Analyst Inattention, Transitory Tax Items, and Non-GAAP Earnings

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ABSTRACT

This study examines analysts' ability to identify transitory tax items and the role of manager-provided non-GAAP earnings in this process. Analysts act as if transitory tax items persist to future earnings when managers strategically report non-GAAP earnings by including generally income-increasing transitory tax items in their non-GAAP earnings. Our evidence is consistent across two samples of transitory tax items that complement one another to identify the impact of non-GAAP earning disclosures. Interestingly, analysts appear to properly identify and adjust for transitory tax items when managers do not issue non-GAAP earnings and when managers exclude transitory tax items from non-GAAP earnings.

Keywords: Non-GAAP earnings; analyst forecasts; R&D tax credit; transitory tax items; limited attention

I. INTRODUCTION

In recent years, managers increasingly issue non-GAAP earnings after excluding selected amounts from GAAP earnings (Francis and Linebaugh 2015; Morgenson 2016). The Securities and Exchange Commission (SEC) has expressed concern over this practice because some non-GAAP earnings appear to violate the SEC's current regulations. For example, SEC Chair Mary Jo White (2016) criticized the practice of only excluding transitory charges from non-GAAP earnings and including transitory gains in non-GAAP earnings. In addition, SEC Commissioner Kara Stein (2016) requested feedback on whether and how the SEC can change non-GAAP disclosure rules to prevent abuse. However, it remains unclear whether and how non-GAAP earnings inform or mislead market participants, because prior evidence is mixed.[1]

This paper investigates whether managers' treatment of transitory items in non-GAAP earnings influences analysts' perceptions of firms' earnings persistence. We compare analysts' forecast errors under three instances of managers' treatment of transitory items: when managers did not issue non-GAAP earnings, when managers exclude transitory items from non-GAAP earnings, and when managers include transitory items in non-GAAP earnings. We use transitory tax items to study our research question because this setting allows us to observe managers' disclosure choices while holding pretax income and other factors constant, and conducting tests within the same income statement line item. Thus, we can better attribute managers' decisions regarding the inclusion in non-GAAP earnings of generally income-increasing transitory tax items to strategic reporting rather than to revealing private information about future events.[2]

[1] Recently, Doyle, Jennings, and Soliman (2013) and Curtis, McVay, and Whipple (2014) provide evidence that managers can mislead with non-GAAP disclosures, but earlier work from Lougee and Marquardt (2004) and Johnson and Schwartz (2005) suggest that investors are not necessarily mislead.

[2] Donelson, Jennings, and McInnis (2011) find increasingly frequent large special items lowered earnings quality in recent decades and their recognition is largely due to economic events, rather than managerial opportunism. In addition, most special items are income-decreasing and receive much more uniform treatment from analysts.

Although non-GAAP earnings can make transitory tax items salient to financial statement users, non-GAAP earnings do not necessarily contribute additional information about earnings persistence, because the information is frequently available in mandated disclosures. For example, the SEC requires managers to discuss material transitory items in Management's Discussion and Analysis. In addition, managers often highlight transitory items within the first few sentences of earnings announcements (Baumker, Biggs, McVay, and Pierce 2014). On the other hand, if analysts display limited attention and processing power (Hirshleifer and Teoh 2003; Plumlee 2003), they are likely to rely on salient non-GAAP earnings rather than gather information from mandated disclosures. Thus, we predict non-GAAP earnings assist analysts when managers exclude transitory tax items, but strategic non-GAAP earnings can mislead analysts. When managers do not issue non-GAAP earnings, we expect analysts to accurately assess earnings persistence, because analysts must actively search mandated disclosures to identify and evaluate transitory components of earnings.

We identify two mutually exclusive samples of transitory tax items. The samples complement one another to identify the effects of strategic reporting. Our first sample of transitory tax items is based on Compustat's nonrecurring income tax data item, which includes tax audit resolutions, law changes, valuation allowances, and foreign earnings repatriations. Prior studies suggest these transitory tax items are complex for even sophisticated financial statement users (e.g. Chen and Schoderbek 2000; Plumlee 2003; Krull 2004; Dhaliwal, Kaplan, Laux, and Weisbrod 2013; Cazier, Rego, Tian, and Wilson 2015). Because analysts lack information about these items and may not recognize them in mandated disclosures unless management makes non-GAAP earnings adjustments, we expect that analysts follow the managers' treatment of transitory tax items in non-GAAP earnings.

Our second sample of transitory tax items is from the 2013 extension of the R&D tax credit when Congress retroactively enacted the R&D tax credit 367 days. Under U.S. GAAP, tax benefits for law changes are recognized entirely in the quarter in which the legislation passes. The 2013 extension was the 16th extension of the R&D tax credit since 1981.[3] As such, analysts can likely estimate the earnings impact of the discrete R&D tax item without non-GAAP disclosures. On the other hand, because of analysts' limited attention and processing power, they may follow managers' treatment of discrete R&D items in non-GAAP earnings.

We read 8-K earnings announcements to determine whether managers issued non-GAAP earnings and, if so, whether the transitory tax item was included in or excluded from non-GAAP earnings at the manager's discretion. For our nonrecurring income tax sample, we document that 63% of firms excluded nonrecurring income taxes from non-GAAP earnings, while 10% of firms included the transitory tax item in non-GAAP earnings. The remaining 27% of firms did not issue non-GAAP earnings. For our discrete R&D tax benefit sample, only 11% of firms excluded the discrete R&D tax benefit from non-GAAP earnings and 54% included the discrete R&D tax benefit. These findings suggest that current SEC regulations or enforcement do not restrain managers from strategically including transitory gains in non-GAAP earnings.

In both samples, our empirical results reveal that managers have the ability to mislead analysts with non-GAAP earnings. First, in the quarter the transitory tax item is recognized, we find that analysts' Street earnings follow managers' non-GAAP earnings. If managers exclude (include) a transitory tax item, Street earnings also exclude (include) the item. When managers do not issue non-GAAP earnings, Street earnings exclude the transitory tax item on average. Second, we examine the association between forecast errors and the transitory tax item. We find

[3] Due to the regular lapse and re-instatement of the R&D credit, Compustat does not catalog the discrete tax benefit from R&D credit re-instatement as a nonrecurring tax item, even though some portion of the item is transitory to the next quarter by construction.

forecast errors are significantly associated with the transitory tax item when managers included the transitory tax item. This result suggests that analysts' beliefs of earnings persistence were influenced only after managers issued non-GAAP earnings. Yet, when managers exclude the transitory tax item from non-GAAP earnings or do not issue non-GAAP earnings, we find weak evidence of an association between the transitory tax item and analysts' forecast error. In summary, these findings are consistent with analysts displaying limited attention.

Our findings validate concerns by regulators and the financial press over strategically-reported non-GAAP earnings. The SEC is considering whether and how to change rules over non-GAAP earnings, and the PCAOB's Standing Advisory Group recently discussed increasing auditor responsibilities to include assurance over non-GAAP measures. Our findings contribute to the discussion by providing evidence that non-GAAP earnings can mislead market participants' perceptions of earnings persistence. Our results suggest that current SEC enforcement fails to rein in managers' strategic non-GAAP disclosures and supports the SEC's proposal to increase regulation or enforcement of non-GAAP rules.

We also contribute to the academic literature that studies non-GAAP earnings and transitory items. First, we find that transitory tax items help to incrementally explain the difference between non-GAAP and GAAP earnings. Prior studies generally decompose the total difference of non-GAAP and GAAP earnings into Compustat's special items and other exclusions (e.g. Doyle, Lundholm, and Soliman 2013; Gu and Chen 2004; Kolev, Marquardt, and McVay 2008; Curtis, McVay, and Whipple 2014). These studies generally find that other exclusions have greater predictive power for future earnings than Compustat's special items. Our results show that a portion of the other exclusions from non-GAAP earnings is made up of transitory tax items, and these are often material. Second, we believe that we are the first paper to

study managerial treatment of a uniform and exogenous transitory item in non-GAAP earnings through the discrete R&D tax benefit. In this setting, our study suggests that managers' strategic treatment of transitory items in non-GAAP earnings is not mitigated by disclosure of the transitory item elsewhere.

II. BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background and Prior literature

Non-GAAP disclosures are regulated by the SEC under Regulation S-K Item 10(e), Regulation G, and Item 2.02 of Form 8-K. The rules that apply to non-GAAP disclosures depend on where or how the non-GAAP disclosures are issued.[4] In addition, non-GAAP disclosure requirements by the SEC vary based on the applicable regulation. For example, Regulation G does not require equal or greater prominence of an equivalent GAAP measure, but Regulation S-K Item 10(e) and Item 2.02 of Form 8-K do. However, all regulations require that managers disclose the most directly comparable GAAP measure and reconcile the non-GAAP measure to the GAAP measure. In May 2016, the SEC issued additional Compliance & Disclosure Interpretations, which interpret the prior regulations but do not offer new regulations. However, the SEC and other regulators continue to consider whether changes to regulation of non-GAAP disclosures are needed or whether current guidance with additional scrutiny over non-GAAP disclosures is sufficient.

Although these regulations can seemingly curb managerial opportunism in non-GAAP earnings disclosures, prior literature generally argues that non-GAAP disclosures are weakly regulated (Doyle et al. 2013). Moreover, several experimental studies show that strategic use of

[4] In general, Regulation G promulgates regulations for earnings calls, media interviews, investor and industry presentations, and certain press releases such as earnings guidance. Item 2.02 of Form 8-K regulates annual and quarterly earnings releases. Regulation S-K Item 10(e) regulates filings with the SEC including Form 10-Ks, 10-Qs, registration statements, and proxy statements.

non-GAAP earnings can influence potential investors (Frederickson and Miller 2004; Elliott 2006; Elliott, Hobson, and White 2015).

