The Role of Non-GAAP Reporting in Conforming Tax Avoidance

ABSTRACT

I investigate whether non-GAAP reporting changes incentives to engage in tax avoidance that reduces GAAP earnings ("conforming tax avoidance"). If firms can report non-GAAP earnings that exclude the effects of conforming tax avoidance, they may be able to avoid the negative capital market reaction to lower GAAP earnings. I find that non-GAAP reporters engage in more conforming tax avoidance, consistent with non-GAAP reporting reducing the financial reporting costs of conforming tax avoidance. This relation strengthens as the benefits of non-GAAP reporting and conforming tax avoidance increase, and weakens as their costs increase. I also find evidence that non-GAAP reporters engage in two conforming tax strategies, expense acceleration and the LIFO inventory method, to a greater extent, while engaging in less non-conforming tax avoidance. This study contributes to the literature on the real effects of non-GAAP reporting and has implications for the growing prevalence of taxes levied on financial earnings.

I. INTRODUCTION

Lawmakers are increasingly concerned that firms can present glowing performance to investors and simultaneously report low performance to tax authorities (e.g., Warren 2019; Kessler 2021; Knaus 2022). Motivated in part by concerns about the magnitude and prevalence of book-tax differences, legislators are increasingly imposing minimum taxes on corporate earnings.[1] Academics and practitioners have warned that firms can avoid these taxes by managing their GAAP earnings downward, and then "undo" that downward management when they calculate non-GAAP earnings (e.g., Hoopes and Schanz 2022; Maurer and Francis 2021). Prior research investigates conditions under which firms are willing to present lower earnings to investors to avoid taxes, known as conforming tax avoidance,[2] and the financial reporting costs of this strategy (e.g., Scholes, Wilson, and Wolfson 1990). However, there are no empirical studies examining whether the disclosure of non-GAAP earnings affects that trade-off. If firms report non-GAAP earnings that exclude the effects of conforming tax avoidance, as academics and practitioners predict, they may escape the financial reporting costs of conforming tax avoidance, providing them latitude to avoid minimum taxes levied on corporate earnings.

In this paper, I investigate whether non-GAAP reporting reduces the financial reporting costs of conforming tax avoidance. I divide the investigation into three research questions. First, I examine whether the disclosure of non-GAAP earnings is positively associated with measures of conforming tax avoidance. If non-GAAP reporters exclude conforming tax avoidance, thereby reducing its financial reporting costs, then non-GAAP reporters should engage in more conforming

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[1] For instance, the U.S. and Germany enacted minimum taxes on corporate financial statement earnings in 2023 and 2024, respectively. Other OECD member countries are in the process of adopting similar taxes under Pillar Two of the OECD's Base Erosion and Profit Shifting project.

[2] The term "conforming" denotes that the tax and financial accounting for the relevant transactions conform. In other words, conforming tax avoidance reduces financial accounting income, whereas "non-conforming tax avoidance" does not. Conforming tax avoidance methods include debt financing, expense and loss acceleration, and income-decreasing inventory assumptions.

tax avoidance. Second, I examine whether the association between non-GAAP reporting and conforming tax avoidance varies with their respective benefits and costs. These cross-sectional tests provide some comfort that the primary tests capture the intended constructs, and they provide evidence about the boundary conditions under which the primary test results hold. Finally, I examine the association between non-GAAP reporting and specific forms of tax avoidance to shed light on potential mechanisms for the primary results.

Although non-GAAP reporting provides firms with latitude in financial reporting, the presence of certain firm and institutional features could nevertheless prevent non-GAAP reporters from enjoying any advantages in conforming tax avoidance. First, capital market participants may not notice or react negatively to the effect of conforming tax avoidance on GAAP earnings. In that case, non-GAAP reporting will not reduce the already minimal financial reporting costs of conforming tax avoidance. Second, for firms with sufficiently low tax burdens, changes to financial reporting costs may not encourage additional tax avoidance. Finally, the SEC monitors non-GAAP exclusions closely and their rules forbid exclusions that they deem "potentially misleading" (SEC 2022; PWC 2023). In cases where SEC scrutiny prevents non-GAAP reporters from excluding conforming tax avoidance activities, non-GAAP reporters will not enjoy any financial reporting advantage. As these examples demonstrate, it is unclear *ex ante* whether non-GAAP reporting provides an advantage to firms engaging in conforming tax avoidance.

To provide empirical evidence on this matter, I estimate OLS regressions of conforming tax avoidance as a function of non-GAAP reporting. My proxy for conforming tax avoidance is the residual from industry-year regressions of taxes paid on measures of non-conforming tax avoidance (Badertscher, Katz, Rego, and Wilson 2019). My proxy for non-GAAP reporting is an indicator variable that equals one if a firm reports non-GAAP EPS in quarterly earnings

announcements for the year (Bentley, Christensen, Gee, and Whipple 2018). I control for the first-stage non-conforming tax avoidance measures, determinants of non-GAAP reporting and conforming tax avoidance, and year and firm fixed effects. My main sample consists of 21,567 observations of 2,904 firms over the years 2003 to 2019.

Using this design to examine my first research question, I find that non-GAAP reporters engage in significantly more conforming tax avoidance, consistent with non-GAAP reporting reducing the financial reporting costs of conforming tax avoidance. This result is robust to alternative control variable and fixed effect structures, single-stage estimates, using an alternative proxy for conforming tax avoidance, and entropy balancing covariates between non-GAAP reporting status. Using my primary specification, I estimate that non-GAAP reporters save approximately $9.6 million in taxes annually.

I next investigate my second research question: whether the primary result varies cross-sectionally with the benefits and costs of non-GAAP reporting and conforming tax avoidance. The benefit of non-GAAP reporting is the ability to redirect capital market attention away from GAAP earnings towards non-GAAP earnings, which becomes increasingly valuable as capital market attention becomes stronger. Using analyst following, stock issuances, and sales growth as proxies for capital market attention (Badertscher et al. 2019), I estimate that the association between non-GAAP reporting and conforming tax avoidance becomes 36 to 40 percent stronger for each standard-deviation increase in capital market attention. The benefit of conforming tax avoidance (i.e., the tax savings associated with lowering income) increases linearly in tax rates. Using tax loss carryforwards, the availability of tax shields in high-tech industries, and the estimates from Blouin, Core, and Guay (2010) as proxies for marginal tax rates, I estimate that the association between non-GAAP reporting and conforming tax avoidance becomes 40 percent stronger with

each standard-deviation increase in marginal tax rates (i.e., for a 10 percentage point tax rate increase). Both sets of tests suggest that the positive association between non-GAAP reporting and conforming tax avoidance becomes stronger as their joint use becomes more beneficial to firms.

Turning to costs, I examine cross-sectional differences associated with three costs of non-GAAP reporting and conforming tax avoidance. The first cost is commitment costs of non-GAAP reporting. Because the SEC requires consistency in non-GAAP reporting, excluding items related to conforming tax avoidance in one period could effectively commit firms to excluding gains in future periods that *improve* GAAP earnings. The second cost is regulatory scrutiny towards conforming-tax-avoidance-related exclusions that the SEC may deem misleading to investors (SEC 2022; Guenther, Maydew, and Nutter 1997; Badertscher et al. 2019; Lynch, Pflitsch, and Stich 2023). The third cost is managerial compensation, which may suffer if managers' contracts cannot distinguish conforming tax avoidance from actual weak performance. Using proxies for these three costs, I find that the positive association between non-GAAP reporting and conforming tax avoidance is 55 to 85 percent weaker among firms more likely to experience these costs. This pattern is consistent with non-GAAP reporting's benefits being less relevant to firm decisions when other costs are more relevant.

I then investigate my third research question: whether conforming tax avoidance is associated with specific forms of tax avoidance, beginning with two conforming tax strategies. I first examine whether non-GAAP reporters accelerate expenses into earlier periods to accelerate tax deductions. Given prior evidence that firms shift concurrent operating expenses into special items (McVay 2006; Fan, Barua, Cready, and Thomas 2010; Ha 2021), non-GAAP reporters may be able to similarly shift *accelerated* operating expenses into special items and report those expenses as non-GAAP exclusions. Consistent with this prediction, firms reporting non-GAAP

earnings in the current year report less discretionary expenses in the first quarter of the following year. Next, I investigate whether non-GAAP reporters are more likely to use the last-in, first-out (LIFO) inventory method. I find some preliminary evidence suggesting that non-GAAP reporting is associated with the use of LIFO. These results are consistent with non-GAAP reporters engaging in two specific conforming tax strategies.[3] Lastly, I examine non-GAAP reporters' *non-conforming* tax avoidance. Prior research suggests firms may substitute between conforming and non-conforming forms of tax avoidance (Badertscher, Phillips, Pincus, and Rego 2009; Badertscher et al. 2019). Consistent with substitution in my setting, I observe that non-GAAP reporters engage in less non-conforming tax avoidance.

Lastly, I conduct tests to address common empirical challenges. To explain my results thus far, a correlated omitted variable would need to be orthogonal to my controls, vary within firm, vary within year, vary with my cross-sectional variables, and be associated with specific tax avoidance strategies. Nevertheless, I conduct additional analyses to further address potential endogeneity. First, I employ two difference-in-differences settings that provide plausibly exogenous variation in the benefits of non-GAAP reporting and conforming tax avoidance. Similar to my earlier cross-sectional analyses, these settings provide evidence that the relation between non-GAAP reporting and conforming tax avoidance changes in response to changes in their respective benefits. Second, I implement Klein and Vella (2010) modified control function regressions that use heteroskedasticity-based instruments to address endogeneity, and continue to find that non-GAAP reporters engage in significantly higher conforming tax avoidance. Lastly, to

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[3] I choose not to examine debt financing, another common form of conforming tax avoidance, for two reasons. First, the data I use capture non-GAAP EPS, a non-GAAP measure that rarely excludes interest expense. Second, it is difficult to empirically disentangle the tax incentives for debt from other incentives that could explain an association between non-GAAP reporting and debt (e.g., Rozenbaum 2019). Nevertheless, in untabulated tests I find evidence that non-GAAP reporting is associated with interest expense, especially as marginal tax rates increase.

address reverse causality, I estimate Granger causality tests, which reveal that non-GAAP reporting predicts future conforming tax avoidance, not the reverse. Although all archival tests require untestable assumptions (Armstrong, Kepler, Samuels, and Taylor 2022), consistency across multiple approaches provides additional confidence in interpreting the results as evidence that non-GAAP reporting lowers the financial reporting costs of conforming tax avoidance.

I contribute to multiple literatures. First, I contribute to the conforming tax avoidance literature. Existing studies in this literature emphasize that capital market attention discourages conforming tax avoidance (e.g., Scholes et al. 1990; Scholes, Wilson, and Wolfson 1992; Matsunaga, Shevlin, and Shores 1992; Dhaliwal, Frankel, and Trezevant 1994; Badertscher et al. 2009; Lynch, Romney, Stomberg, and Wangerin 2019). In contrast, I examine a setting in which conforming tax avoidance is relatively insensitive to capital market attention, and in which firms exert control over financial reporting costs. My findings should concern policymakers relying on financial reporting costs to discourage conforming tax avoidance in response to taxes on financial statement earnings, especially given the recent prevalence of non-GAAP reporting.

