On the Informativeness of Unexpected Exclusions from Street Earnings

Brian Bratten
Gatton College of Business & Economics, University of Kentucky
brian.bratten@uky.edu

Stephannie Larocque
Mendoza College of Business, University of Notre Dame
larocque.1@nd.edu

Teri Yohn
Goizueta Business School, Emory University
tyohn@emory.edu

December 2020

We thank Erik Beardsley, Larry Brown, Shuping Chen (LBS discussant), Peter Easton, Zach Kaplan, Xiumin Martin, Rick Mendenhall, Ben Whipple (FARS discussant), David Veenman, and seminar participants at the 2020 FARS Midyear Meeting, the 2019 LBS Symposium, Nanyang Technological University, Singapore Management University, University of North Carolina at Charlotte, University of South Florida, University of Tennessee, and University of Waterloo for helpful comments. We thank Kurt Gee for sharing data related to firms' non-GAAP earnings. We gratefully acknowledge the financial support of the Gatton College of Business & Economics and the Ernst & Young Fellowship at the Mendoza College of Business.

On the Informativeness of Unexpected Exclusions from Street Earnings

Abstract

Street earnings increasingly differ from GAAP earnings. Exclusions from street earnings include both expected exclusions, forecasted *ex ante* by analysts, and unexpected exclusions, revealed after earnings are reported. Prior research finds that investors prefer street earnings to GAAP earnings and unexpected exclusions reflect transitory earnings items when used to meet analysts' street forecasts. We further explore the importance of unexpected exclusions by examining investors' and analysts' reactions to unexpected exclusions, the role of unexpected exclusions in predicting future earnings, and the characteristics of unexpected exclusions associated with firms' meet-or-beat behavior. We find that unexpected exclusions are value relevant to investors and analysts, and separating expected and unexpected exclusions is useful for forecasting earnings. Moreover, we find that firms are more likely to meet analysts' forecasts with unexpected exclusions that represent forecasted but misestimated excluded items than un-forecasted excluded items. Our results provide insight into how to interpret analysts' earnings exclusions.

On the Informativeness of Unexpected Exclusions from Street Earnings

1. INTRODUCTION

While generally accepted accounting principles (GAAP) mandate the measurement of reported earnings, analysts increasingly report adjusted, non-GAAP measures of "street" earnings. Prior research examines exclusions from street earnings (i.e., the difference between GAAP earnings and street earnings) and provides mixed evidence on the information content and value relevance of exclusions, with some research concluding that exclusions reflect less persistent earnings items (e.g., Bentley, Christensen, Gee, and Whipple 2018) and other research concluding that exclusions have information content and are value relevant (e.g., Guillamon-Saorin, Isidro, and Marques 2017). While this stream of literature typically examines total exclusions, exclusions reflect both excluded earnings amounts forecasted ex ante by analysts (hereafter, expected exclusions) and unexpected exclusions revealed after earnings are reported.

In a recent study, Bradshaw, Christensen, Gee, and Whipple (2018) use unexpected exclusions (which they refer to as the "exclusions surprise") to improve the measurement of GAAP forecast errors; they conclude that investors prefer street earnings to GAAP earnings and that unexpected exclusions reflect transitory earnings items when used to meet analysts' street earnings forecasts. However, prior literature has yet to comprehensively analyze the characteristics of unexpected exclusions in order to assess how market participants should evaluate them. We thus explore the importance of unexpected exclusions by examining the market reaction to unexpected exclusions after controlling for earnings announcement and firm characteristics and by examining analysts' reaction to unexpected exclusions (i.e., analysts' revisions). We also examine expected and

unexpected exclusions' associations with GAAP earnings items and their roles in predicting future earnings. Finally, we further explore the characteristics of unexpected exclusions associated with firms' meet-or-beat behavior by investigating whether they more likely represent exclusions that have been forecasted but misestimated by analysts or excluded items not forecasted by analysts.

Our sample includes 100,890 firm-quarters from 2004 to 2017 for which we can observe total, expected, and unexpected exclusions. We utilize actual GAAP and street earnings from I/B/E/S to derive total exclusions (i.e., GAAP EPS less street EPS) in each firm-quarter. We create a consensus of individual analysts' GAAP and EPS forecasts issued on the same day for the same firm in order to hold information constant for the same analyst's forecasts, and we use the difference between the consensus GAAP EPS and street EPS forecasts to measure analysts' expected exclusions. Unexpected exclusions equal the difference between total and expected exclusions. We find that both total exclusions and unexpected exclusions have increased over time, with 50 percent (48.5 percent) of firm-quarters in our sample experiencing total (unexpected) exclusions in 2004 and 62.4 percent (61.7 percent) of the sample experiencing total (unexpected) exclusions in 2017.