Empirical studies on whether non-GAAP earnings inform or mislead provide mixed evidence. Bradshaw and Sloan (2002) show that stock returns respond more strongly to non-GAAP earnings (in their tests, analysts' Street earnings) than GAAP earnings, suggesting that non-GAAP earnings are informative to market participants. They also find managers prefer to discuss non-GAAP earnings performance rather than GAAP earnings, which begs the question whether managers voluntarily disclose non-GAAP earnings to mislead rather than inform. Several studies provide evidence that non-GAAP earnings primarily inform (e.g. Bhattacharya, Black, Christensen, and Larson 2003; Brown and Sivakumar 2003; Collins, Li, and Xie 2009).

In contrast, several studies suggest that managers disclose non-GAAP earnings to mislead market participants. For example, Doyle et al. (2003) find that large differences between non-GAAP and GAAP earnings lead to lower future cash flows. Their findings suggest that managers may not exclude only transitory items. Doyle et al. (2013) find firms are more likely to meet or beat analysts' forecasts when I/B/E/S' actual earnings are greater than GAAP earnings. They decompose the difference between I/B/E/S' actual earnings and GAAP earnings into Compustat's special items and 'other items,' and show 'other items' drive their main result. Curtis et al. (2014) also study misleading non-GAAP earnings. In their study, they assess whether managers presented transitory gains in an informative or opaque manner. Although they find that managers generally issue informative non-GAAP earnings, they also find that managers are more likely to include transitory gains in non-GAAP earnings when doing so helps them beat analysts' forecasts. We believe our paper contributes to understanding the findings in Doyle et al. (2013) and Curtis et al. (2014) because our paper's evidence reveals one mechanism that helps

managers to meet or beat analysts' expectations, and we also show that misleading non-GAAP earnings can have future consequences.

Do transitory tax items predict future earnings?

Before beginning our main analysis, we validate that our two samples of transitory tax items are in fact transitory to future earnings. Similar to Frankel (2009), we assert that nonrecurring income taxes and discrete R&D tax items are transitory if they have lower predictive power for future earnings than do other components of earnings. Based on prior research on special items, we predict the following hypothesis:

H1: Transitory tax items are not predictive of future earnings.

Do managers' non-GAAP earnings influence analysts' belief of earnings persistence?

Managers decide whether and how to disclose transitory items in non-GAAP earnings, and often face incentives to disclose (or fail to disclose) them strategically. First, disclosure of non-GAAP earnings is voluntary, so managers can choose whether or not to disclose. Second, managers can disclose non-GAAP earnings and exclude transitory items from non-GAAP earnings. Lastly, managers can disclose non-GAAP earnings and include transitory items. By selectively including earnings-increasing items, managers can inflate earnings that they hope will be viewed as persistent.

We hypothesize how these three ways of presenting transitory tax items in non-GAAP earnings impact analysts' beliefs about earnings persistence. Specifically, we examine whether analysts include or exclude the transitory tax items from Street earnings. Street earnings represent analysts' expectation of recurring earnings and help to value the firm (Bradshaw and Sloan 2002). Bradshaw and Sloan (2002) find special items explain some of the difference between Street and GAAP earnings. They also examine amortization expense, research and

development expense, and nonoperating income, but they find only a modest increase in explanatory power after adding these additional variables. Studies following Bradshaw and Sloan (2002) often exclusively focus on special items as the only source of transitory items in earnings. The exclusion of special items from Street earnings is consistent with analysts' viewing special items as transitory to future earnings (Frankel 2009; Brown, Call, Clement, and Sharp 2015).

If analysts can identify transitory items, they will likely exclude them from their earnings forecasts and own definition of actual earnings, and so I/B/E/S will exclude those transitory items from Street earnings. Consistent with this viewpoint, Gu and Chen (2004) find that analysts selectively include special items in Street earnings that are more persistent than the special items they exclude from Street earnings. However, recent survey evidence by Brown et al. (2015) shows analysts lack strong incentives to validate managers' non-GAAP earnings adjustments. For example, analysts mainly issue Street earnings to forecast future earnings, but only 24% of analysts say their earnings forecast accuracy is a very important determinant of their compensation (Brown et al. 2015). Thus, consistent with analysts having limited attention and processing power, we expect analysts to rely on managers' non-GAAP earnings as a measure of persistent earnings (Hirshleifer and Teoh 2003).[5]

When managers do not issue non-GAAP earnings, we expect that analysts will exclude the transitory item from non-GAAP earnings. Analysts can actively search information about transitory items from 8-K earnings announcements and 10-Q/K financial statements when managers do not issue non-GAAP earnings. As sophisticated financial statement users, analysts should have the ability or resources to judge whether an item is transitory after reading the mandatory disclosures. We summarize these predictions in the following hypotheses:

[5] Prior research finds that limited attention theory helps to explain many phenomena, such as underreaction to earnings announcements (Hirshleifer, Lim, and Teoh 2009), investment in high volume or high return stocks (Barber and Odean 2008), and underreaction to earnings news released on Fridays (DellaVigna and Pollet 2009).

H2a: I/B/E/S' Street earnings exclude transitory tax items when managers exclude them from non-GAAP earnings.

H2b: I/B/E/S' Street earnings include transitory tax items when managers include them in non-GAAP earnings.

H2c: I/B/E/S' Street earnings exclude transitory tax items when managers do not issue non-GAAP earnings.

Consequences of strategic non-GAAP earnings

We next hypothesize how the different treatments of transitory items by management affect analysts' earnings forecasts in the quarter following the transitory item. Analysts' forecasts are a function of their beliefs of recurring earnings (Brown et al. 2015) and so analysts likely update their beliefs of earnings persistence when they observe deviations from their earnings expectations. Analysts may revise their beliefs about earnings persistence between the time they issue Street earnings and when they make their forecast of next quarter's earnings. If analysts identify and adjust for transitory tax items, then we do not expect to observe a significant association between transitory tax items and forecast errors in the subsequent quarter. However, analysts may not realize any error in their assessment of earnings persistence for a transitory tax item. In this case, we expect any error will influence analysts' earnings forecast in the subsequent quarter, particularly when management includes transitory tax items in non-GAAP earnings. We state our predictions in the following hypotheses:

H3a: There is no association between transitory tax items and analysts' consensus forecast error in the subsequent quarter when managers exclude them from non-GAAP earnings.

H3b: There is a significant association between transitory tax items and analysts' consensus forecast error in the subsequent quarter when managers include them in non-GAAP

earnings.

H3c: There is no association between transitory tax items and analysts' consensus forecast error in the subsequent quarter when managers do not issue non-GAAP earnings.

III. RESEARCH DESIGN

H1: Persistence Tests

We modify a basic persistence equation of future earnings regressed on current earnings to investigate the predictive power of transitory tax items (Doyle et al. 2003; Curtis et al. 2014). In particular, we exclude arguably transitory items from GAAP earnings to identify the persistence of such items. We use ordinary least squares regression (OLS) to estimate the following model:

$$Future\ Earnings_{i,q} = \beta_0 + \beta_1\left(GAAP_{i,q} - SPI_{i,q} - NRTAX_{i,q}\right) + \beta_2 SPI_{i,q} + \beta_3 NRTAX_{i,q} + \beta_j Controls + Year\ FE + QTR\ FE + Industry\ FE + \varepsilon_{i,q}$$

for firm i, fiscal quarter q. $Future\ Earnings_{i,q}$ equals the operating earnings per share summed over four quarters starting with the quarter q+1 (Compustat OPEPSQ), scaled by price at the fiscal quarter end. $GAAP_{i,q}$ is income before extraordinary items (Compustat IBQ), scaled by market value of equity at fiscal quarter end. $SPI_{i,q}$ is special items (Compustat SPIQ) and $NRTAX_{i,q}$ is nonrecurring income taxes (Compustat NRTXTQ), scaled by market value of equity. SPI is set to zero when missing.

Our model controls for firms in a loss position, earnings volatility, firm size, current sales growth, and growth potential because these firms may have less persistent earnings and more non-GAAP exclusions (Curtis et al. 2014). Specifically, we include an indicator variable equal to 1 if income before extraordinary items is less than zero and 0 otherwise. Earnings volatility is the standard deviation of income before extraordinary items divided by total assets, computed using at least six of the prior eight quarters. Firm size equals the log of market value of equity at

quarter end. We measure current sales growth as the ratio of current sales to sales from four quarters ago. To control for growth potential, we include the book-to-market ratio as book value of equity divided by the market value of equity at the fiscal quarter end. We add year-, quarter-, and industry-fixed effects to control for unobserved heterogeneity in a specific time period or industry. In addition, we cluster standard errors by firm to ensure that inferences are not driven by correlated errors at the firm-level and are robust to heteroscedasticity.

The coefficient β_3 captures the predictive power for future earnings of nonrecurring income taxes. If nonrecurring income taxes are perfectly transitory to future earnings, then β_3 will not be significantly different from zero. On the other hand, a β_3 coefficient of four indicates that nonrecurring income taxes persist perfectly over the following four quarters.

We also consider whether the persistence of nonrecurring income taxes is different based on how the manager presents the nonrecurring income tax item in non-GAAP earnings. We split $NRTAX_{i,q}$ into three variables – if the manager excludes nonrecurring income taxes from non-GAAP earnings ($NRTAX_{i,q,Excluded}$), if the manager includes nonrecurring income taxes in non-GAAP earnings ($NRTAX_{i,q,Included}$), and if the manager did not issue non-GAAP earnings ($NRTAX_{i,q,no\ non\text{-}GAAP}$) – and estimate the following model:

$$\begin{gathered} Future\ Earnings_{i,q} = \beta_0 + \beta_1\left(GAAP_{i,q} - SPI_{i,q} - NRTAX_{i,q}\right) + \beta_2 SPI_{i,q} \\ +\beta_3 NRTAX_{i,q,Excluded} + \beta_4 NRTAX_{i,q,Included} + \beta_5 NRTAX_{i,q,no\ non-GAAP} \\ +\beta_j Controls + YearxQTR\ FE + Industry\ FE + \varepsilon_{i,q} \end{gathered}$$

The coefficients β_3, β_4, and β_5 capture the predictive power for future earnings of nonrecurring income taxes for each instance of managers' non-GAAP earnings disclosure decision. The interpretations of these coefficients are similar to that of the coefficient on nonrecurring income taxes in the previous persistence model.