Second, my study contributes to the non-GAAP disclosure literature. Non-GAAP research largely focuses on how attributes of GAAP earnings affect non-GAAP reporting practices (e.g., Bhattacharya, Black, Christensen, and Larson 2003; Black, Christensen, Joo, and Schmardebeck 2017; Kyung, Lee, and Marquardt 2019). My study joins new research examining the reverse: how non-GAAP reporting practices affect GAAP earnings (Guggenmos, Rennekamp, Rupar, and Wang 2022; Ashby, Chyz, Myers, and Whipple 2023). My study also joins recent research investigating the real effects of non-GAAP reporting. These studies find evidence that non-GAAP reporting encourages more of the activities reflected in non-GAAP exclusions, and generally suggest that the additional activities represent excessive expenditures with negative implications

for firm value (Rozenbaum 2019; Laurion 2020; McClure and Zakolyukina 2024). Similar to Ahn et al. (2025), who suggest that non-GAAP reporters' higher expenses create long-term value, I provide evidence that non-GAAP reporting can encourage value-enhancing real activities. Finally, I provide evidence that non-GAAP reporting encourages a new type of real activity, conforming tax avoidance.[4]

II. BACKGROUND AND PRIOR RESEARCH

2.1 Non-GAAP Reporting

Theory suggests that non-GAAP reporting can serve both to inform the market about transitory income components and to bias market expectations in ways that serve managers' interests (Hirshleifer and Teoh 2003). The informational role is especially useful to investors with limited capacity to process information (Hirshleifer and Teoh 2003; Bhattacharya, Black, Christensen, and Mergenthaler 2007; Allee, Bhattacharya, Black, and Christensen 2007; Elliott 2006). Empirical studies suggest that both informational and aggressive non-GAAP reporting occur in practice, but informational motives appear more descriptive on average (e.g., Curtis, McVay, and Whipple 2014; Bentley et al. 2018; Black, Christensen, Ciesielski, and Whipple 2021; Campbell, Gee, and Wiebe 2022; McVay, Rodriguez-Vazquez, and Toynbee 2024; Black, Christensen, Ciesielski, and Whipple 2018). Consistent with an equilibrium with informative non-GAAP reporting, several studies find that capital markets respond more to non-GAAP earnings surprises than GAAP earnings surprises (e.g., Bradshaw and Sloan 2002; Bhattacharya et al. 2003; Bradshaw, Christensen, Gee, and Whipple 2018). Simultaneously, the credibility gained by

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[4] Prior studies investigate the informativeness of tax expense reflected in non-GAAP reporting (Beardsley, Mayberry, and McGuire 2021; Donelson, Koutney, and Mills 2024; Chen, Chiu, Shevlin, and Wang 2022), but these studies do not investigate differences in tax avoidance. Rozenbaum (2019) examines EBITDA reporting and *non*-conforming tax avoidance, and does not find a significant association.

reporting useful information provides an opportunity for managers to use non-GAAP reporting as an impression management tool (Black et al. 2017; Guggenmos et al. 2022).

I contribute to recent research suggesting that capital market attention to non-GAAP earnings encourages firms to incur more of the expenses that they exclude when calculating non-GAAP earnings. Rozenbaum (2019) finds that EBITDA reporters exhibit higher levels of investment and leverage. Laurion (2020) generalizes this prediction to other non-GAAP measures, and finds that non-GAAP reporters incur more acquisitions, restructuring, and impairment expenses. Ahn et al. (2025) provide evidence that higher investment among non-GAAP reporters reflects less under-investment, and increases firm value. McClure and Zakolyukina (2024) estimate a structural model and conclude that non-GAAP reporting both decreases under-investment and increases over-investment. Finally, turning to expense classification, Ashby et al. (2023) find that acquiring firms allocate more of the purchase price to amortizable assets when they have a history of reporting non-GAAP earnings that excludes amortization expense.

2.2 Conforming Tax Avoidance

Tax avoidance can be categorized as either conforming or non-conforming. Conforming tax avoidance reduces taxable income using methods that also lower book income, whereas non-conforming tax avoidance does not affect book income. Conforming tax avoidance methods include debt financing, expense and loss acceleration, and inventory assumptions that lower income.[5] All else equal, capital markets reward firms for reporting higher earnings (e.g., Barth, Elliott, and Finn 1999; Bartov, Givoly, and Hayn 2002; Skinner and Sloan 2002), and because capital markets may not anticipate conforming tax avoidance, they may react negatively when firms report lower GAAP earnings to avoid taxes (Shane and Stock 2006). For this reason, firms

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[5] Badertscher et al.'s (2019) Appendix B and Kara et al.'s (2023) Appendix 2 describe methods of conforming tax avoidance in greater depth.

engage in less conforming tax avoidance when they are sensitive to capital market reactions (Penno and Simon 1986; Scholes et al. 1990, 1992; Matsunaga et al. 1992; Dhaliwal et al. 1994; Cloyd, Pratt, and Stock 1996; Erickson, Hanlon, and Maydew 2004; Graham, Hanlon, Shevlin, and Shroff 2014; Hoopes, Langetieg, Maydew, and Mullaney 2024; Kara, Mayberry, and Rane 2023). However, non-conforming tax avoidance entails its own costs, including potential scrutiny from regulators and politicians (Cloyd 1995; Cloyd et al. 1996; Mills and Sansing 2000; Bozanic, Hoopes, Thornock, and Williams 2017; Kubick, Lynch, Mayberry, and Omer 2016; Kessler 2021; Mills, Nutter, and Schwab 2013). Firms therefore trade off conforming and non-conforming forms of tax avoidance depending on their relative costs (Badertscher et al. 2009, 2019; Lynch et al. 2019).

III. HYPOTHESIS DEVELOPMENT

Negative capital market reactions to lower earnings create financial reporting costs that constrain conforming tax avoidance (e.g., Mills and Newberry 2001; Badertscher et al. 2019). However, firms that report non-GAAP earnings may be able to calculate non-GAAP earnings that excludes the earnings effects of conforming tax avoidance. Because capital markets preferentially react to non-GAAP earnings when reported (Bradshaw and Sloan 2002; Bhattacharya et al. 2003; Bradshaw et al. 2018), reporting non-GAAP earnings that excludes the effects of conforming tax avoidance should reduce the financial reporting costs of conforming tax avoidance. All else equal, firms will engage in more conforming tax avoidance when its costs are lower. This possibility is consistent with prior research suggesting that non-GAAP reporting encourages more of the activities that non-GAAP earnings excludes (Rozenbaum 2019; Laurion 2020; McClure and Zakolyukina 2024; Ahn et al. 2025; Ashby et al. 2023). Similar arguments motivate speculation that non-GAAP reporters are especially likely to reduce GAAP earnings to avoid taxes levied on

financial statement income (Hanlon 2021; Gaertner and Hoopes 2021; Hoopes and Schanz 2022; Hanlon and Nessa 2023; Maurer and Francis 2021).

Figure 1 presents excerpts from two earnings announcements from Seneca Foods Corporation ("Seneca") that illustrate how firms can exclude charges related to conforming tax avoidance and reduce financial reporting costs in practice. In its fiscal year ended March 31, 2008, Seneca adopts LIFO, a conforming tax avoidance strategy that lowers Seneca's GAAP earnings and taxable income.[6] In Figure 1, Panel A, the subtitle to Seneca's 2008 earnings announcement specifically warns that LIFO adoption affects its reported earnings. The body of the announcement discloses the earnings impact of LIFO adoption, highlights the amount of cash taxes saved by adopting LIFO, and then reports as-if FIFO operating income. Seneca continuously reports as-if FIFO earnings in all subsequent earnings announcements, as evidenced in Panel B, which presents the non-GAAP reconciliation from Seneca's 2023 annual earnings announcement. The excerpts in both panels are consistent with Seneca reporting non-GAAP earnings to redirect capital market attention to the (FIFO) earnings it would report in the absence of a conforming tax strategy, lowering the financial reporting costs of that strategy.

Despite this example, the degree to which firms exclude activities related to conforming tax avoidance when calculating non-GAAP earnings is not obvious *ex ante*. The SEC monitors and restricts non-GAAP exclusions, as reflected in the fact that non-GAAP reporting is the single most common subject of SEC comment letters (PWC 2023). SEC guidance describes exclusions related to normal operating expenses, or unusual expenses that nevertheless may reoccur within

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[6] Internal Revenue Code §472(c) requires firms to use LIFO in their financial statements to use LIFO for calculating taxable income. Despite theoretical arguments that LIFO better matches expenses and revenues in inflationary periods, empirical analysis and surveys suggest that in practice firms use LIFO only for its tax benefits (Guenther and Hussein 1995; Cushing and LeClere 1992; IFRS Foundation 2012). Former FASB director James Leisenring echoes this conclusion in public remarks in 2002: "I don't think anybody thinks LIFO is a good inventory method for anything except tax purposes" (Kleinbard, Plesko, and Goodman 2006).

two years as "potentially misleading" (SEC 2022). If conforming tax activities fall under these categories, firms may not be able to exclude them, in which case conforming tax avoidance reduces non-GAAP earnings as much as it reduces GAAP earnings. In this case, non-GAAP reporting will not reduce the financial reporting cost of conforming tax avoidance. Consistent with this possibility, Gaertner, Hoopes, Kelley, and Pflitsch (2025) measure the market reaction to the 2021 passage of the U.S. corporate alternative minimum tax (CAMT), and in a cross-sectional test, Gaertner et al. find that the generally negative market reaction to the CAMT is not significantly different for non-GAAP reporters. Thus, Gaertner et al. do not find evidence that the market expects non-GAAP reporting to facilitate any conforming tax avoidance in response to the CAMT.[7]

Moreover, it is possible that in addition to redirecting attention away from GAAP earnings, non-GAAP reporting may *increase* capital market attention paid to earnings overall. That is, capital markets may pay more attention to non-GAAP earnings than they would to GAAP earnings reported alone. If non-GAAP earnings does not exclude conforming tax avoidance (i.e., if conforming tax avoidance reduces non-GAAP earnings), and non-GAAP reporting increases capital market attention, then non-GAAP reporting will increase financial reporting costs and discourage conforming tax avoidance.

How non-GAAP reporting changes the incentives for conforming tax avoidance is therefore an empirical question. I state my hypothesis in the null form:

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[7] While this result from Gaertner et al. (2025) suggests tension exists in my research question, several factors make it difficult to interpret the implication of this result for my setting: (1) It is unclear how efficiently the market anticipates firm responses to tax laws (e.g., Plumlee 2003; Shane and Stock 2006); (2) Gaertner et al. focus on 89 specific large firms targeted by the CAMT, which are unlikely to be representative of the broader set of firms in my sample; (3) Gaertner et al. define non-GAAP reporting as reporting non-GAAP EPS for all of the prior four quarters, whereas I include firms reporting non-GAAP EPS at least in one of those quarters; and finally (4) Gaertner et al.'s test may not have enough power to detect differences between subsets of the 89 CAMT-targeted firms.

Hypothesis: *Relative to firms that do not report non-GAAP earnings, firms that report non-GAAP earnings engage in similar levels of conforming tax avoidance.*

IV. PRIMARY RESEARCH QUESTION

4.1 Research Design

4.1.1 Measure of conforming tax avoidance

To measure conforming tax avoidance, I estimate first-stage OLS regressions of cash taxes paid on non-conforming tax avoidance measures following Badertscher et al. (2019):

$$Taxes\ Paid_{i,t} = \beta_0 + \beta_1 NOL\ 01_i + \beta_2 \Delta NOL_i + \beta_3 BTD_i \qquad (1)$$

$$+ \beta_4 NegBTD\ 01_i + \beta_5 BTD \times NegBTD\ 01_i + \tau_i$$

The dependent variable in equation 1, *Taxes Paid,* equals cash taxes paid scaled by beginning assets. To capture variation in taxes paid attributable to non-conforming tax avoidance, equation 1 includes controls for the presence of tax loss carryforwards (*NOL01*), the annual change in tax loss carryforwards (*ΔNOL*), book-tax differences (*BTD*), an indicator variable for negative book-tax differences (*NegBTD 01*), and the interaction of *BTD* and *NegBTD 01*. I estimate equation 1 by year and two-digit NAICS industry on the sample of all Compustat firms, excluding observations with negative cash taxes paid, and requiring at least 10 observations per estimation. After controlling for non-conforming tax avoidance and tax loss carryforwards, the residual from this model, τ, captures variation in taxes paid attributable to conforming tax avoidance. I create my measure of conforming tax avoidance, *Conform,* by multiplying τ by negative one so that *Conform* increases in tax avoidance.