We provide evidence that unexpected exclusions are value relevant. Specifically, we observe a significant positive earnings response coefficient on unexpected exclusions and find that analysts' forecast revisions following earnings announcements are positively related to unexpected exclusions. These results suggest that both investors and analysts incorporate the information in unexpected exclusions and find them to be informative about future earnings.

We also provide evidence on the information content of expected and unexpected exclusions for forecasting future profitability. To provide insights into the nature and persistence of expected and unexpected exclusions, we examine their association with 11 GAAP earnings items often associated with exclusions. Relative to expected exclusions, we find that unexpected exclusions are more highly associated with not only non-recurring earnings items but also recurring earnings items such as depreciation and amortization expense. We also document that, although unexpected exclusions are less persistent than expected exclusions, both expected and unexpected exclusions predict future earnings.[1] Moreover, we find that out-of-sample forecasting models that include both unexpected and expected exclusions yield significantly more accurate GAAP earnings forecasts, relative to models that include only street earnings or include street earnings and total exclusions.

Finally, we investigate the relation between unexpected exclusions and firms' propensity to meet or beat earnings benchmarks. To do so, we partition our sample of unexpected exclusions into those that reflect forecasted but misestimated exclusions (when consensus expected exclusions are non-zero), and those that reflect un-forecasted excluded earnings items (when consensus expected exclusions equal zero).[2] We argue that unexpected exclusions are more likely to reflect recurring items when analysts forecast exclusions and to reflect nonrecurring items when analysts do not forecast exclusions.[3] We

[1] While we find that $1 of expected exclusions is associated with $1.08 of four-quarter-ahead GAAP earnings, $1 of unexpected exclusions is associated with $0.14 of four-quarter-ahead GAAP earnings.

[2] For example, an analyst could have forecasted but misestimated the amount of stock-based compensation that is excluded from street earnings and/or the analyst could have not forecasted a non-recurring loss that is excluded from I/B/E/S street earnings.

[3] In our sample, expected exclusions equal zero for just 44 percent of observations with non-zero total exclusions, which suggests that the misestimation of excluded earnings items is pervasive. In a sample of hand-collected analysts' reports, we observe that forecasted but misestimated exclusions primarily represent errors in forecasting stock-based compensation, amortization, pension costs, and other items, while un-forecasted excluded earnings items primarily reflect gains and losses and tax-related items, among others.

observe that firms more frequently meet or beat analysts' street EPS forecasts (but not analysts' GAAP forecasts) when analysts forecast but misestimate exclusions than when analysts do not forecast exclusions. We also find that unexpected exclusions that reflect misestimated exclusions are more predictive of future earnings than un-forecasted excluded items. This evidence is contrary to the suggestion in Bradshaw et al. (2018) that unexpected exclusions used to meet street but not GAAP earnings are more likely associated with transitory items. Examining investors' and analysts' reactions to forecasted but misestimated versus un-forecasted exclusions, we find that analysts place more weight on unexpected exclusions that were forecasted but misestimated than unexpected exclusions that were un-forecasted. This evidence suggests that analysts behave in a manner consistent with forecasted but misestimated unexpected exclusions being more persistent than un-forecasted unexpected exclusions.

Our study contributes to the street versus GAAP literature. Bradshaw et al. (2018) find that, after controlling for unexpected exclusions, unexpected street earnings are more value relevant than unexpected GAAP earnings and conclude that investors prefer street earnings to GAAP earnings. They also conclude that unexpected exclusions are value relevant when GAAP and non-GAAP earnings provide different signals about the firm's performance. After controlling for firm and earnings announcement characteristics, we provide evidence that market participants respond to unexpected exclusions regardless of whether GAAP and street earnings provide different signals. We also provide evidence that unexpected exclusions are associated with both recurring and non-recurring GAAP items and predict future earnings. In addition, we add to the literature by partitioning unexpected exclusions into forecasted but misestimated exclusions and un-forecasted

excluded earnings items, and thus provide further evidence on the implications of unexpected exclusions for firms' meet-or-beat behavior. Considering the documented increase and interest in non-GAAP reporting in recent years, our evidence provides important insights to researchers, investors, and analysts by documenting that unexpected exclusions are value relevant and have information content for future earnings that should not be ignored. Our evidence on the persistence of expected versus unexpected exclusions and their usefulness for forecasting profitability also builds on prior research that examines earnings persistence and disaggregates earnings to improve forecasts of future profitability (e.g., Fairfield, Sweeney, and Yohn 1996).