We also test the predictive power of discrete R&D items for future earnings. We use the

same earnings prediction model, but replace nonrecurring income taxes with the discrete R&D item amount. We similarly split the discrete R&D item variable into three variables to capture whether the persistence of discrete R&D is different for each instance of managers' non-GAAP disclosure decision. Because we observe each firms' discrete R&D item for only the 2013 tax law change, we do not include year fixed effects in the discrete R&D item regressions.

H2: Analysts' beliefs of earnings persistence

We conduct two complementary tests of analysts' beliefs of persistent earnings to investigate whether managers' non-GAAP earnings influence analysts. First, we examine whether managers' non-GAAP earnings treatment of transitory tax items explain whether transitory tax items are excluded from Street earnings.[6] In particular, we examine the relationship between nonrecurring income taxes and the difference between Street and GAAP earnings following Bradshaw and Sloan (2002). We use OLS to estimate the following model:

$$\left(Street_{i,q} - GAAP_{i,q}\right) = \beta_0 + \beta_1 SPI_{i,q} + \beta_2 NRTAX_{i,q,Excluded} + \beta_3 NRTAX_{i,q,Included} + \beta_4 NRTAX_{i,q,no\ non-GAAP} + \beta_j Controls + Year\ FE + QTR\ FE + Industry\ FE + \varepsilon_{i,q}$$

where $Street_{i,q}$ equals I/B/E/S actual earnings, scaled by market value of equity. All other variable definitions are consistent with our persistence model above. Similar to our persistence model, we include control variables for firms in a loss position, earnings volatility, firm size, current sales growth, and growth potential. We also include fixed effects for year, quarter, and industry, and standard errors are clustered at the firm-level.

If nonrecurring income taxes are excluded from Street earnings, then they should be negatively associated with the difference between Street and GAAP earnings. Thus, based on

[6] We use I/B/E/S actual earnings as our proxy of Street earnings, which are based on what the majority of analysts followed by I/B/E/S decide on for each earnings item by firm. As discussed in Baik et al. (2009), if analysts determine their actual earnings independently, then our study describes the influence of managers' non-GAAP earnings on the average analyst. Alternatively, some analysts may follow the lead of other analysts to determine which items to exclude from Street earnings. Our tests cannot separate these two explanations because we lack itemized exclusions from Street earnings by analysts.

H2a and H2c, we test whether $\beta_2 < 0$ and $\beta_4 < 0$. Alternatively, if analysts do not adjust for the transitory item, then nonrecurring income taxes should not be significantly associated with the difference between Street and GAAP earnings. Based on H2b, we expect Street earnings to include nonrecurring income taxes when managers include nonrecurring income taxes in non-GAAP earnings. Thus, we do not expect β_3 to be statistically different from zero.

In our second test of analysts' beliefs of persistent earnings, we examine the association between analysts' forecast errors and transitory tax items. This test provides further evidence on whether analysts are influenced by managers' non-GAAP earnings. If analysts do not forecast transitory tax items and Street earnings properly exclude such items, we expect no association between analysts' earnings forecast errors and transitory tax items. On the other hand, if analysts follow managers' non-GAAP disclosures in issuing Street earnings but managers include transitory tax items that are not persistent, we expect a positive association between analysts' forecast errors and the transitory tax item. We use OLS to estimate the following model:

$$\begin{gathered} Forecast\ error_{i,q} = \beta_0 + \beta_1 NRTAX_{i,q,Excluded} + \beta_2 NRTAX_{i,q,Included} \\ +\beta_3 NRTAX_{i,q,no\ non-GAAP} + \beta_4 SPI_{i,q} + \beta_5 Pretax\ Forecast\ Error_{i,q} \\ +\beta_j Controls + Year\ FE + QTR\ FE + Industry\ FE + \varepsilon_{i,q} \end{gathered}$$

Forecast Error$_{i,q}$ is the difference of I/B/E/S net actual earnings and the consensus analysts' net earnings forecast. *Pretax Forecast Error*$_{i,q}$ is the difference of I/B/E/S pretax actual earnings and the consensus analysts' pretax earnings forecast. *Forecast Error*$_{i,q}$ and *Pretax Forecast Error*$_{i,q}$ are scaled by market value of equity. Controlling for the contemporaneous analysts' pretax forecast error accounts for analysts' difficulty in forecasting a firm's quarterly earnings due to general business complexity. We also control for firm size, growth potential, and the number of analysts following the firm in the nonrecurring income tax quarter.

When managers exclude nonrecurring income taxes from earnings, we do not expect an

association between nonrecurring income taxes and contemporaneous analysts' forecast error, i.e. $\beta_1 = 0$. In contrast, when managers include transitory tax items in non-GAAP earnings, we expect a positive association between nonrecurring income taxes and forecast error, i.e. $\beta_2 > 0$. In the case when managers do not issue non-GAAP earnings, we also expect no association, i.e. $\beta_3 = 0$. For our tests of analysts' beliefs about the persistence of discrete R&D items, we replace nonrecurring income tax variables with the corresponding discrete R&D item variables.

H3: Consequence of strategic non-GAAP earnings

When analysts understand non-GAAP earnings (i.e., they are not misled), they should disregard transitory items to forecast future earnings (H3a; H3c). However, as discussed in H2, when managers include transitory items in non-GAAP earnings, analysts likely consider this earnings component to be persistent, so it will contribute to their earnings forecast in the next quarter. Thus, we predict analysts' forecast errors in the subsequent quarter are associated with nonrecurring income taxes when managers include nonrecurring income taxes in non-GAAP earnings (H3b). To test this, we estimate the following model using ordinary least squares:

$$\begin{gathered} Forecast\ error_{i,q+1} = \beta_0 + \beta_1 NRTAX_{i,q,Excluded} + \beta_2 NRTAX_{i,q,Included} \\ +\beta_3 NRTAX_{i,q,no\ non-GAAP} + \beta_4 SPI_{i,q} + \beta_5 Pretax\ Forecast\ Error_{i,q+1} \\ +\beta_j Controls + Year\ FE + QTR\ FE + Industry\ FE + \varepsilon_{i,q+1} \end{gathered}$$

All our variables are as defined previously. We control for firm size, growth potential, and number of analysts covering the firm measured in the quarter following the nonrecurring income tax. We do not expect to find an association between $Forecast\ Error_{i,q+1}$ and nonrecurring income taxes when managers exclude nonrecurring income taxes from non-GAAP earnings nor when managers do not issue non-GAAP earnings. That is, we expect β_1 and β_3 not to be statistically different from zero. But when managers include nonrecurring income taxes in non-GAAP earnings, we expect to find a statistically significant association between *Forecast*

$Error_{i,q+1}$ and nonrecurring income taxes, $\beta_2 \neq 0$. We conduct the same test for discrete R&D items by replacing nonrecurring income tax variables with the discrete R&D item amounts.

IV. SAMPLE

We use two samples of transitory tax items: Compustat's nonrecurring income tax data item and discrete R&D tax items from the 2013 R&D tax credit extension. We randomly sample 400 firms in Compustat's quarterly database with nonzero nonrecurring income taxes from 2005 to 2012 and study all quarterly nonrecurring income tax observations of these firms. In total, we identify 1,289 firm-quarters of nonrecurring income tax.[7] Because we believe we are the first to examine a large sample of transitory tax items, we read 8-K earnings announcements and 10-Q/K financial statements for these firm-quarters to specifically understand why Compustat identified the item as nonrecurring. Appendix B provides examples from firm disclosures of nonrecurring income taxes.

Table 1 shows our tabulation of the events leading to a transitory tax item. We document that firms' common transitory tax events are tax audit resolutions, valuation allowance changes, law changes, and foreign earnings repatriations.[8,9] These events are plausibly transitory to earnings so we focus our analysis on these four events. Thus, our evidence on nonrecurring income taxes can help improve our understanding of common transitory tax items. We exclude observations missing actual earnings in I/B/E/S because we are interested in analysts' perception

[7] For our empirical tests, we start with this sample of 1,289 firm-quarters of *NRTAX* rather than a random sample of all firm-quarters in Compustat with *NRTAX*. We believe this design choice biases against finding that analysts misunderstand the persistence of transitory tax items because analysts are more likely to notice transitory tax items for a firm that previously reported a transitory tax item.

[8] None of our categories represent the tax effect of a pretax special item. That is, a nonrecurring income tax affects net income exclusively through the tax expense line item.

[9] The undetermined category is 25.6% of our 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. Note that Compustat's 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." Because we cannot identify the reason for Compustat's nonrecurring income tax, we do not include these undetermined nonrecurring income taxes in our analysis of non-GAAP earnings.

of recurring earnings as measured by actual earnings. We also exclude observations in the top and bottom one percent at each end of the distribution for each continuous variable. Our final sample consists of 376 firm-quarter observations.

[Insert Table 1 here]

For our second sample of transitory tax items, we identify firm-quarters affected by the enactment of American Taxpayer Relief Act of 2012 (hereafter, ATRA). Each firm's tax benefit relates to the firm's prior year R&D expenditures because the reinstatement results in the prior year tax benefit for the R&D deduction converting to a larger benefit for an R&D tax credit. Compustat did not record this cumulative benefit in *NRTAX* as a nonrecurring income tax because S&P Client Services says the U.S. tax law for this item changes frequently. Prior studies use the R&D tax credit re-enactment as a setting to study an exogenous quarterly earnings increase and its impact on analysts' earnings forecasts in the same quarter and stock returns (Bratten and Hulse 2016; Hoopes 2016). Our study focuses on managerial discretion in non-GAAP earnings and analysts' beliefs of earnings persistence as shown in concurrent and subsequent quarter's forecast accuracy.