4.1.2 Model

To test my hypothesis regarding the effect of non-GAAP reporting on conforming tax avoidance, I use OLS to estimate the following regression:

$$Conform_{i,t} = \beta_0 + \beta_1 Report\ NG_{i,t} + \beta_2 NOL\ 01_{i,t} + \beta_3 \Delta NOL_{i,t} \tag{2}$$

$$+ \beta_4 BTD_{i,t} + \beta_5 NegBTD\ 01_{i,t} + \beta_6 BTD \times NegBTD\ 01_{i,t}$$

$$+ \beta_7 LogAssets_{i,t} + \beta_8 Interest\ Exp._{i,t} + \beta_9 Mgr\ Ability_{i,t}$$

$$+ \beta_{10} Inst.Ownership_{i,t} + \beta_{11} LogAnalysts_{i,t} + \beta_{12} Stock\ Issue_{i,t}$$

$$+ \beta_{13} Sales\ Growth_{i,t} + Year_t + Firm_i + \epsilon_{i,t}$$

The dependent variable in equation 2, *Conform*, captures conforming tax avoidance as described earlier. The independent variable of interest, *Report NG,* equals one if a manager reports non-GAAP earnings for at least one quarter during the fiscal year, and zero otherwise. I measure non-GAAP reporting using the data collected by Bentley et al. (2018) on non-GAAP quarterly EPS reports in earnings announcements filed with SEC forms 8-K.[8] The coefficient on *Report NG* measures differences in conforming tax avoidance between non-GAAP reporters and GAAP-only reporters. A positive coefficient on *Report NG* ($\beta_1 > 0$) indicates that non-GAAP reporters engage in higher levels of conforming tax avoidance.

I control for several potential determinants of conforming tax avoidance in equation 2. I include the first-stage regressors from equation 1 in all models of *Conform* to ameliorate potential bias associated with residual dependent variables (Wei Chen, Hribar, and Melessa 2018).[9] I also include "baseline controls" for firm size (*LogAssets*), interest expense (*Interest Exp.*), managerial ability (*Mgr Ability*), the level of institutional ownership (*Inst. Ownership*), and three proxies for capital market attention: analyst following (*LogAnalysts*), the issuance of stock (*Stock Issue*), and sales growth (*Sales Growth*).[10] Appendix A provides full variable definitions. Finally, I include

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[8] I thank Bentley et al. (2018) for making their data publicly available.

[9] My primary results are robust to single-stage models that directly estimate *Taxes Paid* and fully interact the independent variables in equation 1 with industry-year fixed effects (untabulated; Wei Chen, Hribar, and Melessa 2018).

[10] I thank Demerjian et al. (2012) for making their managerial ability data publicly available.

year and firm fixed effects in equation 2 to control for time effects and unobservable time-invariant firm characteristics. To address the potential for control variables and high-dimension fixed effects to introduce or exacerbate bias (Whited, Swanquist, Shipman, and Moon 2022; Jennings, Kim, Lee, and Taylor 2024; Breuer and deHaan 2024; Grieser and Hadlock 2019; Armstrong, Kepler, et al. 2022), I estimate similar specifications without baseline control variables and using lower-dimension fixed effects before estimating equation 2.

In all tests, I use robust standard errors clustered by firm. I winsorize all continuous variables at the 1st and 99th percentiles. I also standardize continuous variables to a mean of zero and a standard deviation of one so that coefficients for models with variable interactions are easier to interpret. Appendix A provides complete variable definitions.

4.1.3 Sample construction and descriptive statistics

I begin my sample construction by matching Bentley et al.'s (2018) observations of non-GAAP reporting in quarterly earnings announcements to the corresponding annual Compustat observations of U.S.-incorporated firms. I require Compustat observations to match to at least one quarterly earnings announcement (either with or without non-GAAP reporting). This requirement ensures that my sample firms have relatively similar earnings announcement behavior that is captured by Bentley et al.'s collection process. Bentley et al.'s observations begin in 2003. I end my sample period in 2019 to avoid potential confounding by pandemic-related events in 2020. I obtain an initial sample of 57,420 observations fitting these requirements. From these, I drop observations with less than $10 million in assets, and observations where pretax income does not equal the sum of its components (i.e., Compustat variable PI does not equal the sum of SALE, negative COGS, negative XSGA, negative XINT, negative DP, NOPI, and SPI). I then require data to calculate *Conform*, followed by managerial ability data from Demerjian et al. (2012),

institutional ownership data from Thomson Reuters 13F Institutional Holdings, and analyst forecast data from I/B/E/S. I exclude firms in financial services (NAICS 52) and utilities (NAICS 22) industries because of differences in their tax and financial reporting environments. Finally, because I use firm fixed effects in most tests, I exclude firms observed in only a single year (Correia 2015). These criteria produce the 21,567 observations of 2,904 firms that comprise my main sample. Table 1 summarizes the sample selection process. Panel A reports the number of observations excluded by each sample requirement. Panel B suggests that my main sample is spread evenly across the years 2003 to 2019.

Table 2 provides descriptive statistics for the main sample. Panel A presents summary statistics for the variables used in my primary tests. The mean value of *Conform* in my main sample is less than zero (-0.003), indicating that my sample engages in slightly less conforming tax avoidance than the larger Compustat sample I use to estimate equation 1. The distributions of the first stage regressors *Taxes Paid, NOL 01, ΔNOL, BTD, NegBTD 01* roughly match those reported by Badertscher et al. (2019), although the firms in my sample report more tax losses (*NOL 01* and *ΔNOL*). The mean value of *Report NG* indicates that 55 percent of observations report non-GAAP earnings for at least one quarter. Of these observations, 86 percent report non-GAAP earnings for the fourth quarter, and 64 percent report non-GAAP earnings for all four quarters (untabulated). Panel B presents mean and median statistics for the same variables after partitioning the sample by values of *Report NG*. T-tests and Wilcoxon rank-sum tests comparing the partitions reveal that non-GAAP reporters differ significantly across most variables, consistent with their importance as controls.

4.2 Results

Table 3 presents results from estimating the association between conforming tax avoidance and non-GAAP reporting. Column 1 presents results for a model specification with only *Report NG*, first-stage regressors, and year fixed effects included as independent variables. Column 2 presents results after adding baseline controls and industry fixed effects to the model. Column 3 presents results for equation 2, including firm fixed effects.[11] Across all columns, the coefficient on *Report NG* is significantly positive. This result indicates that non-GAAP reporters engage in more conforming tax avoidance, inconsistent with the null hypothesis. Using the estimate from Column 3, reporting non-GAAP earnings is associated with a 0.112 standard deviation increase in *Conform.* Multiplying this increase by the within-firm standard deviation of *Conform* of 0.0171 and the sample mean assets of $4.99 billion (untabulated), I estimate that reporting non-GAAP earnings is associated with conforming tax avoidance that saves $9.6 million in taxes paid. For comparison, the results from Badertscher et al. (2019) suggest that firms save approximately $17 million in taxes paid when they transition from FIFO to LIFO.[12] Collectively, the results in Table 3 are consistent with non-GAAP reporting reducing the financial reporting costs associated with conforming tax avoidance.

4.3 Sensitivity tests

I perform three untabulated tests to assess the sensitivity of my primary results to alternate design choices that each address a different potential concern. To address potential bias associated with the use of a residual (i.e., *Conform*) as a dependent variable, I estimate a single-stage

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[11] Following recommendations from Breuer and deHaan (2024) and Armstrong et al. (2022), I compare the pooled and within-firm, within-year standard deviations of my variables. I find that 68 percent of the variation in *Conform* and 67 percent of the variation in *Report NG* remain after firm and year fixed effects.

[12] Using Table 3, Panel A from Badertscher et al. (2019), I estimate this amount as the change from year *t-1* to *t+1* in *CONFORM_TAX* multiplied by assets: (-0.002 x $8.448 billion) in year *t+1* less (0.000 x $4.343 billion) in year *t-1*.

counterpart to equation 2 (Wei Chen et al. 2018).[13] To address potential bias associated with the inability of the first-stage variables in equation 1 to perfectly control for non-conforming tax avoidance, I use pretax return on assets as an alternate measure of conforming tax avoidance (Hundsdoerfer and Jacob 2019; Eichfelder, Jacob, Kalbitz, and Wentland 2023). Finally, to address potential bias associated with functional form assumptions, I use entropy balancing to obtain weights that balance the first three moments of first-stage regressors and baseline control variables between non-GAAP reporting and other observations (an efficient alternative to propensity score matching, which also addresses functional form misspecification; Hainmueller 2012; Shipman, Swanquist, and Whited 2017; McMullin and Schonberger 2020). Across all three untabulated sensitivity tests, I find that my results do not change.

V. CROSS-SECTIONAL ANALYSES

I next perform cross-sectional tests that address my second research question, how the association between non-GAAP reporting and conforming tax avoidance varies with their benefits and costs. For these tests, I modify equation 2 to interact *Report NG* with one of several cross-sectional variables denoted by the placeholder variable *CS*.[14]

5.1 Benefit of Non-GAAP Reporting

The first cross-section I examine is the benefit of non-GAAP reporting. The focal benefit of non-GAAP reporting is the ability to redirect capital market attention from GAAP earnings towards non-GAAP earnings. In the hypothetical edge case in which capital markets do not pay any attention to earnings, conforming tax avoidance is not constrained by capital market attention, and so non-GAAP reporting will have no effect on the incentive to engage in conforming tax

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[13] The single stage model regresses *Taxes Paid* on the baseline control variables, firm and year fixed effects, and the first-stage regressors in equation 1 fully interacted with industry-year fixed effects.

[14] The results of all cross-sectional tests are robust to interacting the first-stage and baseline control variables in equation 2 with *Report NG, CS,* or with both (untabulated; deHaan, Moon, Shipman, Swanquist, and Whited 2023).

avoidance. As capital market attention increases, the negative reaction to conforming tax avoidance increases, *unless* firms report non-GAAP earnings that exclude the effects of conforming tax avoidance. The financial reporting benefit of non-GAAP reporting, and its effect on conforming tax avoidance, should therefore increase as capital market attention increases.

To test this prediction, I interact *Report NG* with one of the three proxies for capital market attention: analyst following (*LogAnalysts*), stock issuances (*Stock Issue*), or sales growth (*Sales Growth*). The coefficient on the interaction term measures how the conforming tax avoidance associated with non-GAAP reporting changes as capital market attention increases. A positive coefficient on the interaction term suggests that non-GAAP reporting has a stronger effect on the incentive for conforming tax avoidance when capital market attention is stronger, as I predict.

Table 4 presents the results of the capital market attention cross-sections. In each of the three columns, the placeholder variable *CS* denotes one of the three different proxies for capital market attention. Across all columns, I observe positive coefficients on the interaction term *Report NG × CS*, indicating that the positive association between non-GAAP reporting and conforming tax avoidance becomes stronger as capital market attention increases. Using the coefficients from each of the three columns, I find that the strength of the association between non-GAAP reporting and conforming tax avoidance increases by 36 percent, 40 percent, or 39 percent for each standard-deviation increase in capital market attention.[15] These results are consistent with tax avoidance decisions being more responsive to changes in financial reporting costs when those costs are larger *ex ante*.

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[15] I calculate these estimates by dividing the interaction coefficient in each column by the coefficient on *Report NG*. Because I standardize continuous variables, these estimates are relative to the strength of the association when the respective capital market attention proxy is at the sample mean.

5.2 Benefit of Conforming Tax Avoidance

The second cross-section I examine is the benefit of conforming tax avoidance. In simplified terms, the tax savings associated with conforming tax avoidance equals the change in GAAP earnings (i.e., the change in taxable income) multiplied by the firm's marginal tax rate. The tax benefit of reducing income therefore increases as marginal tax rates increase, and non-GAAP reporters may reduce GAAP earnings more as marginal tax rates increase.

To test this prediction, I interact *Report NG* with one of three proxies for higher marginal tax rates: the absence of tax loss carryforwards (*No NOL 01*), presence in industries with less access to tax credits and income shifting strategies (*Not Tech/Pharm 01*; Blouin et al. 2010), and Blouin et al.'s (2010) actual estimates of marginal tax rates (*Estimated MTR*).[16] If non-GAAP reporters reduce their GAAP earnings to a larger degree when the tax benefit is larger, I should observe a positive coefficient on the interaction term when *Conform* is the dependent variable (and a negative coefficient when *Pretax ROA* is the dependent variable). To address the potentially mechanical effect of tax rates on *Conform*,[17] in these tests I use pretax ROA (*Pretax ROA*) as an alternate dependent variable that also measures conforming tax avoidance (Hundsdoerfer and Jacob 2019; Eichfelder et al. 2023).