Our study also contributes to the benchmark-beating literature by examining the characteristics of unexpected exclusions when firms meet street but not GAAP analyst forecasts. We document that benchmark beating is more likely to occur when analysts forecast but misestimate excluded earnings items than when they do not forecast exclusions. We also find evidence that unexpected exclusions that reflect forecasted but misestimated exclusions are more persistent than un-forecasted exclusions. This evidence is important for identifying and understanding benchmark-beating behavior.

2. GAAP EARNINGS, STREET EARNINGS, AND EXCLUDED ITEMS

2.1. Prior Literature

Although public companies prepare financial reports following GAAP, analysts and the business press typically follow firms' street earnings. I/B/E/S and other forecast data

aggregators adjust GAAP earnings to determine street earnings.[4] Thomson Reuters (2009) describes the I/B/E/S procedure of converting GAAP to street earnings as removing the earnings items excluded (if any) by the majority of the analysts following a given firm.[5]

GAAP versus non-GAAP earnings is the subject of a stream of prior literature. Early studies examining street earnings (usually as defined by I/B/E/S) relative to GAAP earnings compare their value relevance and persistence (Bradshaw and Sloan 2002; Brown and Sivakumar 2003; Bhattacharya, Black, Christensen, and Larson 2003). Other studies examine exclusions directly (although they do not measure expected vs. unexpected exclusions) and provide mixed evidence on the usefulness of exclusions when forecasting earnings. Some studies conclude that exclusions reflect less persistent earnings that are not value relevant (Bentley et al. 2018; Gu and Chen 2004; Huang and Skantz 2016; Leung and Veenman 2018) while others conclude that exclusions have information content for future earnings and are therefore value relevant (Doyle, Lundholm, and Soliman 2003; Frankel, McVay, and Soliman 2011; Guillamon-Saorin et al. 2017).

Prior research also examines analysts' exclusion choices, questioning the motives of analysts. Some of these studies argue that analysts opportunistically follow management in determining which items to exclude, regardless of the expected persistence of these items (Shane and Stock 2006; Chen 2010; Christensen, Merkley, Tucker, and Venkataraman 2011), while others argue that analysts do not naively follow management in making their exclusion choices (Baik, Farber, and Petroni 2009; Barth, Gow, and Taylor 2012; Bentley et

[4] See Figure 1. The timing of this adjustment can depend on the complexity of what is being excluded. Bochkay, Markov, Subasi, and Weisbrod (2020) report that the time lapse between the dissemination of GAAP earnings by firms and of street earnings by I/B/E/S has a mean (median) of 599 (45) minutes.
[5] For example, if the majority of analysts following a firm exclude stock compensation from their street earnings forecast, I/B/E/S excludes stock compensation from actual street earnings. Kaplan, Martin, and Xie (2019) conclude the majority rule results in a downward bias in forecasted street earnings.

al. 2018). Other research provides reasons for exclusion choices besides identifying what is predictive of future earnings or what is excluded by management. For example, Whipple (2015) attributes exclusions to "non-cash" items, arguing investors are less concerned about non-cash earnings components. Bratten, Larocque, and Yohn (2020) examine variation in the forecasting of exclusions across analysts following the same firm depending on analysts' experience, forecast frequency, and other characteristics.

While prior research on exclusions examines their information content, value relevance, and other characteristics, researchers typically combine expected and unexpected exclusions or examine only analysts' forecasted exclusions. In a recent study, Bradshaw et al. (2018) show the importance of unexpected exclusions for calculating GAAP forecast surprises and for identifying firms that use non-GAAP earnings to meet analysts' forecasts. We contribute to this literature by examining investors' and analysts' reactions to unexpected exclusions, the persistence and nature of unexpected versus expected exclusions, and the nature of unexpected exclusions associated with meet-or-beat behavior.

2.2. Research Questions

Early research concludes that stock prices are more aligned with street earnings than GAAP earnings (Bradshaw and Sloan 2002; Brown and Sivakumar 2003; Bhattacharya et al. 2003), suggesting that exclusions from street earnings have little value relevance. Bradshaw et al. (2018) find that the stronger market reaction to street earnings surprises relative to GAAP earnings surprises documented in prior research is partially influenced by measurement error related to including unexpected exclusions in the GAAP earnings surprise. However, after controlling for this measurement error, Bradshaw et al. (2018) find that unexpected street earnings are more value relevant than unexpected GAAP

earnings and conclude that investors appear to prefer street earnings to GAAP earnings. While a finding of lower value relevance for GAAP earnings relative to street earnings may reflect that GAAP earnings contains less persistent earnings components, the finding does not necessarily imply that investors or analysts ignore GAAP earnings items that are excluded from street earnings. While not the primary goal of the study, Bradshaw et al. (2018) examine the market reaction to unexpected exclusions based on whether or not street earnings meet or beat street and/or GAAP earnings forecasts. They find that unexpected earnings are value relevant when GAAP and street earnings provide different signals about the firm's performance.