As firms' tax return data are confidential and firms might not disclose their benefit from ATRA, for our primary sample we approximate whether a firm is affected by ATRA and the amount of the benefit. We select firm-quarters in Compustat with fiscal period end dates (Compustat's DATADATE) between the enactment date of ATRA and 100 days after the enactment. To ensure that the earnings benefit of ATRA is material to firms' quarterly earnings, we restrict our sample to firms with material R&D expenditures, defined as prior-year's U.S. current tax expense (TXFED) greater than 1% of the cumulative R&D spending over the prior four quarters to ATRA enactment. We also require that cumulative R&D spending over the prior

four quarters is greater than $1 million. Our primary sample of firm-quarters likely affected by the ATRA includes 462 observations. In supplemental tests, we limit the sample to the 222 firms that explicitly disclose the R&D credit re-instatement benefit.

In panel A of table 2, we report descriptive statistics for our nonrecurring income tax sample. The mean and median of the difference between Street and GAAP earnings is positive, consistent with prior literature documenting that Street earnings generally exceed GAAP earnings. Also, the mean and median of nonrecurring income taxes are both positive, meaning they are income-increasing on average. As such, when managers include nonrecurring income taxes in non-GAAP earnings, it appears to be strategic. We document that managers include only 10% of nonrecurring income taxes in non-GAAP earnings (39 out of 376 firm-quarters).

In an untabulated logistic regression, we estimate managers' likelihood of including a transitory tax item in non-GAAP earnings, to determine whether inclusion is more likely when it helps the firm beat analysts' forecasts. We find that managers are 2.6 times more likely to include the transitory tax item when doing so allows the firm to beat the mean analyst forecast (p-value = 0.01), which suggests firms include nonrecurring income tax benefits in non-GAAP earnings to avoid negative earnings surprises.[10]

Panel B of table 2 describes our discrete R&D item sample. In contrast to nonrecurring income taxes, 54% of firms include this discrete, income-increasing, R&D item in non-GAAP earnings (249 out of 462 firms) while only 11% of firms exclude the discrete R&D item from non-GAAP earnings (52 out of 462 firms). In panel C of table 3, we restrict the sample to only

[10] We use logistic regression to regress an indicator variable *Include* on an indicator variable *Can Beat with NRTAX*. *Include* is equal to 1 if the firm included the nonrecurring income tax in their non-GAAP earnings and zero otherwise. *Can Beat with NRTAX* is equal to 1 in two cases: first, firms that included the *NRTAX* and beat its earnings forecast, but would have missed if the *NRTAX* is excluded from actual earnings; second, firms that excluded the *NRTAX* and missed its earnings forecast, but would have beat if the *NRTAX* is included in the actual earnings; and *Can Beat with NRTAX* equals 0 in all other cases. *Can Beat with NRTAX* is always zero if *NRTAX* is income-decreasing so we do not include an indicator variable for whether the *NRTAX* is positive.

firms that disclose the amount of discrete R&D benefit due to the ATRA. Out of the 462 firms that we expect are eligible for a material discrete R&D benefit, only 222 (48%) firms disclose the benefit amount.

[Insert Table 2 here]

We present Pearson (Spearman) correlations for our main variables for each sample in table 3 below (above) the diagonal. Panel A shows that nonrecurring income taxes are negatively correlated with the difference between Street and GAAP earnings, consistent with analysts excluding nonrecurring income taxes from Street earnings. We do not find evidence that nonrecurring income taxes are correlated with future earnings, suggesting that these items are transitory to future earnings on average. Consistent with prior studies showing that special items are excluded from Street earnings, special items is negatively correlated with the difference between Street and GAAP earnings. Similarly, we find nonrecurring income taxes are negatively correlated with the difference between Street and GAAP earnings.

Panel B shows the correlation matrix for the imputed discrete R&D item sample. The discrete R&D item is positively correlated with the difference between Street and GAAP earnings, suggesting that on average the discrete R&D item is not excluded from Street earnings. In panel C, we examine correlation of main variables for the limited sample of firms that explicitly disclosed the discrete R&D item. We continue to observe that the discrete R&D item is positively correlated with the difference between Street and GAAP earnings. We do not find consistent evidence of a correlation between the forecast error and the discrete R&D item.

[Insert Table 3 here]

V. RESULTS

Persistence Tests

Table 4 shows the empirical predictive power of transitory tax items for future earnings. In column 1, we regress future earnings on special items, nonrecurring income taxes, and GAAP earnings excluding special items and nonrecurring income taxes. We do not find evidence that special items have statistically or economically predictive power for future earnings (coefficient=0.174; p-value=0.3).[11] We next examine whether nonrecurring income taxes have predictive power for future earnings. The coefficient on nonrecurring income taxes suggests that each 1% change in ROE due to nonrecurring income taxes predicts a 0.483% change in ROE over the next four quarters. The economically small coefficient suggests nonrecurring income taxes have weak economic power to predict future earnings (and significantly smaller than GAAP earnings excluding special items and nonrecurring income tax; p-value=0.001). Similar to prior studies that find special items have statistically significant predictive power for future earnings, but weak economic predictive power, nonrecurring income taxes appear transitory to future earnings.

In column 2, we examine whether the persistence of nonrecurring income taxes varies based on managers' disclosure decisions. When managers exclude nonrecurring income taxes from non-GAAP earnings, each 1% change in ROE due to nonrecurring income taxes predicts a statistically significant, but small, 0.439% change in ROE over the next four quarters. When managers include the nonrecurring income taxes in non-GAAP earnings, changes in ROE due to nonrecurring income taxes have no statistically significant effect on ROE over the next four quarters. Finally, when managers do not issue non-GAAP earnings, each 1% quarterly change in

[11] Our regression methodology follows prior studies that regress the sum of the following four quarters of earnings on the current quarterly earnings. Several studies report special items and future earnings are negatively associated (e.g. Kolev et al. 2008; Curtis et al. 2014; Doyle et al. 2003; Hsu and Kross 2011). Other studies report a statistically significant positive association (e.g. Chen 2010; Gu and Chen 2004; Jones and Smith 2011). Our study may find a weak statistical relationship between special items and future earnings because we focus on firm-quarters with transitory tax items rather than firm-quarters with special items.

ROE due to nonrecurring income taxes predicts a statistically significant, but small, 0.537% change in ROE over the next four quarters.[12] These findings suggest that nonrecurring income taxes are mostly transitory to future earnings, regardless of managers' treatment of the nonrecurring income tax in non-GAAP earnings.

[Insert Table 4 here]

We also examine the influence of the transitory tax item on effective tax rates (ETR). In panel A of figure 1, we plot the average quarterly ETR for the quarter of the nonrecurring income tax by managers' treatment of the nonrecurring income tax in non-GAAP earnings. For context, we also plot the four quarters prior and subsequent to the nonrecurring income tax. The average ETR reaches a minimum in the quarter of the nonrecurring income tax and the trend of the average ETR appears to be roughly similar in the four quarters prior to and following the nonrecurring income tax quarter, regardless of the treatment of the nonrecurring income tax.

[Insert Figure 1 here]

Next, we test the empirical predictive power of the discrete R&D tax item for future earnings. In column 3 of table 4, our sample includes all firms that we estimate have material R&D tax expenditures and thus should receive a discrete R&D tax benefit. Because some firms do not report the actual amount of discrete R&D tax benefit received, we estimate their benefit as their R&D expenditures over the prior year times 2.5%, the median benefit by firms reporting the

[12] As a robustness check, we also examine the persistence of nonrecurring income taxes relative to tax expense. Specifically, we regress future operating earnings on pretax income excluding special items, special items, tax expense excluding nonrecurring income taxes, and nonrecurring income taxes. Tax expense has economic predictive power similar to pretax income (coefficient = 1.416; p-value = 0.001) and coefficients on other variables are qualitatively similar to those shown in column 1 of table 4. Thus, we continue to find nonrecurring income taxes have weak economic predictive power, even when compared to tax expense. We also investigate the predictive power of nonrecurring income taxes for future tax expense. We regress one-year-ahead tax expense on nonrecurring income taxes and on current quarterly tax expense excluding nonrecurring income taxes. We find tax expense excluding nonrecurring income taxes has strong economic predictive power for future tax expense (coefficient=1.45; p-value<0.001). However, nonrecurring income taxes have weak economic predictive power for future tax expense (coefficient=-0.220; p-value=0.09), consistent with our main findings.

actual discrete R&D benefit (untabulated). We estimate each 1% of quarterly ROE from the discrete R&D tax item predicts 2.143% ROE of future earnings over the next four quarters, but the coefficient is insignificant at conventional levels.[13]

In column 4, we examine the persistence of the discrete R&D item by managers' non-GAAP disclosure decisions. We find that when managers exclude the discrete R&D item from non-GAAP earnings, the predictive power for future earnings is statistically insignificant (coefficient=0.537; p-value=0.68). Similarly, when managers include the discrete R&D item in non-GAAP earnings, the predictive power for future earnings is statistically insignificant (coefficient=-1.190; p-value=0.95). However, when managers do not issue non-GAAP earnings, each 1% change in the discrete R&D item predicts 5.6% ROE over the next four quarters, which may reflect the underlying predictive power of R&D expense for future earnings. When we restrict our analysis to only firms that disclosed the discrete R&D item amount in column 5, we find larger coefficients when discrete R&D is included or excluded from non-GAAP earnings than estimated coefficients from the full sample, but these coefficients remain statistically insignificant. We also continue to find that discrete R&D significantly predicts future earnings when managers do not report non-GAAP earnings. In an untabulated regression, we control for the firms' research and development expenditure during the prior year, but our results are qualitatively similar to those reported in column 5.

In panel B of figure 1, we plot the average quarterly ETR around the quarter the discrete R&D item is recorded. Similar to the average quarterly ETRs around a nonrecurring income tax, the average ETR falls to a minimum in the discrete R&D item quarter and firms' ETR follow a similar trend for average quarterly ETRs, regardless of managers' treatment of the R&D item in

[13] The fact that the coefficient is larger than that of special items or other types on non-recurring tax items may reflect the underlying predictive power of R&D expense for future earnings (Lev and Sougiannis 1996).

non-GAAP earnings.