Table 5 presents the results of the marginal tax rate cross-sections. In each of the three columns, the placeholder variable *CS* denotes one of the three different proxies for marginal tax rates.[18] Across all columns, I observe positive (negative) coefficients on the interaction term *Report NG × CS* when the dependent variable is *Conform* (*Pretax ROA*). In other words, the

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[16] Data for *Estimated MTR* is available for fiscal year ends through 2016. I thank Blouin et al. (2010) for making this data available through WRDS.

[17] Because *Conform* equals the negative residual from a regression of taxes paid (equation 1), and taxes paid mechanically increase as tax rates increase, *Conform* will mechanically decrease as tax rates increase unless the first-stage controls in equation 1 perfectly control for tax rates.

[18] The coefficient on *CS* is not absorbed by firm fixed effects in Columns 3 and 4 because I use historical industries, which vary over time for a few firms. Results do not change if I use time-invariant industries instead.

association between non-GAAP reporting and conforming tax avoidance becomes stronger as marginal tax rates increase. Focusing on the results in Column 6 using the *Estimated MTR* proxy, I find that the strength of the association between non-GAAP reporting and conforming tax avoidance increases by 40 percent for each standard-deviation increase in marginal tax rates, or equivalently, for each 10 percentage point increase in marginal tax rates.[19] These results are consistent with non-GAAP reporters reducing their income more when reducing income has a larger benefit for their tax liability.

5.3 Costs of Non-GAAP Reporting and Conforming Tax Avoidance

In my third set of cross-sectional tests, I examine how the association between non-GAAP reporting and conforming tax avoidance varies with both of their costs. All else equal, I predict that the incentive to use non-GAAP reporting to facilitate conforming tax avoidance should become weaker as their joint use becomes more costly.

I identify three relevant costs. The first cost is commitment costs. SEC regulations instruct non-GAAP reporters to exclude transitory gains (that improve GAAP income) if they also exclude transitory losses. For firms that experience transitory gains, the commitment to exclude gains in future periods may discourage non-GAAP reporting and prevent them from using non-GAAP exclusions to facilitate conforming tax avoidance in the current period. I use the occurrence of positive special items in the past two years (*Prior Pos. SPI 01*) as a proxy for the likelihood of future transitory gains that create commitment costs of non-GAAP reporting in the current period.

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[19] I calculate this estimate by dividing the interaction coefficient by the coefficient on *Report NG*. In an untabulated test, I re-estimate the model in Table 5, Column 6 leaving continuous variables unstandardized. With this change, the coefficient on *Report NG* measures the predicted difference in *Pretax ROA* associated with non-GAAP reporting when the marginal tax rate (*Estimated MTR*) is zero. When estimated, that coefficient is negative but insignificant (-0.0049, t-stat = -0.52). In other words, I estimate that non-GAAP reporting is not significantly associated with pretax ROA when lowering pretax ROA would not save the firm taxes.

The second cost is regulatory scrutiny. Firms may incur greater SEC scrutiny if they attempt to exclude activities related to conforming tax avoidance. Common conforming tax strategies (e.g., as described by Badertscher et al. 2019) often relate to normal operating activities (e.g., the recurring item exception, discretionary expense timing) or relate to "transitory" items (e.g., restructuring) that nevertheless reoccur in consecutive years (a relatively common pattern; Laurion 2020). SEC guidance describes exclusions relating to normal operating expenses or any charges that reoccur within two years as "potentially misleading" (SEC 2022). Thus, it may be difficult to exclude conforming tax avoidance without attracting SEC scrutiny. I use the number of SEC comment letters related to non-GAAP reporting in the last two years (*SEC CLs*) to proxy for ongoing SEC attention that could make exclusions related to conforming tax avoidance more costly.

The third cost is manager compensation. Even when conforming tax avoidance enhances long-term firm value, managers may be reluctant to reduce GAAP earnings when doing so could reduce their compensation.[20] Similarly, the effect of non-GAAP reporting on financial reporting costs may be less relevant to managers' decisions when they have personal financial incentives to increase GAAP earnings. I use the absence of a CEO bonus (*No Bonus 01*) to proxy for managers' incentives *not* to engage in conforming tax avoidance (i.e., their incentive to increase GAAP earnings) because of compensation costs.

To test whether the three costs affect the association between non-GAAP reporting and conforming tax avoidance, I interact *Report NG* with the three proxies for costs (*Prior Pos. SPI 01, SEC CLs,* and *No Bonus 01*). A negative coefficient on the interaction term suggests that non-GAAP reporting has a weaker effect on the incentive for conforming tax avoidance when non-

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[20] Contracts that attempt to reward conforming tax avoidance may be infeasible because external observers may not be able to distinguish conforming tax avoidance from weak performance (Shane and Stock 2006).

GAAP reporting and/or conforming tax avoidance is more costly. Table 6 presents the results. In each of the three columns, the placeholder variable *CS* denotes one of the three different proxies for costs. Across all columns, I observe significant negative coefficients on the interaction term *Report NG × CS*, indicating that the positive association between non-GAAP reporting and conforming tax avoidance becomes weaker as firms incur more costs when using non-GAAP reporting or conforming tax avoidance. Using the coefficients from each of the three columns, I find that the strength of the association between non-GAAP reporting and conforming tax avoidance decreases by 55 percent, 85 percent, or 56 percent among observations more likely to experience these costs.[21] These results are consistent with financial reporting cost effect of non-GAAP reporting becoming less important as firms are increasingly constrained by other costs.

VI. FORMS OF TAX AVOIDANCE

To address my third research question, I next assess whether non-GAAP reporting is associated with two specific conforming tax strategies and with non-conforming tax avoidance.

6.1 Expense Acceleration

The first conforming tax strategy that I examine is expense acceleration. This strategy is most effective when accelerating expenses from early in the next year to late in the current year, accelerating the related tax deduction by a year while only accelerating the actual expense by as little as a day (Scholes et al. 2014). Given strong market reactions to fourth quarter earnings (e.g., Jacob and Jorgensen 2007), this strategy could impose financial reporting costs even if it increases GAAP earnings the following year.

Non-GAAP reporters may be able to mitigate these financial reporting costs, however. Prior research suggests that COGS, SG&A, and R&D expenses (collectively, "target expenses")

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[21] I calculate these estimates relative to the association for observations with *CS* equal to zero (i.e., observations less likely to experience costs) by dividing the interaction coefficient in each column by the coefficient on *Report NG*.

are associated with both conforming tax avoidance and classification shifting (Badertscher et al. 2019; Lynch et al. 2023; McVay 2006; Fan et al. 2010). This overlap introduces the possibility that non-GAAP reporters could both accelerate target expenses to save taxes and shift those accelerated expenses into special items (i.e., non-recurring exclusions) for the current year, lowering the associated financial reporting cost. If non-GAAP reporters use this strategy, I expect them to report less target expenses early in the following year. To test this prediction, I regress measures of the target expenses in the first quarter of the next year (*COGS, SG&A,* and *R&D*, constructed to increase in pretax income) on *Report NG* and the baseline control variables.

Table 7 presents the results. Across all three columns, I observe significantly positive coefficients on *Report NG*, indicating that non-GAAP reporting is positively associated with each of the three target expenses (i.e., fewer expenses) in the first quarter of the next year. This result is consistent with non-GAAP reporters accelerating target expenses from the first quarter of the following year into the current year.[22]

6.2 The LIFO Inventory Method

The second conforming tax avoidance strategy I examine is the LIFO inventory method. Regardless of its purported financial reporting benefits, academic and practitioner evidence suggests that firms use LIFO virtually exclusively for its tax benefits (Guenther and Hussein 1995; Cushing and LeClere 1992; IFRS Foundation 2012). Firms weigh the tax benefits against the financial reporting costs of reporting lower GAAP income under LIFO, however (Johnson and Dhaliwal 1988; Dhaliwal et al. 1994). Non-GAAP reporting provides firms with an opportunity to

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[22] In untabulated falsification tests, I do not find a similar association with expenses less subject to discretion, namely stock compensation expense (where the related tax deduction largely depends on employee exercise) or interest expense (where the timing is almost entirely non-discretionary). I also do not find a similar association between non-GAAP reporting and any of the target expenses in the *fourth* quarter of the next year, where the time value cost of accelerating the expense by a full year outweighs the time value benefit of accelerating the deduction by a year. These falsification test results suggest that stronger performance (i.e., lower expenses in general) among non-GAAP reporters is not an alternate explanation for the results of my expense acceleration tests.

avoid these costs by reporting non-LIFO income to investors.[23] To assess whether differences in financial reporting costs make non-GAAP reporters more likely to use LIFO, I estimate conditional logit models of LIFO use (*Use LIFO*) and increases in the relative rank of LIFO among a firm's inventory methods (*LIFO Rank Up*) as functions of non-GAAP reporting. Because firms change their inventory methods relatively infrequently, creating low within-firm variation in these variables, I estimate models conditioned on industry before estimating models conditioned on firm.[24] In addition to conditioning on either firm or industry, I include year fixed effects and control for determinants of LIFO use (Dhaliwal et al. 1994; Badertscher et al. 2019).

Table 8 presents the results. Columns 1 and 2 present coefficients from the models conditioned on industry. In these columns, the coefficients on *Report NG* are significantly positive, consistent with smaller financial reporting costs associated with LIFO for non-GAAP reporting firms. In contrast, for models conditioned on firm in Columns 3 and 4, the estimated coefficients on *Report NG* are insignificant. Given the rarity of firms changing inventory methods over time, the within-firm tests in Columns 3 and 4 have low power to detect an association between non-GAAP reporting and LIFO use.[25] For this reason, I focus on Columns 1 and 2, and I interpret the results in Table 8 as preliminary evidence that non-GAAP reporting may encourage LIFO use.

6.3 Non-Conforming Tax Avoidance

Finally, I examine non-conforming tax avoidance as an alternative to conforming tax avoidance. Prior research suggests that firms substitute between conforming and non-conforming

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[23] U.S. Treasury Regulation §1.472-2(e) allows firms that calculate taxable income using LIFO to nevertheless report non-LIFO earnings in supplemental reports, including earnings announcements, without violating the conformity requirement. Although SEC guidance describes non-GAAP exclusions relating to recurring expenses as "potentially misleading" (SEC 2022), the SEC allows such exclusions when they are useful to investors (e.g., because they enhance comparability or provide information about internal performance measures).

[24] I use three-digit NAICS in these tests because conditioning the logit models on two-digit NAICS is computationally infeasible.

[25] For instance, out of the 2,841 firms in my sample with inventory data, only 103 (i.e., 3.6 percent) adopt or abandon LIFO during the sample period (untabulated).

tax avoidance to maintain a consistent overall level of tax avoidance (Badertscher et al. 2009, 2019). To the extent non-GAAP reporting encourages more conforming tax avoidance, non-GAAP reporters may therefore engage in less non-conforming tax avoidance. To test this prediction, I regress three proxies for non-conforming tax avoidance on *Report NG*, baseline control variables, and additional controls for non-conforming tax avoidance. The first of the three proxies for non-conforming tax avoidance is Henry and Sansing's (2018) measure, *H&S Delta*, which captures tax preferences similarly to effective tax rates (ETRs) but for a broader set of firms, including loss firms. The second proxy is the sum of ETR reconciliation line items most likely to reflect deliberate non-conforming tax avoidance, *Intentional ETR Benefits* (Schwab, Stomberg, and Xia 2022).[26] The third proxy is the benefit from uncertain current-year tax positions that could be challenged by tax authorities, *CY UTB Additions* (e.g., De Simone, Nickerson, Seidman, and Stomberg 2020; Acito and Nessa 2022; Dyreng, Hanlon, and Maydew 2019).[27]

Table 9 presents the results of estimating these three proxies for non-conforming tax avoidance as a function of non-GAAP reporting. The coefficient on *Report NG* is significantly negative across all three columns, indicating that non-GAAP reporting firms engage in less non-conforming tax avoidance. These results are consistent with non-GAAP reporters substituting away from non-conforming tax avoidance as they increase conforming tax avoidance.