We build on Bradshaw et al. (2018) with a more detailed examination of the value relevance of unexpected exclusions. Specifically, we control for earnings and firm characteristics in our investor response analyses. Prior research shows that the market reaction to earnings announcements is influenced by firm characteristics such as size and analyst following (Collins and Kothari 1989; Dempsey 1989) and by earnings characteristics such as the reporting of losses (Hayn 1995). We therefore reexamine investors' response to unexpected exclusions after controlling for firm and earnings announcement characteristics. We also examine analysts' responses to unexpected exclusions (i.e., their forecast revisions) to provide insight into sophisticated investors' interpretation of unexpected exclusions. This motivates our first set of research questions:

Q1a: Are earnings announcement returns associated with unexpected exclusions, after controlling for unexpected street earnings?

Q1b: Are analysts' forecast revisions associated with unexpected exclusions, after controlling for unexpected street earnings?

Some prior research investigating adjustments to reported GAAP earnings suggests exclusions reflect transitory earnings items. For example, Gu and Chen (2004) find that nonrecurring items that analysts exclude from street earnings are less persistent than nonrecurring items that analysts do not exclude. Bentley et al. (2018) examine differences in the persistence of management exclusions and analysts' exclusions and find that analysts' exclusions are associated with less persistent earnings items. These prior studies, however, focus on total exclusions. Since exclusions have both an expected and an unexpected component, we argue that incorporating both components into forecasts of future earnings may improve these forecasts.

We note that in a firm-quarter, expected exclusions reflect forecasted excluded items, while unexpected exclusions reflect unexpected amounts of forecasted excluded earnings items and/or un-forecasted excluded earnings items. For example, analysts could have forecasted the firm's research and development expense that is excluded from their street earnings forecasts but misestimated the amount. Alternatively, the firm could have incurred a restructuring charge that analysts did not forecast and that is excluded from actual street earnings. Therefore, expected exclusions likely reflect estimates of more permanent items while unexpected exclusions could include non-recurring items, misestimates of more permanent earnings items, or both. Thus, separating unexpected and expected exclusions will likely provide information content for future profitability. This logic leads to our second set of research questions.

Q2a: Do expected and/or unexpected exclusions provide information content for future profitability?

Q2b: Does disaggregating total exclusions into expected and unexpected exclusions improve forecasts of future profitability?

Researchers have assessed whether earnings exclusions that result in earnings that meet or beat benchmarks reflect intentional earnings management to mislead investors or true un-forecasted nonrecurring items. Bradshaw et al. (2018) contribute to this literature by adjusting for unexpected exclusions to improve the classification of firms using non-GAAP earnings to meet or beat analysts' forecasts. After this adjustment, they conclude that the meeting or beating of analysts' forecasts occurs more for firms that have transitory items, as opposed to recurring items. However, Bradshaw et al. (2018) determine transitory versus recurring items using the difference between GAAP bottom-line earnings and operating earnings. Since non-operating earnings include both nonrecurring and recurring items and given potential classification shifting of recurring versus nonrecurring items across operating and non-operating earnings (McVay 2006), it is not clear that un-forecasted nonrecurring exclusions drive the meeting of street but not GAAP behavior.

To provide further insight into whether unexpected exclusions reflect forecasted but misestimated exclusions versus un-forecasted exclusions, we separate unexpected exclusions into situations in which analysts forecasted exclusions versus situations in which they did not. When analysts forecast (do not forecast) exclusions, we argue that the unexpected exclusions are more likely to reflect recurring (nonrecurring) items. We examine whether benchmark-beating behavior and the characteristics of unexpected exclusions differ when analysts misestimate forecasted exclusions versus when analysts do not forecast exclusions. This leads to our third set of research questions:

Q3a: Do firms more frequently meet or beat street (but miss GAAP) forecasts when unexpected exclusions are forecasted but misestimated or are not forecasted?

Q3b: Does the information content of unexpected exclusions for future profitability differ based on whether analysts forecast versus do not forecast exclusions and whether earnings meet or beat street (but miss GAAP) forecasts?