Analysts' beliefs of earnings persistence

Table 5 presents the results of our tests of whether analysts believe nonrecurring income taxes and discrete R&D tax items are persistent components of earnings by examining whether these transitory tax items are excluded from Street earnings. In column 1, the coefficient on nonrecurring income taxes is -0.810, which suggests that on average Street earnings exclude nonrecurring income taxes nearly in full. In column 2, the coefficient on nonrecurring income taxes that are excluded from non-GAAP earnings is -0.848, and again, nonrecurring income taxes appear to be almost fully excluded from Street earnings. In contrast, the coefficient on nonrecurring income taxes included in non-GAAP earnings is -0.299, but not statistically significant, which suggests that analysts include nonrecurring income taxes in Street earnings when managers include the nonrecurring income taxes in non-GAAP earnings. Finally, we find that when managers do not issue non-GAAP earnings, the nonrecurring income taxes coefficient is -0.779 and suggests analysts exclude these items from Street earnings as well. These results are consistent with analysts having limited attention and following the managers' presentation when managers issue non-GAAP earnings. But analysts can identify transitory tax items for themselves if managers do not issue non-GAAP earnings.

Columns 3-5 examine whether analysts exclude the discrete R&D tax item from Street earnings. Column 3 shows the coefficient on discrete R&D is 0.088 and statistically insignificant. On average, it appears analysts do not exclude the discrete R&D item from Street earnings. In column 4, we examine whether analysts' treatment of the discrete R&D item follows managers' treatment of the discrete R&D item. We find that the coefficient of the discrete R&D item when managers excluded it from non-GAAP earnings is -0.323. Although the direction of

the coefficient is consistent with our predictions and suggest that analysts exclude the discrete R&D when managers exclude the discrete R&D item, the coefficient is not statistically significant. When managers include the discrete R&D item in non-GAAP earnings, we find a positive coefficient of 1.264, suggesting analysts include the discrete item in Street earnings.[14] Finally, we find a coefficient of -0.552 on the discrete R&D item when managers did not issue non-GAAP earnings, suggesting that analysts excluded the item from Street earnings. This finding is consistent with our persistence test failing to control for the predictive power of R&D expenditures for future earnings rather than the discrete R&D benefit itself having predictive power for future earnings.

We restrict our sample to only firms that disclosed the discrete R&D benefit amount in column 5. When managers exclude the discrete R&D item from non-GAAP earnings, the coefficient is -1.220 and statistically significant. In addition, we find a positive coefficient of 0.807 on the discrete R&D item when managers included the item in non-GAAP earnings. These results suggest that analysts' treatment of the discrete R&D item follows managers' treatment of the discrete R&D item. When managers do not issue non-GAAP earnings, we find the coefficient on discrete R&D is -0.582, consistent with our full sample evidence.

[Insert Table 5 here]

In summary, our results suggest analysts do not adjust for managers' incentives to report inflated non-GAAP earnings, consistent with analysts having limited attention. In the presence of non-GAAP earnings, analysts exclude transitory gains from Street earnings when managers exclude transitory gains from non-GAAP earnings. But analysts follow managers' non-GAAP presentation when transitory gains are included in non-GAAP earnings. Furthermore, when

[14] Conceptually, a GAAP earnings component should only be negatively or not associated with the difference between Street and GAAP earnings. We interpret the statistically significant positive coefficient as a rejection of a negative coefficient.

managers do not issue non-GAAP earnings, analysts appear to gather information about transitory tax items and exclude the transitory tax items from non-GAAP earnings.

We complement our analysis of analysts' Street earnings by examining the association between forecast errors and the transitory item. Conceptually, Street earnings and analysts earnings forecasts should exclude transitory items, so we should not find a statistically significant association between forecast errors and transitory tax items. However, prior studies find evidence of a statistically significant relationship between forecast errors and transitory items (Doyle et al. 2013). We seek to better understand this association by examining the impact of managers' non-GAAP earnings.

Our analysis in table 5 suggests that Street earnings frequently include transitory tax items, suggesting analysts often believe these items are persistent. But our test in table 5 only provides evidence on analysts' beliefs after managers announce earnings. We examine forecast errors to clarify whether analysts believe transitory tax items are persistent before managers announce earnings. A significant positive association between forecast errors and transitory tax items suggests analysts' beliefs of earnings persistence were influenced by managers. .

Consistent with prior literature, column 1 of table 6 shows a positive and statistically significant association between forecast errors and the nonrecurring income tax item. In column 2, we examine whether this association depends on managers' treatment of the nonrecurring income tax in non-GAAP earnings. We find the coefficient on nonrecurring income taxes when managers exclude the item is 0.054 and statistically significant. The positive coefficient suggests that analysts were unable to completely understand earnings persistence even when managers exclude the amount from non-GAAP earnings, but the economic impact is small. When firms include the nonrecurring income tax in non-GAAP earnings, the coefficient on nonrecurring

income taxes is 0.778 and statistically significant. The large coefficient suggests that analysts include the nonrecurring income tax in Street earnings after seeing managers' treatment of the transitory item in non-GAAP earnings, resulting in a greater positive forecast error. Finally, when managers do not issue non-GAAP earnings, the coefficient on nonrecurring income taxes is 0.075 and not statistically significant. In addition, the contemporaneous quarterly pretax forecast error, our control for analysts' forecasting difficulty, is significantly associated with the net earnings forecast error. Thus, we attribute analysts' forecast error to managers' strategic non-GAAP earnings disclosures rather than general difficulty in forecast earnings in the presence of a transitory item.

We also examine the association between analysts' forecast error and the discrete R&D item in columns 3-5. In column 3, we find a statistically significant positive association between forecast error and the discrete R&D item, consistent with analysts including the discrete R&D item in actual earnings. In column 4, we examine managers' treatment of the discrete R&D item on forecast error. When managers exclude the discrete R&D item, we find a coefficient on the discrete R&D item of 0.532, but the coefficient is not statistically significant. When managers include the discrete R&D item, the coefficient is 0.583 and statistically significant. Finally, when managers did not issue non-GAAP earnings, the association between the discrete R&D item and forecast error is positive, but not statistically significant.

When we restrict our analysis to only firms that disclosed the discrete R&D item, the magnitude of coefficients is similar to those in our full sample, but the relationship between the discrete R&D item and forecast error is no longer statistically significant at conventional levels (p-value = 0.102).

[Insert Table 6 here]

Taken together, our results suggest that managers successfully influence analysts' beliefs of earnings persistence through strategic inclusion of transitory benefits in non-GAAP earnings.

Consequence of strategic non-GAAP earnings

Hypotheses 3a-3c predict that forecast errors in the quarter following the transitory item are significantly associated with the transitory item in the prior quarter. Table 7 presents our results. In column 1, the coefficient on nonrecurring income taxes is 0.030 and statistically significant, but the economic magnitude of the nonrecurring income taxes on analysts' forecast errors in the subsequent quarter is small.

In column 2, the coefficient on nonrecurring income taxes is 0.518 and statistically significant when managers include the nonrecurring income tax in non-GAAP earnings. Our evidence confirms anecdotal evidence that suggests analysts raise their ETR forecasts (that is, increase their tax expense forecasts) following a lower than expected ETR in the previous quarter due to the generally income-increasing nonrecurring income tax.[15] One reason why analysts might increase their ETR forecasts is that analysts forecast annual ETRs (rather than quarterly ETRs) and apply their annual ETR forecast to quarterly pre-tax forecasts to forecast tax expense, consistent with the integral method of accounting for income taxes under ASC 740. However, when firms' quarterly ETR is lower than expected, analysts may attempt to "force" their annual ETR forecast by raising their ETR forecast in the subsequent quarter, generating a second positive forecast error.

We also find small positive coefficients on nonrecurring income taxes for firms that exclude the transitory tax item from non-GAAP earnings or do not report non-GAAP earnings.

[15] In the quarter of the R&D tax item, we find several analysts raised their future ETR estimates after the earnings announcement. For example, after Congress re-enacted the R&D credit, JP Morgan forecasted an annual 27% ETR for Xerox Corp in 2013. For the first quarter of 2013, JP Morgan reported a 21.6% ETR, a 5.4% ETR beat. In addition, JP Morgan raised their ETR forecast to 28% for the second quarter, but did not discuss the reasoning behind the expected increase. In the second quarter, JP Morgan reported a 24.1% ETR for a 3.9% ETR beat.

Interestingly, these results suggest that firms do not face a cost when they do not provide non-GAAP earnings. Although managers claim that they issue non-GAAP earnings to assist market participants understand earnings persistence, it appears that analysts can identify transitory tax items even when managers do not issue non-GAAP earnings.

Column 3 reports the results for the association between the discrete R&D item and the analysts' forecast error in the quarter after the discrete R&D item. We find a positive relationship between the discrete R&D item and the subsequent quarter's forecast error (the forecast error in Q2 for many firms), but the association is not statistically significant. We further examine the relationship between the discrete R&D item and the forecast error by considering whether and how the manager presented the discrete R&D item in non-GAAP earnings. The positive association in column 3 appears to be driven by firms that include the discrete R&D item in non-GAAP earnings, but the coefficients are not statistically significant.

In column 5, we restrict the sample to firms disclosing the actual amount of the discrete R&D item. When managers include the discrete R&D item in non-GAAP earnings, we find a statistically significant positive association between the discrete R&D item and forecast errors in the following quarter. In contrast, we find small positive associations when managers exclude the discrete R&D item and did not issue non-GAAP earnings. Because we expect the disclosure of the discrete R&D item to provide the same information about firms' earnings regardless of managers' treatment in non-GAAP earnings, these findings add confidence to the perspective that managers can strategically influence analysts' beliefs of earnings persistence with non-GAAP earning disclosures.

[Insert Table 7 here]

Overall, our results suggest that analysts' expectations of future earnings are influenced

by transitory tax items in prior quarters when managers include the transitory item in non-GAAP earnings.