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[26] *Intentional ETR Benefits* includes reconciliation items related to tax credits, foreign items, non-deductible expenses, tax-exempt income, and other permanent book-tax differences. I multiply the items by negative one to increase in non-conforming tax avoidance. Data for *Intentional ETR Benefits* is available for a subset of the main sample and for fiscal year ends up to March 2017. I thank Schwab, Stomberg, and Xia (2022) for making this ETR reconciliation data publicly available.

[27] Data for *CY UTB Additions* is available beginning in 2007. Although unrecognized tax benefits could theoretically relate to conforming tax avoidance, that relation would bias against my results. Moreover, Towery (2017) reports that 96 percent of tax positions reported on IRS Schedule UTP (1,795 out of 1,869) create book-tax differences, consistent with most unrecognized tax benefits relating to non-conforming tax avoidance.

VII. ADDRESSING EMPIRICAL CHALLENGES

In my final set of tests, I examine whether my results are robust to methods that address different sources of endogeneity. First, I employ difference-in-differences (DID) settings to test how the association between non-GAAP reporting and conforming tax avoidance changes around shocks to their benefits, similar to the cross-sectional tests in Sections 5.1 and 5.2. Though the DID settings may be less generalizable than the earlier cross-sectional tests, they provide more plausibly exogenous variation. Table 10 presents the results. Panel A presents estimates of changes in conforming tax avoidance after analyst brokerage closures and mergers, which reduce analyst coverage and thus the financial reporting benefit of non-GAAP reporting.[28] Panel B presents estimates of changes after the 2017 U.S. tax reform, which reduces corporate tax rates and thus the benefit of conforming tax avoidance.[29] In both panels, the association between non-GAAP reporting and conforming tax avoidance is weaker after these shocks decrease their respective benefits. Altogether, Table 10 provides evidence that inferences from earlier cross-sectional tests are robust to plausibly exogenous DID settings that shift firm incentives.

Second, I implement a modified Klein and Vella (2010) control function estimator by adding *KV Function* as an independent variable to equation 2, following Armstrong, Nicoletti, and Zhou (2022; equation 6). Klein and Vella's control function uses group-level heteroskedasticity to measure and remove bias from correlated omitted variables, and has been used in finance and accounting settings where valid instrumental variables are not available (e.g., Armstrong, Nicoletti, et al. 2022; Heflin, Tan, Ton, and Wang 2024). I jointly estimate the regressions of interest (each specification from the three columns in Table 3 with their own respective values for

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[28] I thank James Warren for data needed to identify firms affected by brokerage closures and mergers following prior studies (Kelly and Ljungqvist 2012; Warren 2025).

[29] Similar to earlier cross-sectional tests, Table 10, Panel B includes models with *Pretax ROA* as an alternative dependent variable to address concerns that *Conform* may be mechanically affected by tax rates.

KV Function), and parallel regressions of *Report NG* on the control variables as seemingly unrelated regressions so that standard errors reflect any correlation between error terms from the first stage estimates of *KV Function* and the regressions of interest. Table 11 reports the results. The coefficients on *Report NG* remain significant and positive, consistent with non-GAAP reporting encouraging conforming tax avoidance even after controlling for their endogenous determinants.

Third, I conduct a Granger causality test to provide evidence about the relative timing of changes in non-GAAP reporting and conforming tax avoidance. To implement the Granger causality test, I estimate a panel vector autoregression with two lags. I include all controls in equation 2, removing year fixed effects using cross-sectional means and removing firm fixed effects using the Helmert forward-mean-differencing procedure. Table 12 reports the results. In Column 1, the coefficient on *Report NG$_{t-1}$* is significantly positive, indicating that non-GAAP reporting in the prior year is associated with conforming tax avoidance in the current year. The coefficient on *Report NG$_{t-2}$* is not significant, but the sum of the coefficients on both lagged values of *Report NG* is significantly positive. In Column 2, the coefficients on *Conform$_{t-1}$* and *Conform$_{t-2}$* are insignificant (lowest two-tailed p-value = 0.219), and the sum of their coefficients is insignificant.[30] Together, the estimates in Table 12 suggest that non-GAAP reporting predicts subsequent conforming tax avoidance more strongly than conforming tax avoidance predicts subsequent non-GAAP reporting.[31]

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[30] Inferences from the Granger test do not change using one or three lags instead of two, using bootstrapped standard errors, omitting the first-stage regressors in equation 1 as control variables, or using the lagged regressors as instruments with a generalized method of moments approach (Holtz-Eakin, Newey, and Rosen 1988).

[31] To provide further evidence about timing, in an untabulated test, I use an event study design to estimate year-by-year changes in conforming tax avoidance around the first time a firm reports non-GAAP earnings. I find a marginally significant increase in conforming tax avoidance in the first year that a firm reports non-GAAP earnings, and highly significant increases in conforming tax avoidance in the three subsequent years. I observe no pre-trend in conforming tax avoidance in the three years prior to the first year of non-GAAP reporting.

VIII. CONCLUSION

I hypothesize that non-GAAP reporting may encourage conforming tax avoidance by allowing firms to avoid the financial reporting costs of reducing GAAP earnings. Collectively, my tests provide evidence that non-GAAP reporters engage in more conforming tax avoidance, especially when capital market attention creates pressure to report strong earnings, when higher marginal tax rates increase the associated tax savings, and when the costs of this strategy are lower. I also find evidence that non-GAAP reporting is associated with specific conforming tax strategies, and less non-conforming tax avoidance. I cautiously interpret the results as evidence that non-GAAP reporting can encourage firms to manage GAAP earnings to avoid taxes.

One implication of my study is that non-GAAP reporters do not face a binary choice between pursuing financial reporting objectives or pursuing tax objectives. Instead, non-GAAP reporters can pursue the best of both worlds, reporting low taxable income and low (GAAP) book-tax differences to the tax authority, while reporting high (non-GAAP) book income to capital markets. In other words, in addition to avoiding taxes, non-GAAP reporters appear able to both avoid investor perceptions of weak performance and avoid scrutiny towards large book-tax differences. Another implication of my study is that the disclosure of non-GAAP earnings can encourage changes to GAAP earnings. These implications should concern lawmakers who are relying on financial statement earnings as a tax base. Non-GAAP reporting has become nearly ubiquitous among the large firms targeted by these taxes (McKeon 2018). Nevertheless, and over academics' protests, political expediency makes financial statement earnings an appealing tax base to lawmakers. My results suggest that in the current reporting environment, taxing financial earnings may be a self-defeating endeavor.

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APPENDIX A
Variable Definitions

VARIABLE	DEFINITION
ΔNOL	The tax loss carryforward [TLCF] minus the prior year tax loss carryforward, divided by beginning assets [AT]. I set tax loss carryforward to zero where missing.
Acquisition01	An indicator variable equal to one for observations with acquisitions [AQC] greater than five percent of beginning assets [AT], and zero otherwise.
Acquisitions	Special items related to acquisitions [AQP] divided by beginning assets [AT].
BTD	Book-tax differences, equal to pretax income [PI] minus taxable income, divided by beginning assets [AT]. Taxable income equals federal and foreign current tax expense [TXFED + TXFO], divided by the federal statutory tax rate (35% for fiscal years ending before January 01, 2018, and 21% for fiscal years ending after Dec 31, 2017**)**, and then minus *ΔNOL*. If current federal or foreign tax expense is missing, the numerator of taxable income equals total tax expense minus deferred, state, local and other tax expense [TXT - TXDI - TXS - TXO].
COGS	Quarterly cost of goods sold [COGSQ] in the first quarter of the next year, set to zero where missing, multiplied by negative one and divided by assets [AT].
COGS Intens.	Cost of goods sold [COGS] divided by assets [AT].
Conform	A measure of conforming tax avoidance, equal to the CONFORM_TAX measure developed by Badertscher et al. (2019) multiplied by negative one. CONFORM_TAX is the residual from estimating first-stage OLS regressions of TXPD_AT [TXPD / AT_{t-1}] on *NOL01*, *ΔNOL*, *BTD*, *NegBTD 01*, and *BTD × NegBTD 01*, estimated separately for each two-digit NAICS industry and fiscal year combination, and requiring at least ten observations per estimation. I winsorize variables at the 1st and 99th percentiles (pooled) before estimating these first stage regressions.
Closure	An indicator variable equal to one for firms affected by analyst brokerage closures or mergers during the sample period, and zero otherwise.
CS	A placeholder variable that takes the value of the variable indicated by the table column header.
CY UTB Additions	Increases to unrecognized tax benefits related to current year tax positions [TXTUBPOSINC], divided by pretax income [PI].
Estimated MTR	The after-interest marginal tax rates [BCG_MTRINT] estimated by Blouin, Core, and Guay (2010) and made available through WRDS (under "Other Compustat").
H&S Delta	Henry and Sansing's (2018) Δ, divided by market value of assets and multiplied by negative one. Market value of assets equals assets [AT], plus the product of year-end share price times shares outstanding [PRCC_F × CSHO], less the book value of stockholder's equity [SEQ]. Δ equals adjusted cash taxes paid, less the product of pretax income [PI] and the statutory federal tax rate (35% for fiscal years ending before January 01, 2018, and 21% for fiscal years ending after Dec 31, 2017). Adjusted cash taxes paid equals cash taxes paid [TXPD] less the one-year change in tax refund receivable [TXR].
Inst. Ownership	Percentage of shares owned by institutional investors, from Thomson Reuters' 13F database. I follow the calculation suggested by WRDS (variable IOR) using their code available at: wrds-www.wharton.upenn.edu/pages/wrds-research/applications/institutional-ownership-research/institutional-ownership-concentration-and-breadth-ratios/
Intan. Intens.	Intangible assets [INTAN], set to zero where missing, divided by beginning assets [AT].

VARIABLE	DEFINITION
Intentional ETR Benefits	The sum of ETR effects related to tax credits, foreign items, non-deductible expenses, tax-exempt income, and other permanent book-tax differences, as collected and categorized by Schwab, Stomberg, and Xia (2022), multiplied by negative one. Schwab et al. make their data available on Junwei Xia's website at: sites.google.com/tamu.edu/junweixia/adjusted-etr
Interest Exp.	Interest expense [XINT] divided by beginning assets [AT].
Inventory Intens.	Inventory [INVT] divided by ending assets [AT].
KV Function	Equal to: $$\xi_{i,t}\left(\frac{\sigma_{\xi,j,t}}{\sigma_{\eta,j,t}}\right)$$ ξ equals the residual from a first-stage regression of *Report NG* on the other independent variables in equation 2, including fixed effects and intercept. η equals the residual from a first-stage regression of equation 2, including fixed effects and intercept. $\sigma_{u,j,t}$ equals the standard deviation of residual u (either ξ or η) within two-digit NAICS industry j and year t.
LIFO Rank Up	An indicator variable equal to one if LIFO moves up a firm's hierarchical ranking of its inventory valuation methods, and zero otherwise. For instance, if a firm reports LIFO as its secondary inventory method [INVVAL (rank 2) = 2] in Year 1, and then reports LIFO as its primary method [INVVAL (rank 1) = 2] in Year 2, *LIFO Rank Up* equals one in Year 2, and then resets to zero in Year 3.
LogAnalysts	The natural logarithm of one plus the number of analysts following a firm [NUMEST] reported in the I/B/E/S summary file. I use the maximum number of analysts forecasting for any fiscal period within the fiscal year, and for any forecast measure or periodicity.
LogAssets	The natural logarithm of assets [AT].
Mgr Ability	The managerial ability score estimated by Demerjian, Lev, and McVay (2012) using data envelopment analysis, which they make available on Peter Demerjian's website at: peterdemerjian.weebly.com/managerialability.html
MNC 01	An indicator variable equal to one for observations with non-zero, non-missing pretax foreign income [PIFO], and zero otherwise.
NegBTD 01	An indicator variable equal to one for observations with negative BTD, and zero otherwise.
No Bonus 01	An indicator variable equal to one for firm-years where all CEO observations in Execucomp [CEOANN = "CEO"] have zero or negative bonuses [BONUS <= 0], and zero otherwise. This variable is set to missing for firm-years with no CEO observations in Execucomp.
No NOL 01	An indicator variable equal to one when *NOL 01* equals zero, and zero otherwise.
Nonrecurring Taxes	Nonrecurring tax expense [NRTXT], replaced with zero if missing, divided by beginning assets [AT].
NOL 01	An indicator variable equal to one for observations with a beginning tax loss carryforward [TLCF] greater than zero, and zero otherwise. I set tax loss carryforward to zero where missing.
Not Tech/Pharm 01	An indicator variable equal to one for observations in industries other than technology [SIC not in 3571, 3572, 3577, 3674, 3678, 7370, 7372] and pharmaceuticals [SIC not in 2834, 2835, 2836], and zero otherwise.
Post Close	An indicator variable equal to one for observations in any year after analyst brokerage closures or mergers, measured by cohort, and zero otherwise.
Post TCJA	An indicator variable equal to one for observations with fiscal years ending after Dec 22, 2017, and zero otherwise.

