statistic			*F*-statistic = 0.99			*F*-statistic = 8.31***		
p-value			*p*-value = 0.319			*p*-value = 0.004		
Observations	76,377	7,089	2,579	4,510	4,510	5,998	1,091	1,091
R-squared	0.047	0.043	0.049	0.040	0.041	0.047	0.043	0.047

Variable definitions: $CAR_{i,t}$ is the *cumulative abnormal return* defined as cumulative three-day stock return around the earnings announcement (day -1 to day +1) minus the cumulative return for a value-weighted portfolio of firms in the same CRSP size decile. $UE_{i,t}$ is *unexpected earnings* defined as the difference of Street earnings (I/B/E/S actual earnings) and I/B/E/S median analyst forecast (MEDEST). $NRTAX_{i,t}$ is nonrecurring income taxes (NRTXTQ). All earnings variables are scaled by their beginning-of-period market value of equity (PRCCQ*CSHOQ). Huber-White robust *t*-statistics are in parentheses. Standard errors are clustered by earnings announcement date. ***, **, and * indicate a significant coefficient at the 1, 5, or 10% level, respectively, alpha level or better based on a two-tailed test.

Table 7A: Predictive Power for Future Earnings of Nonrecurring Income Taxes by Type of Nonrecurring Income Tax

$$GAAP_{i,1yr} = \alpha_0 + \alpha_1\left(GAAP_{i,t} - SPI_{i,t} - NRTAX_{i,t}\right) + \alpha_2 SPI_{i,t} + \alpha_3 NRTAX_{i,t} + \gamma_t + \delta_j + \varepsilon_{i,t}$$

	NRTAX Pooled (1)	NRTAX by Type (2)
(GAAP – SPI – NRTAX)	2.399*** (5.3)	2.247*** (4.9)
SPI	0.514*** (3.1)	0.413*** (3.1)
NRTAX	0.945** (2.1)	
Repatriation		2.079 (1.3)
Valuation Allowance		1.012*** (6.3)
Audit Resolution		0.740 (0.6)
Law Change		-3.998 (-1.2)
Other NRTAX		0.298 (0.5)
Intercept	0.02** (2.1)	0.025** (2.5)
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
Observations	777	777
R-squared	0.271	0.288

Variable definitions: $GAAP_{i,1yr}$ is the summed following four quarters of income before extraordinary items. $GAAP_{i,t}$ is income before extraordinary items (IBQ). $SPI_{i,t}$ is special items (SPIQ). $NRTAX_{i,t}$ is nonrecurring income taxes (NRTXTQ). All earnings variables are scaled by their beginning-of-period market value of equity (PRCCQ*CSHOQ). Huber-White robust *t*-statistics are in parentheses. Standard errors are clustered by quarter. ***, **, and * indicate a significant coefficient at the 1, 5, or 10% level, respectively, alpha level or better based on a two-tailed test.

Table 7B: Extent to Which Nonrecurring Income Taxes Explain the Difference Between Street and GAAP Earnings by Type of Nonrecurring Income Tax

$$DIFF_{i,t} = \alpha_0 + \alpha_1 SPI_{i,t} + \alpha_2 NRTAX_{i,t} + \gamma_t + \varepsilon_{i,t}$$

	NRTAX Pooled (1)	NRTAX by Type (2)
SPI	-0.906***	-0.874***
	(-19.9)	(-23.8)
NRTAX	-0.812***	
	(-10.6)	
Repatriation		-1.169***
		(-5.6)
Valuation Allowance		-0.878***
		(-15.1)
Audit Resolution		-1.006***
		(-6.9)
Law Change		-1.119***
		(-4.2)
Other NRTAX		-0.451***
		(-3.4)
Intercept	0.001***	0.001**
	(2.9)	(2.4)
Year Fixed Effects	Yes	Yes
Observations	777	777
R-squared	0.837	0.866

Variable definitions: $DIFF_{i,t}$ is the difference of Street earnings (I/B/E/S actual earnings) and income before extraordinary items (IBQ). $SPI_{i,t}$ is special items (SPIQ). $NRTAX_{i,t}$ is nonrecurring income taxes (NRTXTQ). All earnings variables are scaled by their beginning-of-period market value of equity (PRCCQ*CSHOQ). Huber-White robust *t*-statistics are in parentheses. Standard errors are clustered by quarter. ***, **, and * indicate a significant coefficient at the 1, 5, or 10% level, respectively, alpha level or better based on a two-tailed test.