VI. CONCLUSION

We investigate whether and how managers' non-GAAP earnings influence analysts' perceptions of earnings persistence. We find analysts' forecast errors are significantly associated with transitory tax items when managers strategically include the often income-increasing transitory tax items in non-GAAP earnings. In contrast, we find weak evidence of an association between the transitory tax item and analysts' forecast error when managers do not issue non-GAAP earnings and when managers exclude the transitory tax item from non-GAAP earnings. These findings are generally consistent with analysts displaying limited attention or processing power.

We believe these findings contribute to the academic literature on why managers' non-GAAP earnings help them beat earnings. In addition, we believe we are the first paper to document that strategically reported non-GAAP earnings influence analysts' future earnings forecasts. We also believe that our findings inform regulators. Managers often argue against more regulation over non-GAAP earnings because they describe non-GAAP simply as a tool to explain earnings. We find that analysts heavily rely on non-GAAP earnings, even when they are uninformative about persistence. In other words, managers' strategic non-GAAP earnings influence analysts even when information about transitory items appears elsewhere in mandated disclosures.

Our findings suggest several avenues for future research. Limited attention theory suggests that a manager face a trade-off between costs to their reputation and benefits to issuing misleading non-GAAP earnings. Future studies might examine the reputation costs to managers

of strategic disclosure, such as decreased analyst following or more direct questioning from analysts during earnings conference calls, or potential costs imposed by regulators for issuing misleading non-GAAP earnings. As the frequency and amount of information about non-GAAP disclosures increases, we believe that future research on non-GAAP disclosures will continue to interest the academic community and inform regulators.

Appendix A: Variable Definitions

Variable	Definition
$BTM_{i,q}$	The book value of equity divided by market value of equity (Compustat's SEQQ/(PRCCQ x CSHOQ)).
$Discrete\ R\&D_{i,q}$	The amount reported by firms to account for the ATRA if disclosed, scaled by market value of equity. If not disclosed, equals 2.5% of the prior year's R&D expenditures, scaled by beginning-of-quarter market value of equity.
$Earnings\ Volatility_{i,q}$	The standard deviation of quarterly earnings (Compustat's IBQ) scaled by averaged beginning and ending of quarter assets (Compustat's ATQ) over at least six of the prior eight quarters.
$Excluded_{i,q}$	Equals 1 if the firm reports non-GAAP earnings and the transitory tax item is excluded from the firms' non-GAAP earnings and 0 otherwise.
$Forecast\ Error_{i,q}$	The difference of analysts' after-tax earnings consensus forecast and after-tax Street earnings (I/B/E/S' MEDEST – ACTUAL), scaled by beginning-of-quarter market value of equity.
$Future\ Earnings_{i,q}$	The sum of the following four quarters of earnings per share from operations (Compustat's OPEPSQ) starting at q+1, scaled by end-of-quarter stock price.
$GAAP_{i,q}$	Income before extraordinary items (Compustat's IBQ), scaled by beginning-of-quarter market value of equity.
$Included_{i,q}$	Equals 1 if the firm reports non-GAAP earnings and the transitory tax item is not excluded from firms' non-GAAP earnings and 0 otherwise.
$Ln(MVE_{i,q})$	The natural log of market value of equity (Compustat's PRCCQ x CSHOQ).
$Loss_{i,q}$	Equals 1 if the quarterly income before extraordinary items is negative (Compustat's IBQ < 0) and 0 otherwise.
$NRTAX_{i,q}$	Nonrecurring Income Taxes (Compustat's NRTXTQ), scaled by beginning-of-quarter market value of equity.
$Pretax\ Forecast\ Error_{i,q}$	The difference of analysts' pre-tax earnings consensus forecast and pre-tax Street earnings (I/B/E/S' MEDEST – ACTUAL), scaled by beginning-of-quarter market value of equity.
$Sales\ Growth_{i,q}$	The ratio of quarterly sales (Compustat's SALEQ) to four-quarters-ago sales, scaled by common shares outstanding.
$SPI_{i,q}$	Special Items (Compustat's SPIQ), scaled by beginning-of-quarter market value of equity.
$Street_{i,q}$	Street earnings (I/B/E/S' ACTUAL), scaled by beginning-of-quarter market value of equity.

Appendix B: Examples of Transitory Tax Item 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	Tax Audit 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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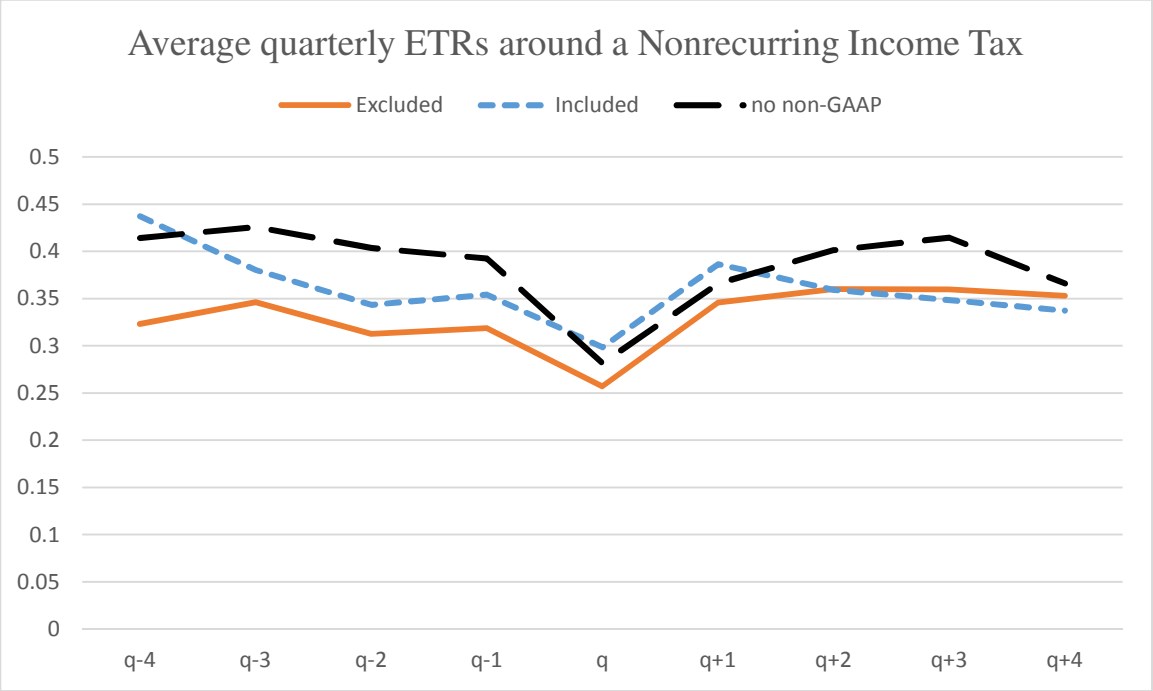
Figure 1: Quarterly ETR around a transitory tax item

Panel A: Nonrecurring Income Tax Sample



Panel B: Discrete R&D Item Sample

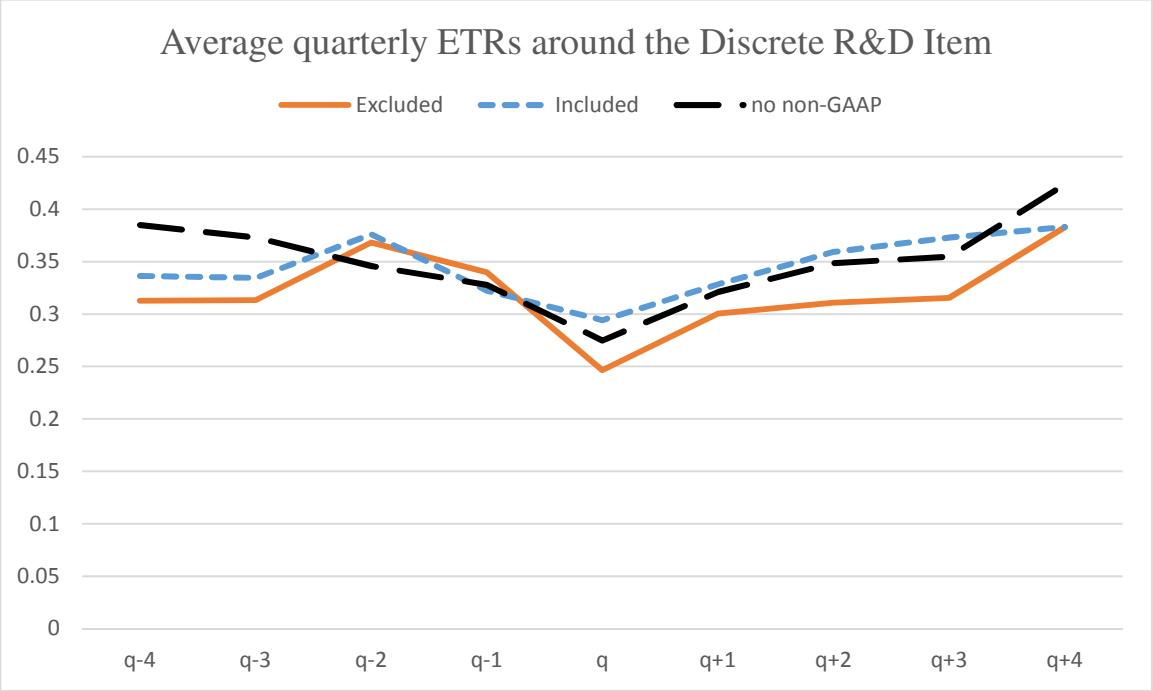


Table 1: Categorization of Nonrecurring Income Taxes in Compustat

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 2: Descriptive Statistics

Panel A: Nonrecurring Income Tax Sample

Variable	*N*	Mean	Std Dev	P25	Median	P75
GAAP-SPI-NRTAX	376	0.0155	0.0109	0.0107	0.0158	0.0210
SPI	376	-0.0051	0.0146	-0.0035	-0.0005	0
NRTAX	376	0.0026	0.0121	-0.0001	0.0016	0.0043
NRTAX Excluded	236	0.0032	0.0115	-0.0001	0.0017	0.0048
NRTAX Included	39	0.0023	0.0040	0.0005	0.0016	0.0033
NRTAX No non-GAAP	101	0.0015	0.0153	-0.0009	0.0015	0.0042
Future Earnings	366	0.0610	0.0368	0.0437	0.0644	0.0801
(Street-GAAP)	376	0.0032	0.0169	-0.0011	0.0002	0.0041
Forecast Error q=0	369	0.0011	0.0041	-0.0001	0.0008	0.0021
Pretax FE q=0	371	0.0001	0.0074	-0.0019	0.0001	0.0022
Forecast Error q=1	363	0.0009	0.0037	-0.0002	0.0007	0.0023
Pretax FE q=1	357	0.0002	0.0084	-0.0010	0.0005	0.0028
Loss	376	0.1064	0.3087	0	0	0
Ln(MVE)	376	8.3622	1.6295	7.1931	8.3289	9.3510
BTM	376	0.4853	0.3001	0.2724	0.4292	0.6458
Earnings Volatility	370	0.0126	0.0154	0.0039	0.0070	0.0138
Sales Growth	374	0.0133	0.0154	0.0033	0.0075	0.0188