VARIABLE	DEFINITION
PPE Intens.	Property, plant, and equipment [PPENT], set to zero where missing, divided by beginning assets [AT].
Pretax ROA	Pretax income [PI], divided by beginning assets [AT].
Prior Pos. SPI 01	An indicator variable equal to one for observations with positive total special items [SPI] in either of the prior two years, and zero otherwise.
R&D	Quarterly research and development expense [XRDQ] in the first quarter of the following year, set to zero where missing, multiplied by negative one and divided by assets [AT].
Report NG	An indicator variable equal to one if a firm reports non-GAAP earnings for at least one quarter of the firm's fiscal year, and zero otherwise. I measure quarterly non-GAAP reporting using the data collected from earnings announcements by Bentley et al. (2018) (i.e., observations where MGR_EXCLUDE = 1). Bentley et al. make their data available on Kurt Gee's website at: sites.google.com/view/kurthgee/data
Sales	Current year sales [SALE], divided by beginning assets [AT].
Sales Growth	Current year sales [SALE] minus prior year sales, divided by prior year sales.
SEC CLs.	The number of SEC comment letters related to non-GAAP reporting received in the two years prior to the earnings announcement date [RDQ] for the current year. I only include letters related to an 8-K filing, defined as those where Audit Analytics' form variable (LIST_FORM_FKEY_ED) includes the term "8K" (case- and punctuation-insensitive). I treat SEC comment letters as non-GAAP related if a non-GAAP term appears in the lists of issues addressed (variables LIST_CL_ISSUE_PHRASE and ISS_OTHRDISC_TEXT), which I define as the presence of any of the following terms (case- and punctuation-insensitive): "ebit", "nongaap", "non gaap", "regulation g", "regulation sk item 10", "proforma", and "pro forma". This variable is missing if the firm's CIK cannot be matched to Audit Analytics data.
SG&A	Quarterly selling, general, and administrative expense [XSGAQ] in the first quarter of the following year, set to zero where missing, multiplied by negative one and divided by assets [AT].
Stock Issue	Current year shares outstanding [CSHO] minus prior year shares outstanding, divided by prior year shares outstanding.
Taxes Paid	Cash taxes paid [TXPD] divided by beginning assets [AT].
Use LIFO	An indicator variable equal to one if a firm uses the LIFO inventory method [INVVAL (any rank) = 2], and zero otherwise.
UTB Adjustments	Unrecognized tax benefit adjustments [TXTUBADJUST], replaced with zero if missing, divided by beginning assets [AT].

Bracketed variable names refer to Compustat variables unless the definition indicates another source. I winsorize all continuous variables at the 1st and 99th percentiles.

FIGURE 1

Example of Conforming Tax Avoidance Exclusions in Non-GAAP Reporting

Panel A: Seneca adopts LIFO and reports non-GAAP (FIFO) earnings

> **Seneca Reports Fiscal 2008 Year-End Results**
>
> **Reported earnings impacted by Company's decision to implement LIFO inventory method**
>
> Seneca Foods Corporation reported net sales for the fiscal year ended March 31, 2008 of $1,080,724,000 versus $1,024,853,000 for the prior year. The current year's net earnings were $8,019,000 or $0.65 per diluted share, compared with $32,067,000 or $2.63 per diluted share, last year. These results reflect the Company's decision to implement the LIFO (last-in, first-out) inventory valuation method effective December 30, 2007 (fourth quarter). The effect of this change was to reduce annual pre-tax earnings by $28,165,000 and net earnings by $18,307,000 million or $1.50 per share ($1.49 diluted) below that which would have been reported using the Company's previous inventory method. The Company believes that in this period of significant inflation, the use of the LIFO method better matches current costs with current revenues. This change also results in cash savings of $9,858,000 by reducing the Company's income taxes, based on statutory rates. If the Company had remained on the FIFO (first-in, first-out) inventory valuation method, the pre-tax results, less non-operating gains and losses, would have been an all time record of $42,644,000, up from $40,009,000 in the prior year.

Panel B: Seneca continues to report non-GAAP earnings excluding LIFO charges

	Twelve Months Ended			
		March 31, 2023		March 31, 2022
Earnings before income taxes, as reported	$	45,370	$	66,231
LIFO charge		100,034		35,821
Loss on equity investment		-		7,775
Adjusted earnings before income taxes		145,404		109,827
Income taxes at effective tax rates		39,259		25,251
Adjusted net earnings	$	106,145	$	84,576

This figure presents excerpts from earnings press releases by Seneca Foods Corporation (Seneca). Panel A displays the title and first paragraph from Seneca's 2008 annual earnings announcement. Panel B displays the non-GAAP reconciliation from Seneca's 2023 annual earnings announcement.

TABLE 1

Sample Selection

Panel A: Sample construction

Criteria	Obs.	Firms
All U.S.-incorporated Compustat observations 2003-2019 with at least one quarterly earnings announcement in Bentley et al.'s (2018) data	57,420	7,786
Require >=$10 million assets and pretax income equal to sum of components	(719)	(97)
Require data to calculate *Conform*	(19,692)	(2,213)
Require Compustat data to calculate remaining control variables	(2,957)	(279)
Require Thomson Reuters 13F, I/B/E/S, and Demerjian et al. (2012) data	(10,970)	(1,644)
Exclude financial (NAICS 52) and utilities (NAICS 22) industries	(998)	(132)
Exclude firms only observed once each	(517)	(517)
Main sample	**21,567**	**2,904**

Panel B: Distribution of observations by year

Year	Observations	%
2003	1,102	5.1%
2004	1,437	6.7%
2005	1,460	6.8%
2006	1,459	6.8%
2007	1,444	6.7%
2008	1,402	6.5%
2009	1,259	5.8%
2010	1,171	5.4%
2011	1,174	5.4%
2012	1,199	5.6%
2013	1,206	5.6%
2014	1,230	5.7%
2015	1,253	5.8%
2016	1,193	5.5%
2017	1,240	5.7%
2018	1,251	5.8%
2019	1,087	5.0%
Total	21,567	100.0%

This table summarizes the sample selection process and results. Panel A presents the number of observations lost with each primary sample requirement. Panel B presents the distribution of observations by fiscal year in the resulting sample.

TABLE 2

Descriptive Statistics

Panel A: Summary statistics

Variable	N	mean	SD	p25	p50	p75
Conform	21,567	-0.003	0.025	-0.011	0.004	0.012
Report NG	21,567	0.555	0.497	0.000	1.000	1.000
NOL 01	21,567	0.590	0.492	0.000	1.000	1.000
ΔNOL	21,567	0.028	0.165	-0.001	0.000	0.010
BTD	21,567	0.014	0.161	-0.023	0.015	0.052
NegBTD 01	21,567	0.374	0.484	0.000	0.000	1.000
LogAssets	21,567	6.691	1.823	5.398	6.652	7.918
Interest Exp.	21,567	0.015	0.017	0.003	0.010	0.021
Mgr Ability	21,567	-0.001	0.140	-0.084	-0.035	0.034
Inst. Ownership	21,567	0.686	0.291	0.504	0.766	0.908
LogAnalysts	21,567	1.975	0.895	1.386	2.079	2.639
Stock Issue	21,567	1.081	0.309	0.994	1.008	1.030
Sales Growth	21,567	0.125	0.272	-0.004	0.079	0.197

Panel B: Partitioned by non-GAAP reporting

Variable	*Report NG = 0*						*Report NG = 1*			
	N	mean	(t)	SD	p50	(z)	N	mean	SD	p50
Conform	9,597	-0.006	***	0.029	0.004	***	11,970	-0.001	0.022	0.004
NOL 01	9,597	0.512	***	0.500	1.000	***	11,970	0.652	0.476	1.000
ΔNOL	9,597	0.032	***	0.183	0.000		11,970	0.025	0.148	0.000
BTD	9,597	0.014		0.174	0.017	***	11,970	0.013	0.151	0.013
NegBTD 01	9,597	0.353	***	0.478	0.000	***	11,970	0.391	0.488	0.000
LogAssets	9,597	6.053	***	1.808	5.943	***	11,970	7.202	1.667	7.153
Interest Exp.	9,597	0.015	***	0.019	0.009	***	11,970	0.016	0.016	0.012
Mgr Ability	9,597	-0.004	**	0.133	-0.034		11,970	0.001	0.146	-0.037
Inst. Ownership	9,597	0.598	***	0.306	0.655	***	11,970	0.757	0.257	0.828
LogAnalysts	9,597	1.642	***	0.949	1.792	***	11,970	2.242	0.750	2.303
Stock Issue	9,597	1.088	***	0.312	1.008	***	11,970	1.075	0.306	1.007
Sales Growth	9,597	0.133	***	0.295	0.085	***	11,970	0.118	0.252	0.075

This table provides descriptive statistics for the variables used in my primary tests. Panel A presents summary statistics for the main sample. Panel B presents statistics partitioned by non-GAAP reporting. ***, ** and * in Panel B denote statistical significance at the 1%, 5% and 10% levels, respectively, of t-tests and Wilcoxon rank-sum tests comparing the partitioned subsamples. I winsorize all continuous variables at the 1st and 99th percentiles. Appendix A provides variable definitions.

TABLE 3

Conforming Tax Avoidance Associated with Non-GAAP Reporting

Dep. variable:	*Conform* (1)	*Conform* (2)	*Conform* (3)
Report NG	0.186***	0.249***	0.112***
	(7.37)	(10.45)	(6.13)
Stage 1 variables			
NOL 01	0.047	0.033	-0.172***
	(1.54)	(1.17)	(-6.50)
ΔNOL	0.144***	0.087***	-0.018
	(12.98)	(6.44)	(-1.46)
BTD	-0.078***	0.002	-0.040**
	(-4.34)	(0.08)	(-2.24)
NegBTD 01	-0.157***	-0.199***	-0.284***
	(-6.95)	(-9.54)	(-17.61)
BTD × NegBTD 01	-0.096***	-0.155***	0.059***
	(-4.20)	(-6.60)	(2.91)
Baseline controls			
LogAssets		0.018	0.073
		(0.75)	(1.59)
Interest Exp.		0.119***	0.079***
		(8.61)	(5.12)
Mgr Ability		-0.169***	-0.146***
		(-9.52)	(-9.98)
Inst. Ownership		-0.034**	-0.038**
		(-2.21)	(-2.33)
LogAnalysts		-0.101***	-0.160***
		(-4.96)	(-6.67)
Stock Issue		-0.041***	-0.041***
		(-4.66)	(-5.47)
Sales Growth		-0.049***	-0.080***
		(-4.88)	(-9.01)
Constant	-0.098**	-0.124***	0.161***
	(-2.58)	(-3.65)	(7.84)
Fixed effects	Year	Industry, Year	Firm, Year
Observations	21,567	21,567	21,567
Adjusted R^2	0.025	0.098	0.505

This table presents estimates of equation 2, a model of conforming tax avoidance as a function of non-GAAP reporting. The dependent variable *Conform* is the residual from estimating equation 1, a first-stage OLS regression of taxes paid on measures of non-conforming tax avoidance (Badertscher et al. 2019). The independent variable of interest, *Report NG*, is an indicator variable equal to one if the firm reports non-GAAP earnings in at least one of its quarterly earnings announcements for that year. I use the data released by Bentley et al. (2018) to measure quarterly non-GAAP reporting.