3. RESEARCH DESIGN

Before outlining our research design, we define a few key variables. As in prior literature, we compute total exclusions from (actual) street EPS for the quarter as follows:

$$\textit{Total Exclusions} = \textit{GAAP EPS} - \textit{Street EPS} \quad (1)$$

We form a consensus of individual analysts' street and GAAP EPS forecasts (*Street Forecast* and *GAAP Forecast*, respectively) issued on the same day. From these two forecasts, we infer analysts' expected exclusions:

$$\textit{Expected Exclusions} = \textit{GAAP Forecast} - \textit{Street Forecast} \quad (2)$$

Unexpected exclusions equal the difference between total and expected exclusions:

$$\begin{aligned} \textit{Unexpected Exclusions} &= \textit{Total Exclusions} - \textit{Expected Exclusions} \quad (3)\\ &= (\textit{GAAP EPS} - \textit{Street EPS}) - (\textit{GAAP Forecast} - \textit{Street Forecast})\\ &= (\textit{GAAP EPS} - \textit{GAAP Forecast}) - (\textit{Street EPS} - \textit{Street Forecast})\\ &= \textit{Unexpected GAAP EPS} - \textit{Unexpected Street EPS} \end{aligned}$$

We illustrate this de-composition in Figure 2. All variables are defined in Appendix A.

3.1 Market and analysts' reaction to unexpected exclusions

To provide evidence on *Q1a*, we examine whether investors react to unexpected exclusions. We regress adjusted earnings announcement returns on unexpected GAAP earnings or its components, as is typical in the earnings response coefficient literature (e.g., Easton and Zmijewski 1989):

$$CAR_{jq} = \alpha_0 + \alpha_1 Unexp_{jq} + Controls_{jq} + \text{YearQtr} + \epsilon_{jq} \quad (4)$$

We define CAR_{jq} as buy-and-hold abnormal returns (i.e., CRSP item 'RET' less 'VWRETD') in the two trading days surrounding firm *j*'s quarter *q* earnings release (specifically, days 0 and +1).[6] In equation 4, as well as later equations, the unit of observation is a firm-quarter.

To provide evidence on *Q1b*, we examine analysts' responses to unexpected exclusions. We follow Easton and Zmijewski (1989) and Bhattacharya et al. (2003) and test for an association between analysts' revisions of their next-quarter forecasts and unexpected exclusions. Specifically, we regress the mean revision of individual analysts' first forecast for the upcoming quarter *q+1* made following the release of quarter *q* earnings, relative to the same analyst's latest quarter *q+1* forecast made prior to the release of quarter *q* earnings, on unexpected GAAP earnings or its components, as in equation 5:

$$Revise_{jq+1} = \alpha_0 + \alpha_1 Unexp_{jq} + Controls_{jq} + \text{YearQtr} + \epsilon_{jq} \qquad (5)$$

$Revise_{jq+1}$ represents the consensus analyst revision for each of two sets of forecasts: GAAP EPS ($Revise\_GAAP_{jq+1}$) and exclusions ($Revise\_Excl_{jq+1}$).

In both equations 4 and 5, $Unexp_{jq}$ captures unexpected earnings (i.e., actual minus forecasted earnings), where earnings is defined as either GAAP earnings or its components (i.e., street earnings and exclusions). Unexpected GAAP earnings ($Unexp\_GAAP_{jq}$) is defined as actual GAAP earnings per share in I/B/E/S minus the mean of individual analysts' latest forecast of GAAP earnings made prior to the quarter *q* earnings announcement, scaled by price at the end of the previous fiscal year. Unexpected street earnings ($Unexp\_Street_{jq}$) is defined as actual earnings per share ("street" is implied) in I/B/E/S less the mean of individual analysts' latest forecast of earnings per share made prior to the quarter *q* earnings announcement, scaled by price, and unexpected exclusions ($Unexp\_Excl_{jq}$) is the

[6] We observe similar results using returns adjusted for equal-weighted returns (results untabulated).

difference between $Unexp\_GAAP_{jq}$ and $Unexp\_Street_{jq}$. In both equations 4 and 5, we control for analyst following (*ANF*), analyst forecast dispersion (*DISP*), size (*lnMV*), market-to-book (*MtoB*), leverage (*Lev*), and the presence of a loss during the quarter (*Loss*) as these variables have been found to affect the market's response to earnings announcements. *YearQtr* denotes the presence of fixed effects to control for time trends during each calendar quarter of our 14-year sample period. To provide evidence on *Q1a* and *Q1b*, we test whether the coefficient on *Unexp_Excl* is significantly different from zero after controlling for *Unexp_Street* in each of equations 4 and 5.

3.2 Nature and persistence of expected and unexpected exclusions

To provide evidence on *Q2a* and the information content of expected and unexpected exclusions for future earnings, we conduct two sets of tests. Our first set examines the differential associations between unexpected versus expected exclusions and contemporaneous earnings items. Our second set of tests examines the association of both expected and unexpected exclusions with future summary measures of earnings.