Panel B: Discrete R&D Item Sample including estimated discrete R&D items

Variable	***N***	**Mean**	**Std Dev**	**P25**	**Median**	**P75**
GAAP-SPI-NRTAX-Discrete R&D	462	0.0116	0.0100	0.0063	0.0123	0.0170
SPI	462	-0.0018	0.0044	-0.0018	-0.0001	0
Discrete R&D	462	0.0010	0.0012	0.0003	0.0007	0.0013
Discrete R&D Excluded	52	0.0014	0.0017	0.0005	0.0008	0.0016
Discrete R&D Included	249	0.0010	0.0011	0.0003	0.0007	0.0013
Discrete R&D No non-GAAP	161	0.0009	0.0011	0.0003	0.0006	0.0011
NRTAX	462	0.0001	0.0013	0	0	0
Future Earnings	436	0.0486	0.0380	0.0305	0.0501	0.0683
(Street-GAAP)	462	0.0029	0.0054	0.0000	0.0007	0.0044
Forecast Error q=0	460	0.0007	0.0036	-0.0006	0.0005	0.0020
Pretax FE q=0	460	0.0001	0.0052	-0.0014	0.0003	0.0021
Forecast Error q=1	446	0.0007	0.0031	-0.0003	0.0004	0.0018
Pretax FE q=1	443	0.0007	0.0042	-0.0007	0.0006	0.0024
Loss	462	0.1255	0.3317	0	0	0
Ln(MVE)	462	7.7727	1.5774	6.6823	7.6443	8.7963
BTM	462	0.3990	0.2349	0.2267	0.3522	0.5284
Earnings Volatility	444	0.0127	0.0160	0.0041	0.0074	0.0147
Sales Growth	453	0.0216	0.0222	0.0067	0.0166	0.0282

Panel C: Discrete R&D Sample with firms that disclosed discrete R&D item amount

Variable	***N***	**Mean**	**Std Dev**	**P25**	**Median**	**P75**
GAAP-SPI-NRTAX-Discrete R&D	222	0.0120	0.0085	0.0070	0.0118	0.0167
SPI	222	-0.0020	0.0047	-0.0018	-0.0001	0
Discrete R&D	222	0.0013	0.0014	0.0005	0.0009	0.0016
Discrete R&D Excluded	41	0.0014	0.0018	0.0006	0.0009	0.0016
Discrete R&D Included	120	0.0013	0.0013	0.0005	0.0009	0.0017
Discrete R&D No non-GAAP	61	0.0012	0.0015	0.0004	0.0008	0.0014
NRTAX	222	0.0001	0.0017	0	0	0
Future Earnings	210	0.0492	0.0351	0.0305	0.0497	0.0660
(Street-GAAP)	222	0.0031	0.0053	0	0.0012	0.0051
Forecast Error q=0	222	0.0012	0.0036	-0.0004	0.0007	0.0020
Pretax FE q=0	222	0.0005	0.0047	-0.0014	0.0004	0.0022
Forecast Error q=1	215	0.0009	0.0028	-0.0002	0.0005	0.0019
Pretax FE q=1	216	0.0010	0.0038	-0.0006	0.0007	0.0026
Loss	222	0.0856	0.2804	0	0	0
Ln(MVE)	222	7.9637	1.5127	6.8637	7.7521	9.0570
BTM	222	0.4065	0.2281	0.2503	0.3479	0.5306
Earnings Volatility	213	0.0114	0.0136	0.0040	0.0073	0.0130
Sales Growth	218	0.0196	0.0202	0.0063	0.0141	0.0251

Table 3: Correlation Matrices

We present Pearson correlations for our nonrecurring income tax sample, our discrete R&D item sample, and the discrete R&D sample restricted to firms disclosing the item amount in Panels A, B, and C, respectively. All variables are as defined in Appendix A. * denotes statistical significance 0.05 level (two-tail).

Panel A: Nonrecurring Income Tax Sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) GAAP-SPI-NRTAX	1	**-0.19**	0.01	**0.59**	**0.11**	**0.27**	**0.26**	0.04	0.00
(2) SPI	-0.03	1	**-0.15**	-0.08	**-0.42**	-0.01	0.04	**-0.13**	-0.09
(3) NRTAX	0.02	-0.02	1	0.01	**-0.46**	**0.13**	**-0.19**	0.07	0.03
(4) Future Earnings	**0.49**	-0.02	0.05	1	0.07	**0.23**	**0.15**	**0.20**	**0.14**
(5) (Street-GAAP)	-0.06	**-0.70**	**-0.56**	-0.06	1	0.06	**0.17**	0.07	0.06
(6) Forecast Error q=0	**0.34**	**0.10**	**0.13**	**0.20**	-0.07	1	**0.62**	**0.16**	**0.17**
(7) Pretax FE q=0	**0.42**	**0.15**	**-0.11**	**0.15**	-0.05	**0.56**	1	0.04	**0.11**
(8) Forecast Error q+1	0.09	-0.08	0.09	**0.25**	-0.03	**0.11**	**0.11**	1	**0.79**
(9) Pretax FE q+1	**0.22**	**-0.16**	0.06	**0.19**	0.10	-0.09	**0.16**	**0.77**	1

Panel B: Discrete R&D Item Sample including estimated discrete R&D items

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) GAAP-SPI-NRTAX-Discrete R&D	1	**-0.15**	**-0.10**	0.04	**0.74**	**-0.18**	**0.26**	**0.22**	0.09	0.05
(2) Discrete R&D	**-0.13**	1	**-0.11**	0.06	-0.08	**0.23**	0.05	-0.02	**0.16**	**0.18**
(3) SPI	**-0.17**	**-0.12**	1	0.02	-0.07	**-0.51**	-0.04	-0.03	-0.03	-0.04
(4) NRTAX	-0.01	**0.09**	0.03	1	0.08	**-0.10**	0.08	-0.01	0.06	0.01
(5) Future Earnings	**0.64**	-0.05	-0.05	0.04	1	**-0.18**	**0.18**	**0.13**	**0.22**	**0.15**
(6) (Street-GAAP)	**-0.22**	**0.17**	**-0.55**	**-0.18**	**-0.21**	1	**0.11**	0.09	**0.10**	**0.14**
(7) Forecast Error q=0	**0.25**	**0.16**	**-0.13**	0.09	**0.09**	**0.14**	1	**0.85**	**0.33**	**0.29**
(8) Pretax FE q=0	**0.27**	-0.01	-0.05	0.06	0.07	0.08	**0.84**	1	**0.33**	**0.36**
(9) Forecast Error q+1	0.07	**0.20**	-0.03	0.05	**0.27**	0.08	**0.30**	**0.31**	1	**0.83**
(10) Pretax FE q+1	0.02	**0.14**	-0.04	0.05	**0.17**	0.07	**0.20**	**0.28**	**0.85**	1

Panel C: Discrete R&D Item Sample including estimated discrete R&D items

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) GAAP-SPI-NRTAX-Discrete R&D	1	0.03	-0.09	0.08	**0.74**	-0.13	**0.27**	**0.23**	0.11	0.08
(2) Discrete R&D	0.07	1	**-0.18**	0.00	0.07	**0.14**	0.11	0.02	**0.15**	0.12
(3) SPI	**-0.24**	**-0.15**	1	0.06	0.01	**-0.55**	-0.06	-0.10	-0.05	-0.06
(4) NRTAX	0.07	0.09	0.06	1	**0.14**	**-0.18**	**0.16**	0.06	0.11	0.02
(5) Future Earnings	**0.66**	0.06	-0.03	0.07	1	**-0.17**	**0.18**	**0.14**	**0.24**	**0.19**
(6) (Street-GAAP)	-0.08	0.04	**-0.63**	**-0.28**	**-0.17**	1	0.09	0.12	**0.15**	**0.18**
(7) Forecast Error q=0	**0.18**	**0.26**	-0.10	**0.16**	0.08	0.07	1	**0.81**	**0.30**	**0.25**
(8) Pretax FE q=0	**0.20**	0.04	-0.07	**0.15**	0.05	0.07	**0.79**	1	**0.32**	**0.34**
(9) Forecast Error q+1	**0.16**	**0.30**	**-0.19**	0.12	**0.27**	**0.20**	**0.38**	**0.38**	1	**0.89**
(10) Pretax FE q+1	0.12	0.11	**-0.21**	0.11	**0.20**	**0.22**	**0.29**	**0.35**	**0.90**	1

Table 4: Persistence Tests

$$Future\ Earnings_{i,q} = \beta_0 + \beta_1\left(GAAP_{i,q} - SPI_{i,q} - NRTAX_{i,q}\right) + \beta_2 SPI_{i,q}$$
$$+\beta_3 NRTAX_{i,q,Excluded} + \beta_4 NRTAX_{i,q,Included} + \beta_5 NRTAX_{i,q,no\ non-GAAP}$$
$$+\beta_j Controls + YearxQTR\ FE + Industry\ FE + \varepsilon_{i,q}$$