Appendix A provides complete variable definitions. Industry fixed effects are based on two-digit NAICS industries. I winsorize continuous variables at the 1st and 99th percentiles and standardize continuous variables to a mean of zero and a standard deviation of one. T-statistics based on robust standard errors clustered by firm appear in parentheses below the coefficients. ***, ** and * next to the coefficients denote two-tailed statistical significance at the 1%, 5% and 10% levels, respectively.

TABLE 4

Moderation by Capital Market Attention

Cross-section:	Capital market attention to earnings		
Variable *CS* =	*LogAnalysts*	*Stock Issue*	*Sales Growth*
Dep. variable:	*Conform*	*Conform*	*Conform*
	(1)	(2)	(3)
Report NG × *CS*	0.040**	0.045***	0.044***
	(2.13)	(3.09)	(2.73)
Report NG	0.112***	0.112***	0.113***
	(6.12)	(6.15)	(6.15)
CS	-0.178***	-0.066***	-0.100***
	(-6.61)	(-5.76)	(-8.36)
Stage 1 variables	Included	Included	Included
Baseline controls	Included	Included	Included
Fixed effects	Firm, Year	Firm, Year	Firm, Year
Observations	21,567	21,567	21,567
Adjusted R^2	0.505	0.506	0.506

This table presents estimates of how the association between non-GAAP reporting and conforming tax avoidance varies with capital market attention. The dependent variable *Conform* is the residual from estimating equation 1, a first-stage OLS regression of taxes paid on measures of non-conforming tax avoidance (Badertscher et al. 2019). The independent variable of interest, *Report NG* × *CS*, is the interaction between *Report NG* and one of three proxies for capital market attention to earnings: analyst following (*LogAnalysts*), seasoned stock offerings (*Stock Issue*), or sales growth (*Sales Growth*). *Report NG* is an indicator variable equal to one if the firm reports non-GAAP earnings in at least one of its quarterly earnings announcements for that year (Bentley et al. 2018).

Appendix A provides complete variable definitions. Industry fixed effects are based on two-digit NAICS industries. I winsorize continuous variables at the 1st and 99th percentiles and standardize continuous variables to a mean of zero and a standard deviation of one. T-statistics based on robust standard errors clustered by firm appear in parentheses below the coefficients. ***, ** and * next to the coefficients denote two-tailed statistical significance at the 1%, 5% and 10% levels, respectively.

TABLE 5

Moderation by Tax Savings

Cross-section:	Marginal tax rates					
Variable *CS* =	*No NOL 01*		*Not Tech/Pharm 01*		*Estimated MTR*	
Dep. variable:	*Conform*	*Pretax ROA*	*Conform*	*Pretax ROA*	*Conform*	*Pretax ROA*
	(1)	(2)	(3)	(4)	(5)	(6)
Report NG × CS	0.098***	-0.050***	0.151***	-0.082**	0.088***	-0.034***
	(2.89)	(-2.72)	(2.77)	(-2.51)	(6.06)	(-3.11)
Report NG	0.068***	-0.052***	-0.018	-0.004	0.112***	-0.086***
	(3.25)	(-4.29)	(-0.34)	(-0.14)	(5.86)	(-8.11)
CS	0.118***	0.088***	-0.155	0.186**	-0.295***	0.207***
	(3.40)	(4.77)	(-1.32)	(2.44)	(-14.13)	(13.83)
Stage 1 variables	Included	N/A	Included	N/A	Included	N/A
Baseline controls	Included	Included	Included	Included	Included	Included
Fixed effects	Firm, Year	Firm, Year	Firm, Year	Firm, Year	Firm, Year	Firm, Year
Observations	21,567	21,567	21,567	21,567	16,613	16,613
Adjusted R^2	0.506	0.829	0.506	0.829	0.549	0.834

This table presents estimates of how the association between non-GAAP reporting and conforming tax avoidance varies with marginal tax rates. The dependent variable *Conform* is the residual from equation 1, a first-stage regression of cash taxes paid on measures of non-conforming tax avoidance (Badertscher et al. 2019). The dependent variable *Pretax ROA* equals pretax income scaled by beginning assets. The independent variable of interest, *Report NG × CS*, is the interaction between *Report NG* and one of three proxies for marginal tax rates: the lack of tax loss carryforwards (*No NOL 01*), presence in industries with lower access to research and experimentation tax credits (*Not Tech/Pharm 01*), or the marginal tax rate estimates from Blouin et al. (2010) (*Estimated MTR*). *Report NG* is an indicator variable equal to one if the firm reports non-GAAP earnings in at least one of its quarterly earnings announcements for that year (Bentley et al. 2018). Regressions of *Conform* include its first-stage regressors as independent variables. All regressions include the baseline controls from equation 2 as independent variables.

Appendix A provides complete variable definitions. I winsorize continuous variables at the 1st and 99th percentiles and standardize continuous variables to a mean of zero and a standard deviation of one. T-statistics based on robust standard errors clustered by firm appear in parentheses below the coefficients. ***, ** and * next to the coefficients denote two-tailed statistical significance at the 1%, 5% and 10% levels, respectively.

TABLE 6

Moderation by Costs of Non-GAAP Reporting and Conforming Tax Avoidance

Cross-section:	Commitment	Regulatory scrutiny	Mgr. compensation
Variable *CS* =	*Prior Pos. SPI 01*	*SEC CLs*	*No Bonus 01*
Dep. variable:	*Conform*	*Conform*	*Conform*
	(1)	(2)	(3)
Report NG × CS	-0.072**	-0.099*	-0.113***
	(-2.45)	(-1.74)	(-2.83)
Report NG	0.131***	0.117***	0.201***
	(6.54)	(6.07)	(5.59)
CS	0.043*	0.073	0.136***
	(1.75)	(1.40)	(3.75)
Stage 1 variables	Included	Included	Included
Baseline controls	Included	Included	Included
Fixed effects	Firm, Year	Firm, Year	Firm, Year
Observations	21,532	20,378	13,212
Adjusted R^2	0.506	0.513	0.519

This table presents estimates of how the association between non-GAAP reporting and conforming tax avoidance varies with their costs. The dependent variable *Conform* is the residual from equation 1, a first-stage OLS regression of cash taxes paid on measures of non-conforming tax avoidance (Badertscher et al. 2019). The independent variable of interest, *Report NG × CS*, is the interaction between *Report NG* and a proxy for a specific cost. In Column 1, *CS* equals an indicator variable for positive special items in prior years (*Prior Pos. SPI 01*), a proxy for the likelihood of current non-GAAP reporting committing firms to report non-GAAP earnings that is lower than GAAP earnings in future periods. In Column 2, *CS* equals the number of SEC comment letters related to non-GAAP reporting (*SEC CLs*), a proxy for regulatory scrutiny. In Column 3, the variable *CS* equals an indicator variable for the absence of a CEO bonus (*No Bonus 01*), a proxy for the risk of managerial compensation being hurt by conforming tax avoidance. *Report NG* is an indicator variable equal to one if the firm reports non-GAAP earnings in at least one of its quarterly earnings announcements for that year (Bentley et al. 2018). All regressions in this table include the first-stage regressors from equation 1 and the baseline controls from equation 2 as independent variables.

Appendix A provides complete variable definitions. I winsorize continuous variables at the 1st and 99th percentiles and standardize continuous variables to a mean of zero and a standard deviation of one. T-statistics based on robust standard errors clustered by firm appear in parentheses below the coefficients. ***, ** and * next to the coefficients denote two-tailed statistical significance at the 1%, 5% and 10% levels, respectively.

TABLE 7

Non-GAAP Reporting and Expense Acceleration

Dep. variable:	COGS	SG&A	R&D
	(1)	(2)	(3)
Report NG	0.024**	0.028***	0.017*
	(2.51)	(3.09)	(1.86)
Baseline controls	Included	Included	Included
Fixed effects	Firm, Year	Firm, Year	Firm, Year
Observations	20,347	20,347	20,347
Adjusted R^2	0.891	0.889	0.886

This table presents estimates of the association between non-GAAP reporting and discretionary expenses in the first quarter of the next year. The dependent variables each measure a single expense in the first quarter of year *t+1*. *COGS* measures cost of goods sold, *SG&A* measures selling, general, and administrative expenses, and *R&D* measures research and development expenses. I divide each of the quarterly expenses by ending assets in year *t*, and multiply each by negative one. The independent variable of interest is *Report NG*, an indicator variable equal to one if the firm reports non-GAAP earnings in at least one of its quarterly earnings announcements for that year (Bentley et al. 2018). All regressions in this table include the baseline controls from equation 2 as independent variables.

Appendix A provides complete variable definitions. I winsorize continuous variables at the 1st and 99th percentiles and standardize continuous variables to a mean of zero and a standard deviation of one. T-statistics based on robust standard errors clustered by firm appear in parentheses below the coefficients. ***, ** and * next to the coefficients denote two-tailed statistical significance at the 1%, 5% and 10% levels, respectively.

TABLE 8

Non-GAAP Reporting and the LIFO Inventory Method

Dep. variable:	Use LIFO (1)	LIFO Rank Up (2)	Use LIFO (3)	LIFO Rank Up (4)
Report NG	0.271**	0.560***	0.040	-0.030
	(2.33)	(2.58)	(0.13)	(-0.08)
LogAssets	0.472***	0.245***	2.052*	0.241
	(9.25)	(3.78)	(1.92)	(0.65)
Sales	-0.143	-0.062	-0.680	0.684
	(-1.56)	(-0.25)	(-1.13)	(1.34)
Sales Growth	-0.076***	0.003	0.235	-0.163
	(-2.75)	(0.03)	(1.61)	(-0.83)
Interest Exp.	0.068	-0.055	0.794	-0.219
	(0.78)	(-0.56)	(1.20)	(-0.64)
Inventory Intens.	-0.057	0.012	0.229	-0.158
	(-0.42)	(0.07)	(0.25)	(-0.29)
COGS Intens.	0.508***	0.307*	-0.715	-0.284
	(2.81)	(1.67)	(-0.97)	(-0.27)
NOL 01	-0.294**	0.035	-0.854	0.598
	(-2.03)	(0.11)	(-1.41)	(1.52)
Acquisition01	0.490***	0.370	0.526**	0.030
	(2.99)	(1.43)	(2.15)	(0.08)
Acquisitions	0.126***	0.245	0.128	0.357
	(3.35)	(1.08)	(0.74)	(0.77)
Fixed effects	Industry, Year	Industry, Year	Firm, Year	Firm, Year
Estimator	Conditional Logit	Conditional Logit	Conditional Logit	Conditional Logit
Observations	15,886	12,948	1,167	699
Pseudo R^2	0.078	0.050	0.587	0.085

This table presents estimates of the association between non-GAAP reporting and the use of the last-in, first-out inventory method (LIFO). The dependent variable in Columns 1 and 3 is *Use LIFO*, an indicator variable equal to one for observations that use LIFO. The dependent variable in Columns 2 and 4 is *LIFO Rank Up*, an indicator variable that equals one if LIFO moves up a firm's hierarchical ranking of its inventory methods relative to the prior year (e.g., from the secondary method to the primary method). In Columns 1 and 2, I estimate logit models conditioned on three-digit NAICS industry. In Columns 3 and 4, I estimate logit models conditioned on firm. Year fixed effects are included as independent variables in all columns. The independent variable of interest is *Report NG*, an indicator variable equal to one if the firm reports non-GAAP earnings in at least one of its quarterly earnings announcements for that year (Bentley et al. 2018).

Appendix A provides complete variable definitions. I winsorize continuous variables at the 1st and 99th percentiles and standardize continuous variables to a mean of zero and a standard deviation of one. T-statistics based on robust standard errors clustered by firm appear in parentheses below the coefficients. ***, ** and * next to the coefficients denote two-tailed statistical significance at the 1%, 5% and 10% levels, respectively.