Table 7C: Type of Nonrecurring Income Tax and Information Content of Street Earnings

$$CAR_{i,[t-1,t+1]} = \alpha_0 + \alpha_1 Unexpected\ Earnings_{i,t} + \varepsilon_{i,t}$$

	NRTAX Pooled (1)	NRTAX by Type (2)
UE	1.557***	1.619***
	(4.5)	(4.7)
NRTAX	0.178	
	(1.1)	
Repatriation		0.870***
		(6.6)
Valuation Allowance		0.130
		(0.6)
Audit Resolution		1.125
		(1.5)
Law Change		0.701
		(0.3)
Other NRTAX		-0.136
		(-0.4)
Intercept	-0.001	-0.001
	(-0.1)	(-0.2)
Observations	750	750
R-squared	0.041	0.052

Variable definitions: $CAR_{i,t}$ is the *cumulative abnormal return* defined as cumulative three-day stock return around the earnings announcement (day -1 to day +1) minus the cumulative return for a value-weighted portfolio of firms in the same CRSP-size decile. $UE_{i,t}$ is *unexpected earnings* defined as the difference of Street earnings (I/B/E/S actual earnings) and I/B/E/S median analyst forecast (MEDEST). $NRTAX_{i,t}$ is nonrecurring income taxes (NRTXTQ). All earnings variables are scaled by their beginning-of-period market value of equity (PRCCQ*CSHOQ). Huber-White robust *t*-statistics are in parentheses. Standard errors are clustered by earnings announcement date. ***, **, and * indicate a significant coefficient at the 1, 5, or 10% level, respectively, alpha level or better based on a two-tailed test.

Table 8: Persistence of Effective Tax Rates

$$ETR_{q+k} = \alpha_0 + \alpha_1 ETR_q + \varepsilon$$

Panel A: Full Sample

		$QTR\ 1_{t+1}$	$QTR\ 2_t$	$QTR\ 3_t$	$QTR\ 4_t$	$QTR\ 4_{t+1}$
	$QTR\ 1_t$		0.695	0.625	0.564	0.510
Current Quarter ETR	$QTR\ 2_t$			0.727	0.613	0.481
	$QTR\ 3_t$				0.696	0.452
	$QTR\ 4_t$	0.399				0.396

Panel B: NRTAX in Current Quarter

		$QTR\ 1_{t+1}$	$QTR\ 2_t$	$QTR\ 3_t$	$QTR\ 4_t$	$QTR\ 4_{t+1}$
	$QTR\ 1_t$		0.398	0.313	0.200	0.122
Current Quarter ETR	$QTR\ 2_t$			0.617	0.429	0.147
	$QTR\ 3_t$				0.671	0.201
	$QTR\ 4_t$	0.134				0.155

Panel C: NRTAX in Current Quarter, ETR excluding NRTAX

		$QTR\ 1_{t+1}$	$QTR\ 2_t$	$QTR\ 3_t$	$QTR\ 4_t$	$QTR\ 4_{t+1}$
	$QTR\ 1_t$		0.483	0.342	0.219	0.083
Current Quarter ETR	$QTR\ 2_t$			0.621	0.425	0.088
	$QTR\ 3_t$				0.662	0.137
	$QTR\ 4_t$	0.077				0.112

Variable definitions: ETR_q is the year-to-date effective tax rate of quarter q defined as the summed year-to-date tax expense (TXTQ) divided by the summed pretax income (PIQ). ETR_q is winsorized at 0 and 1. In panel C, ETR is calculated by subtracting summed year-to-date nonrecurring income taxes (NRTXTQ) from the summed year-to-date tax expense (TXTQ), with the difference divided by summed pretax income (PIQ).