	NRTAX		Discrete R&D Item		
	(1)	(2)	(3)	(4)	(5)
$GAAP_{i,q}$ - $SPI_{i,q}$ - $NRTAX_{i,q}$	1.470***	1.482***			
	(5.9)	(5.7)			
$GAAP_{i,q}$ - $SPI_{i,q}$ - $NRTAX_{i,q}$ - Discrete $R\&D_{i,q}$			2.520***	2.492***	2.381***
			(9.6)	(9.5)	(4.8)
$SPI_{i,q}$	0.174	0.177	0.904*	0.742	0.020
	(0.9)	(0.9)	(1.9)	(1.5)	(0.0)
$NRTAX_{i,q}$	0.483***		0.683	0.915	-0.665
	(3.5)		(1.1)	(1.3)	(-1.1)
$NRTAX_{i,q,Excluded}$		0.439**			
		(2.2)			
$NRTAX_{i,q,Included}$		1.202			
		(0.8)			
$NRTAX_{i,q,no\ non-GAAP}$		0.537***			
		(3.2)			
Discrete $R\&D_{i,q}$			2.143		
			(1.6)		
Discrete $R\&D_{i,q,Excluded}$				0.537	1.426
				(0.4)	(1.0)
Discrete $R\&D_{i,q,Included}$				-0.190	2.825
				(-0.1)	(0.8)
Discrete $R\&D_{i,q,\ no\ non-GAAP}$				5.608***	3.816***
				(3.2)	(3.3)
Intercept	0.006	0.006	-0.047***	-0.048***	-0.082***
	(0.3)	(0.3)	(-2.9)	(-3.0)	(-4.3)
Controls?	Yes	Yes	Yes	Yes	Yes
Year FE?	Yes	Yes	No	No	No
QTR FE?	Yes	Yes	Yes	Yes	Yes
Industry FE?	Yes	Yes	Yes	Yes	Yes
Observations	361	361	417	417	201
R-squared	0.373	0.374	0.459	0.469	0.523

All variables are as defined in Appendix A. *t*-statistics appear in parentheses and are heteroscedasticity-consistent standard errors. In addition, errors in columns 1 and 2 are clustered at the firm. ***, **, * denote statistical significance at the 0.01, 0.05, and 0.10 levels (two-tail), respectively.

Table 5: Tests for Explaining the Difference between Street and GAAP Earnings

$$(Street_{i,q} - GAAP_{i,q}) = \beta_0 + \beta_1 SPI_{i,q} + \beta_2 NRTAX_{i,q,Excluded} + \beta_3 NRTAX_{i,q,Included} + \beta_4 NRTAX_{i,q,no\ non-GAAP} + \beta_j Controls + YearxQTR\ FE + Industry\ FE + \varepsilon_{i,q}$$

	NRTAX		Discrete R&D Item		
	(1)	(2)	(3)	(4)	(5)
$SPI_{i,q}$	-0.821***	-0.822***	-0.611***	-0.568***	-0.568***
	(-11.7)	(-11.6)	(-9.5)	(-8.9)	(-6.9)
$NRTAX_{i,q}$	-0.810***		-0.660***	-0.743***	-0.754***
	(-8.6)		(-7.6)	(-6.1)	(-5.9)
$NRTAX_{i,q,Excluded}$		-0.848***			
		(-7.3)			
$NRTAX_{i,q,Included}$		-0.299			
		(-1.4)			
$NRTAX_{i,q,no\ non-GAAP}$		-0.779***			
		(-4.6)			
Discrete $R\&D_{i,q}$			0.088		
			(0.2)		
Discrete $R\&D_{i,q,Excluded}$				-0.323	-1.220***
				(-0.4)	(-3.9)
Discrete $R\&D_{i,q,Included}$				1.264***	0.807*
				(3.0)	(1.9)
Discrete $R\&D_{i,q,no\ non-GAAP}$				-0.552**	-0.582***
				(-2.4)	(-2.8)
Intercept	-0.001	-0.002	0.001	0.000	-0.002
	(-0.2)	(-0.3)	(0.2)	(0.1)	(-0.7)
Controls?	Yes	Yes	Yes	Yes	Yes
Year FE?	Yes	Yes	No	No	No
QTR FE?	Yes	Yes	Yes	Yes	Yes
Industry FE?	Yes	Yes	Yes	Yes	Yes
Observations	370	370	432	432	208
R-squared	0.820	0.823	0.492	0.542	0.726

All variables are as defined in Appendix A. *t*-statistics appear in parentheses and are heteroscedasticity-consistent standard errors. In addition, errors in columns 1 and 2 are clustered at the firm. ***, **, * denote statistical significance at the 0.01, 0.05, and 0.10 levels (two-tail), respectively.

Table 6: Analysts' Earnings Forecast Errors in Quarter of Transitory Item

$$Forecast\ error_{i,q} = \beta_0 + \beta_1 NRTAX_{i,q,Excluded} + \beta_2 NRTAX_{i,q,Included} + \beta_3 NRTAX_{i,q,no\ non-GAAP} + \beta_4 SPI_{i,q} + \beta_5 Pretax\ Forecast\ Error_{i,q} + \beta_j Controls + YearxQTR\ FE + Industry\ FE + \varepsilon_{i,q}$$

	NRTAX		Discrete R&D Item		
	(1)	(2)	(3)	(4)	(5)
$NRTAX_{i,q}$	0.074**		0.058	0.050	0.058
	(2.1)		(1.1)	(0.8)	(0.8)
$NRTAX_{i,q,Excluded}$		0.054**			
		(2.5)			
$NRTAX_{i,q,Included}$		0.778***			
		(3.7)			
$NRTAX_{i,q,no\ non\text{-}GAAP}$		0.075			
		(1.1)			
Discrete $R\&D_{i,q}$			0.467**		
			(2.2)		
Discrete $R\&D_{i,q,Excluded}$				0.532	0.526
				(1.3)	(1.1)
Discrete $R\&D_{i,q,Included}$				0.583**	0.612
				(2.2)	(1.6)
Discrete $R\&D_{i,q,no\ non\text{-}GAAP}$				0.237	0.220
				(1.4)	(0.9)
$SPI_{i,q}$	0.008	0.007	-0.012	-0.005	-0.005
	(0.7)	(0.6)	(-0.4)	(-0.1)	(-0.1)
Pretax $FE_{i,q}$	0.331***	0.331***	0.589***	0.584***	0.570***
	(6.1)	(6.2)	(19.1)	(19.8)	(10.9)
Intercept	0.003	0.003	-0.000	-0.000	0.000
	(1.6)	(1.5)	(-0.4)	(-0.2)	(0.0)
Controls?	Yes	Yes	Yes	Yes	Yes
Year FE?	Yes	Yes	No	No	No
QTR FE?	Yes	Yes	Yes	Yes	Yes
Industry FE?	Yes	Yes	Yes	Yes	Yes
Observations	368	368	447	447	217
R-squared	0.397	0.457	0.748	0.752	0.700

All variables are as defined in Appendix A. *t*-statistics appear in parentheses and are heteroscedasticity-consistent standard errors. In addition, errors in columns 1 and 2 are clustered at the firm. ***, **, * denote statistical significance at the 0.01, 0.05, and 0.10 levels (two-tail), respectively.

Table 7: Analysts' Earnings Forecast Errors in Quarter Following Transitory Item

$$Forecast\ error_{i,q+1} = \beta_0 + \beta_1 NRTAX_{i,q,Excluded} + \beta_2 NRTAX_{i,q,Included} + \beta_3 NRTAX_{i,q,no\ non-GAAP} + \beta_4 SPI_{i,q} + \beta_5 Pretax\ Forecast\ Error_{i,q+1} + \beta_j Controls + YearxQTR\ FE + Industry\ FE + \varepsilon_{i,q+1}$$

	NRTAX		Discrete R&D Item		
	(1)	(2)	(3)	(4)	(5)
$NRTAX_{i,q}$	0.030**		0.018	0.012	0.008
	(2.5)		(0.4)	(0.3)	(0.3)
$NRTAX_{i,q,Excluded}$		0.015			
		(1.1)			
$NRTAX_{i,q,Included}$		0.518***			
		(2.7)			
$NRTAX_{i,q,no\ non\text{-}GAAP}$		0.029***			
		(2.9)			
Discrete $R\&D_{i,q}$			0.100		
			(0.8)		
Discrete $R\&D_{i,q,Excluded}$				0.006	0.091
				(0.0)	(0.6)
Discrete $R\&D_{i,q,Included}$				0.220	0.455***
				(1.3)	(2.7)
Discrete $R\&D_{i,q,no\ non\text{-}GAAP}$				-0.006	0.125
				(-0.1)	(1.5)
$SPI_{i,q}$	0.013	0.015	0.001	0.006	0.005
	(0.9)	(0.9)	(0.1)	(0.4)	(0.2)
Pretax $FE_{i,q}$	0.394***	0.430***	0.578***	0.578***	0.619***
	(5.4)	(7.4)	(16.2)	(16.0)	(20.8)
Intercept	0.000	0.000	0.000	0.000	-0.000
	(0.3)	(0.1)	(0.3)	(0.4)	(-0.4)
Controls?	Yes	Yes	Yes	Yes	Yes
Year FE?	Yes	Yes	No	No	No
QTR FE?	Yes	Yes	Yes	Yes	Yes
Industry FE?	Yes	Yes	Yes	Yes	Yes
Observations	342	342	429	429	209
R-squared	0.578	0.619	0.714	0.717	0.849

All variables are as defined in Appendix A. *t*-statistics appear in parentheses and are heteroscedasticity-consistent standard errors. In addition, errors in columns 1 and 2 are clustered at the firm. ***, **, * denote statistical significance at the 0.01, 0.05, and 0.10 levels (two-tail), respectively.