In our first set of tests, we examine whether unexpected exclusions capture both recurring and nonrecurring earnings items. To do so, we regress each of unexpected and expected exclusions on 11 reported earnings items.[7] Equation 6 summarizes our approach:

$$Exclusions_{jq} = \alpha_0 + \alpha_1 Earnings\ items_{jq} + \text{YearQtr} + \epsilon_{jq} \quad (6)$$

The dependent variable in equation 6, $Exclusions_{jq}$, takes the value of Exp_Excl_{jq} or $Unexp\_Excl_{jq}$. We define Exp_Excl_{jq} as consensus forecasted exclusions, i.e., the difference between the mean of individual analysts' latest available GAAP EPS forecasts and street

[7] Prior literature examines the association between total exclusions and earnings components (e.g., Bradshaw and Sloan 2002), but we are the first to make comparisons across expected and unexpected exclusions.

EPS forecasts for firm *j* in quarter *q*, according to I/B/E/S, scaled by price. $Unexp\_Excl_{jq}$ again represents unexpected exclusions. We follow prior literature to identify various earnings components found to be associated with exclusions (e.g., Bradshaw and Sloan 2002; Bhattacharya et al. 2003; Gu and Chen 2004; Barth et al. 2012; Brown, Call, Clement, and Sharp 2015; Donelson, Koutney, and Mills 2020). We decompose special items into its subcomponents following Gu and Chen (2004), but at the same time recognize that Compustat might not capture all special items (Dechow, Larson, and Resutek 2020).

We include the following earnings items, based on Compustat items, in our tests: *D&A* (depreciation and amortization) $expense_{jq}$ (based on Compustat item 'DPQ'), *Discontinued* $items_{jq}$ ('DOQ'), *Extraordinary* $items_{jq}$ ('XIQ'), *Gains and losses*$_{jq}$ ('GLPQ'), *Goodwill* $impairment_{jq}$ ('GDWLIAQ'), *Non-recurring* $taxes_{jq}$ ('NRTQ'), *Other special* $items_{jq}$ ('SPIQ'– 'GLPQ'– 'GDWLIAQ'– 'RCPQ'– 'WPDQ'), *R&D* (research and development) $expense_{jq}$ ('XRDQ'), *Restructuring* $costs_{jq}$ ('RCPQ'), *Stock compensation* $expense_{jq}$ ('STKCPAQ'), and $Writedowns_{jq}$ ('WPDQ'). We set each variable to zero if missing in Compustat, and we divide each variable by market value. Variables are also re-scaled to represent their directional effect on earnings, so expense items are multiplied by −1.

We next collapse the individual earnings variables into recurring and non-recurring items. We define $Income\_Recur_{jq}$ as the sum of *Gains and losses*$_{jq}$, *Other special* $items_{jq}$, *D&A* $expense_{jq}$, *R&D* $expense_{jq}$, and *Stock compensation* $expense_{jq}$, and $Income\_NonRecur_{jq}$ as the sum of *Discontinued* $items_{jq}$, *Extraordinary* $items_{jq}$,, *Goodwill* $impairment_{jq}$, *Non-recurring* $taxes_{jq}$, *Restructuring* $costs_{jq}$, and $Writedowns_{jq}$.[8] Equation 7 follows:

$$Exclusions_{jq} = \alpha_0 + \alpha_1 Income\_Recur_{jq} + \alpha_3 Income\_Nonrecur_{jq} + \text{YearQtr} + \epsilon_{jq} \quad (7)$$

[8] In untabulated analysis, we verify that recurring items are more persistent than non-recurring items.

To provide initial evidence into the nature of unexpected vs. expected exclusions, we compare the coefficients on individual earnings components in equation 6 and the coefficients on *Income_Recur* and *Income_Nonrecur* in equation 7 when *Exp_Excl* vs. *Unexp_Excl* is the dependent variable.

Our second set of tests provide direct evidence related to *Q2a*, in which we examine the persistence of expected and unexpected exclusions. We regress performance in the subsequent period on components of current-quarter GAAP earnings, including street earnings and exclusions. We estimate versions of the following equation:

$$Future\ Performance_{jq+1} = \alpha_0 + \alpha_1 Street\_Earn_{jq} + \alpha_2 Excl\_Earn_{jq} + \epsilon_{jq} \quad (8)$$