TABLE 9

Non-GAAP Reporting and Non-Conforming Tax Avoidance

Dep. variable:	H&S Delta (1)	Intentional ETR Benefits (2)	CY UTB Additions (3)
Report NG	-0.094***	-0.066***	-0.029**
	(-5.55)	(-2.92)	(-2.03)
NOL 01	-0.015	0.022	0.006
	(-0.69)	(0.70)	(0.29)
ΔNOL	-0.143***	-0.008	0.005
	(-11.90)	(-0.29)	(1.03)
PPE Intens.	0.213***	-0.016	-0.002
	(7.26)	(-0.38)	(-0.11)
Intan. Intens.	0.054***	0.014	-0.018*
	(3.16)	(0.58)	(-1.68)
MNC 01	-0.027	-0.054	-0.015
	(-0.80)	(-1.16)	(-0.49)
Baseline controls	Included	Included	Included
Fixed effects	Firm, Year	Firm, Year	Firm, Year
Observations	21,567	12,179	13,345
Pseudo / Adj. R^2	0.408	0.297	0.803

This table presents estimates of the association between non-GAAP reporting and non-conforming tax avoidance. The dependent variable is one of three proxies for non-conforming tax avoidance. The dependent variable in Column 1 is *H&S Delta*, Henry and Sansing's (2018) measure of tax preferences. The dependent variable in Column 2 is *Intentional ETR Benefits*, which equals the sum of ETR effects disclosed in ETR reconciliations that are related to tax credits, foreign items, non-deductible expenses, tax-exempt income, and other permanent book-tax differences, multiplied by negative one (Schwab et al. 2022). Data for *Intentional ETR Benefits* is available for a subset of the main sample and ends after March 2017. The dependent variable in Column 3 is *CY UTB Additions*, the natural logarithm of one plus the change in unrecognized tax benefits related to current year tax positions. Data for *CY UTB Additions* is available beginning in 2007. The independent variable of interest is *Report NG*, an indicator variable equal to one if the firm reports non-GAAP earnings in at least one of its quarterly earnings announcements for that year (Bentley et al. 2018).

Appendix A provides complete variable definitions. I winsorize continuous variables at the 1st and 99th percentiles and standardize continuous variables to a mean of zero and a standard deviation of one. T-statistics based on robust standard errors clustered by firm appear in parentheses below the coefficients. ***, ** and * next to the coefficients denote two-tailed statistical significance at the 1%, 5% and 10% levels, respectively.

TABLE 10

Difference-in-Differences Tests

Panel A: Reduction to non-GAAP reporting benefit

Shock:	Analyst coverage decrease due to brokerage closures		
Window length:	+/- 4 years	+/- 3 years	+/- 2 years
Dependent variable:	*Conform*	*Conform*	*Conform*
	(1)	(2)	(3)
Report NG × Closure × Post Close	-0.167**	-0.161**	-0.170**
	(-2.16)	(-2.08)	(-2.18)
Report NG × Closure	0.186***	0.156**	0.176**
	(2.76)	(2.24)	(2.38)
Report NG × Post Close	-0.028	-0.017	-0.011
	(-0.83)	(-0.54)	(-0.39)
Closure × Post Close	0.083	0.085	0.120*
	(1.23)	(1.29)	(1.86)
Report NG	0.079**	0.074**	0.066**
	(2.21)	(2.16)	(1.98)
Stage 1 variables	Included	Included	Included
Baseline controls	Included[†]	Included[†]	Included[†]
Fixed effects	Firm-cohort, Year-cohort	Firm-cohort, Year-cohort	Firm-cohort, Year-cohort
Observations	28,853	24,300	18,885
Adjusted R^2	0.576	0.594	0.620

TABLE 10 (continued)

Difference-in-Differences Tests

Panel B: Reduction to conforming tax avoidance benefit

Shock:	Statutory tax rate decrease from 2017 U.S. tax reform			
Sample period (FYE)	2015-2019		May 2016 - 2019	
Dep. variable:	*Conform*	*Pretax ROA*	*Conform*	*Pretax ROA*
	(1)	(2)	(3)	(4)
Report NG × Post TCJA	-0.116***	0.139***	-0.095**	0.125***
	(-3.06)	(3.61)	(-2.31)	(2.98)
Report NG	0.088**	-0.115***	0.070	-0.126***
	(2.19)	(-3.05)	(1.58)	(-2.79)
Post TCJA	0.100*	-0.160***	0.067	-0.143***
	(1.74)	(-3.46)	(1.17)	(-2.97)
Nonrecurring Taxes	-0.000	0.020***	-0.001	0.019***
	(-0.02)	(3.41)	(-0.13)	(3.10)
UTB Adjustments	-0.017**	-0.021**	-0.010	-0.013
	(-2.18)	(-2.11)	(-1.29)	(-1.21)
Stage 1 variables	Included	N/A	Included	N/A
Baseline controls	Included	Included	Included	Included
Fixed effects	Firm, Year	Firm, Year	Firm, Year	Firm, Year
Observations	4,540	4,540	3,441	3,441
Adjusted R^2	0.636	0.715	0.672	0.760

This table presents estimates of changes in the association between non-GAAP reporting and conforming tax avoidance after exogenous reductions to their respective benefits. The tests in Panel A use stacked cohorts of observations centered around the year that an analyst brokerage covering the firm closes or merges. I use brokerage closures and mergers between 2004 and 2013 from prior literature (Kelly and Ljungqvist 2012; Novia X. Chen, Chiu, and Shevlin 2018). Columns 1, 2, and 3 of Panel A use cohort window lengths of 9, 7, and 5 years. The independent indicator variable *Closure* equals one for firms subject to analyst brokerage closures or mergers during the sample period. The independent indicator variable *Post Close* equals one in the years after the brokerage closure or merger, measured by cohort. To avoid controlling for analyst changes, the control variable *LogAnalysts* is omitted in Panel A. The tests in Panel B use observations from the main tests in a shorter window around the 2017 U.S. tax reform. Columns 1 and 2 of Panel B restrict observations to the years 2015 through 2019. To avoid capturing changes from an SEC C&DI issued on May 17, 2017, Columns 3 and 4 of Panel B exclude observations with years ending before May 31, 2016. The independent indicator variable *Post TCJA* equals 1 for observations with years ending after the implementation of tax reform on December 22, 2017. Panel B includes *Nonrecurring Taxes* and *UTB Adjustments* as additional control variables to capture non-GAAP reporting changes (e.g., additional exclusions) directly related to tax reform. In both panels, the dependent variable *Conform* is the residual from equation 1, a first-stage OLS regression of cash taxes paid on measures of non-conforming tax avoidance (Badertscher et al. 2019). The dependent variable *Pretax ROA* equals pretax income scaled by beginning assets. *Report NG* is an indicator variable equal to one if the firm reports non-GAAP earnings in at least one of its quarterly earnings announcements for that year (Bentley et al. 2018). Appendix A provides complete variable definitions. I winsorize continuous variables at the 1st and 99th percentiles and standardize continuous variables to a mean of zero and a standard deviation of one. T-statistics based on robust standard errors clustered by firm appear in parentheses below the coefficients. ***, ** and * next to the coefficients denote two-tailed statistical significance at the 1%, 5% and 10% levels, respectively.

TABLE 11

Klein and Vella Modified Control Function Regressions

Dep. variable:	Conform (1)	Conform (2)	Conform (3)
Report NG	0.188***	0.257***	0.112***
	(15.76)	(14.36)	(6.15)
KV Function	1.328***	0.539***	0.006
	(5.29)	(3.69)	(1.50)
Stage 1 variables			
NOL 01	0.048***	0.039*	-0.171***
	(3.38)	(1.79)	(-6.49)
ΔNOL	0.142***	0.090***	-0.019
	(23.12)	(8.59)	(-1.51)
BTD	-0.084***	-0.002	-0.039**
	(-7.87)	(-0.11)	(-2.20)
NegBTD 01	-0.176***	-0.202***	-0.284***
	(-18.21)	(-11.42)	(-17.66)
BTD × NegBTD 01	-0.090***	-0.157***	0.059***
	(-7.46)	(-8.32)	(2.90)
Baseline controls			
LogAssets		0.026	0.072
		(1.36)	(1.58)
Interest Exp.		0.114***	0.079***
		(10.86)	(5.15)
Mgr Ability		-0.171***	-0.146***
		(-12.13)	(-10.04)
Inst. Ownership		-0.046***	-0.038**
		(-3.79)	(-2.33)
LogAnalysts		-0.099***	-0.160***
		(-6.25)	(-6.68)
Stock Issue		-0.047***	-0.041***
		(-6.95)	(-5.49)
Sales Growth		-0.044***	-0.079***
		(-5.64)	(-9.02)
Constant	-0.043***	0.320*	0.267***
	(-2.99)	(1.94)	(6.31)
Fixed effects	Year	Industry, Year	Firm, Year
Observations	21,567	21,567	21,567
Adjusted R^2	0.674	0.331	0.574

This table re-estimates the models in Table 3 after adding *KV Function* as an independent variable using Klein and Vella's (2010) control function estimator. *KV Function* is calculated using the heteroskedasticity of first-stage residuals following Armstrong et al. (2022). I jointly estimate the first-stage residuals underlying *KV Function* and the tabulated regressions as seemingly unrelated regressions. The dependent variable *Conform* is the residual from a first-stage OLS regression of cash taxes paid on measures of non-conforming tax avoidance (Badertscher et al. 2019). *Report NG* is an indicator variable equal to one if the firm reports non-GAAP earnings in at least one of its quarterly earnings announcements (Bentley et al. 2018).

Appendix A provides complete variable definitions. I use two-digit NAICS industries. I winsorize continuous variables at the 1st and 99th percentiles and standardize them to a mean of zero and a standard deviation of one. T-statistics based on robust standard errors clustered by firm appear in parentheses below the coefficients. ***, ** and * next to the coefficients denote two-tailed statistical significance at the 1%, 5% and 10% levels, respectively.

TABLE 12

Granger Causality Tests

Dep. variable:	$Conform_t$	$Report\ NG_t$
	(1)	(2)
$Conform_{t-1}$	0.533***	0.015
	(23.47)	(1.23)
$Conform_{t-2}$	0.123***	-0.008
	(7.02)	(-0.93)
$Report\ NG_{t-1}$	0.224***	0.327***
	(7.64)	(14.97)
$Report\ NG_{t-2}$	0.008	0.107***
	(0.33)	(6.56)
Stage 1 variables	Included	Included
Baseline controls	Included	Included
Fixed effects	Firm, Year	Firm, Year
Observations	10,875	10,875
Chi-square test:		
$Report\ NG_{t-1} + Report\ NG_{t-2}$	28.86	
(*p-value*)	(0.000)	
$Conform_{t-1} + Conform_{t-2}$		0.240
(*p-value*)		(0.624)

This table presents estimates of panel vector autoregressions (Granger causality tests). Column 1 tests the ability of past non-GAAP reporting to predict current conforming tax avoidance. Column 2 tests the ability of past conforming tax avoidance to predict current non-GAAP reporting. I remove year fixed effects using cross-sectional means and remove firm fixed effects using the Helmert forward-mean-differencing procedure. The dependent variable *Conform* is the residual from a first-stage OLS regression of cash taxes paid on measures of non-conforming tax avoidance (Badertscher et al. 2019). *Report NG* is an indicator variable equal to one if the firm reports non-GAAP earnings in at least one of its quarterly earnings announcements for that year (Bentley et al. 2018). All regressions include the first-stage regressors from equation 1 and the baseline controls from equation 2 as independent variables.

Appendix A provides complete variable definitions. I use two-digit NAICS industries. I winsorize continuous variables at the 1st and 99th percentiles and standardize continuous variables to a mean of zero and a standard deviation of one. T-statistics based on robust standard errors clustered by firm appear in parentheses below the coefficients. ***, ** and * next to the coefficients denote two-tailed statistical significance at the 1%, 5% and 10% levels, respectively.