Future Performance is represented by either next-quarter GAAP earnings ($GAAP\_Earn_{jq+1}$), operating earnings ($Oper\_Earn_{jq+1}$), or cash flow from operations (CF_{jq+1}). $Street\_Earn_{jq}$ is street earnings. $Excl\_Earn_{jq}$ in equation 8 takes the value of $Total\_Excl\_Earn_{jq}$ or of its components, $Exp\_Excl\_Earn_{jq}$, and $Unexp\_Excl\_Earn_{jq}$. All variables included in this set of tests are scaled by assets. We examine the coefficients on $Exp\_Excl\_Earn_{jq}$ and $Unexp\_Excl\_Earn_{jq}$ in equation 8.[9]

To provide evidence on *Q2b*, we perform out-of-sample tests of the accuracy of $GAAP\ Earn_{q+1}$ or $GAAP\ Earn_{q+4}$ forecasts. We examine a baseline forecast model which includes only $Street\_Earn_q$; a total exclusions model which includes $Street\_Earn_q$ and $Total\_Excl\_Earn_{jq}$, and a disaggregated exclusions model which includes $Street\_Earn_q$, $Exp\_Excl\_Earn_{jq}$, and $Unexp\_Excl\_Earn_{jq}$. We test for the improvement (on an observation-

[9] Other than year-quarter fixed effects, we exclude control variables from equation 8 so that we can interpret the coefficients economically in terms of persistence. In untabulated analyses, we observe similar inferences when we also control for firm characteristics including the log of market capitalization, the incidence of loss, the market to book ratio, and the standard deviation of return on assets (Frankel et al. 2011).

by-observation basis) in the mean and median absolute forecast error from each model using a *t*-test against zero for the mean and a Wilcoxon signed-rank test for the median. We require at least 20 quarters to form an expectation for $GAAP\ Earn_{q+1}$ or $GAAP\ Earn_{q+4}$.

3.3 Unexpected exclusions when earnings meet street but not GAAP forecasts

To provide evidence on *Q3a* and *Q3b*, we distinguish between unexpected exclusions in situations in which analysts forecasted but misestimated exclusions (i.e., expected exclusions are nonzero) versus situations in which analysts did not forecast exclusions (i.e., expected exclusions equal zero). When analysts have (have not) forecasted exclusions, we assume unexpected exclusions are more likely driven by recurring (nonrecurring) items. To provide evidence on *Q3a*, we examine the likelihood of earnings meeting analysts' street but not GAAP forecasts based on whether analysts forecasted exclusions. Finally, to provide evidence on *Q3b*, we re-estimate equation 8 and interact *Unexp_Street and Unexp_Excl* with each of *MeetStreetNotGAAP* and *Exp_Excl_Ind*.

4. SAMPLE AND RESULTS

4.1 Sample and descriptive statistics

We construct our sample from the intersection of I/B/E/S, Compustat, and CRSP from 2004 through 2017.[10] The primary data requirement limiting our sample is that the individual I/B/E/S analysts included in our consensus measures report both street and GAAP earnings per share forecasts on the same date for the same firm-quarter *q*. By using

[10] While analysts may have always provided GAAP forecasts, I/B/E/S increased its GAAP forecast coverage after the early 2000s (Bradshaw et al. 2018). A recent working paper by Chen and Koester (2020) questions the quality of analysts' GAAP EPS forecasts. I/B/E/S has also removed some analysts from its database over time (Call, Hewitt, Watkins, and Yohn 2020). We downloaded I/B/E/S forecasts with announcement dates between 2003 and 2016 on July 23, 2019, and with announcement dates during 2017 on January 5, 2020.

individual analysts' forecasts to create a consensus forecast, we can include the same group of analysts in each of the street, GAAP, and exclusions consensus and ensure information is held constant for the same analyst's forecasts. We calculate the mean of individual analysts' contemporaneous forecasts of street and GAAP earnings to represent analysts' consensus GAAP forecast and street forecast, focusing on the last forecast made by each analyst prior to the quarterly earnings release. From these two forecasts, we infer analysts' forecasted (i.e., expected) exclusions.[11] We include only non-ADR firms to ensure our sample follows the same financial accounting standards. We use price and market value data from CRSP at the end of fiscal year *t–1*, and drop firms with share prices below $5. As indicated in Table 1, Panel A our main sample includes 100,890 firm-quarters.

We report descriptive data covering analysts' forecasts of GAAP earnings, street earnings, and exclusions in Panel B of Table 1. Consistent with prior literature, in our sample, consensus analysts' GAAP EPS forecasts (mean = $0.398, median = $0.283) and street EPS forecasts (mean = $0.412, median = $0.305) are slightly lower than the actual street EPS (mean = $0.423, median = $0.320). Based on the difference between analysts' street and GAAP forecasts, their implied exclusions forecast (i.e., expected exclusions) has a mean of −$0.014 while total exclusions has a mean of −$0.079, such that unexpected exclusions has a mean of −$0.065. These forecasts and exclusions translate into unexpected GAAP earnings scaled by price (*Unexp_GAAP*) with a mean (median) of −0.004 (0.000) and unexpected street earnings scaled by price (*Unexp_Street*) with a mean (median) of −0.000

[11] We use I/B/E/S's detail file to infer expected exclusions in order to ensure an appropriate match of each analyst's street and GAAP forecasts and reduce measurement error. In supplementary analyses (untabulated), we construct a sample of 111,961 firm-quarters using I/B/E/S's summary file to infer consensus expected exclusions based on the difference between the consensus GAAP and street EPS forecasts. We find confirmatory evidence for each of our three sets of research questions using this sample.

(0.000). Mean (median) unexpected exclusions earnings scaled by price (*Unexp_Excl*) is −0.004 (0.000). For 14.3 percent of our sample, earnings meet or beat the consensus street earnings forecast but miss the consensus GAAP earnings forecast (*MeetStreetNotGAAP*).

Panel C of Table 1 indicates the number of firm-quarters with street and with GAAP EPS forecasts, as well as the mean level of total, expected, and unexpected exclusions during our sample period. Consistent with an increasing prevalence of GAAP earnings forecasts in I/B/E/S, column 2 shows an increasing number of firm-quarters from the beginning to the end of our sample period. Our sample represents 28.8 percent of the firm-quarters with street EPS forecasts available in I/B/E/S in 2004, and 91.5 percent of the firm-quarters with street EPS forecasts in 2017. This evidence is consistent with Bentley et al. (2018, Figure 2), who observe a similar increase in both non-GAAP reporting by management and non-GAAP forecasts by analysts available in I/B/E/S from 2003 to 2012. Mean total exclusions are increasingly unexpected in recent years. Given the evidence of outliers in the data, we winsorize these and other variables in all regression analyses.

4.2 Market and analysts' reaction to unexpected exclusions

To address our first set of research questions, we first assess investors' response to unexpected exclusions around earnings announcements. Table 2 provides the results of regressing two-day buy-and-hold abnormal returns (*CAR*) on unexpected components of earnings, as in equation 4. In this and later tables, we present *t*-statistics and report significance based on standard errors clustered by firm and the quarter of each year.

In column 1 of Table 2, we find a significant positive coefficient of 0.3727 (t = 5.76) on *Unexp_GAAP*. Column 2 replaces unexpected GAAP earnings with its two components *Unexp_Street* and *Unexp_Excl*. Both components have a significant positive coefficient; the

coefficient on *Unexp_Street* is 1.7451 (t = 9.10) and the coefficient on *Unexp_Excl* is 0.1639 (t = 5.34).[12] This result provides evidence on *Q1a.* While the magnitude of the coefficients on *Unexp_Street* and *Unexp_Excl* are substantially different from one another, the coefficient on *Unexp_Excl* is positive and significant, suggesting that the market considers unexpected exclusions to be value relevant.[13]

Next, we turn to analysts' responses to unexpected exclusions. Table 3 provides the results of regressing consensus analysts' revisions of next-quarter earnings on unexpected earnings components for the 91,853 firm-quarters in our sample for which we can calculate the mean analyst forecast revision, as in equation 5. Panels A and B, respectively, represent regressions of analysts' revisions of their GAAP and exclusions forecasts for quarter *q+1*, made following the quarter *q* earnings announcement.

For GAAP forecast revisions in Panel A of Table 3, column 1 reports a significant positive coefficient on *Unexp_GAAP* (0.0287, t = 7.66). In column 2, we replace unexpected GAAP earnings with its two components, *Unexp_Street* and *Unexp_Excl*. Both components have a significant positive coefficient; the coefficient is 0.1103 (t = 13.57) on *Unexp_Street* and 0.0178 (t = 13.40) on *Unexp_Excl*. These results provide initial evidence on *Q1b*, revealing a positive association between analysts' quarter-ahead GAAP earnings forecasts and unexpected exclusions.[14]

---

[12] If we do not control for *Unexp_Excl*, the coefficient on *Unexp_Street* is 1.7226 (untabulated).

[13] Bradshaw et al. (2018) find that unexpected exclusions are value relevant when GAAP earnings and street earnings provide different signals, such as when firms beat the street earnings forecast but miss this forecast with their GAAP earnings. We revisit this finding in section 4.5.

[14] We observe similar results when we analyze analysts' street forecast revisions (untabulated). In an additional analysis, we also consider if analysts differentially respond to unexpected exclusions. To do so, we proxy for analyst effort using negative one multiplied by the average number of firms followed by the firm's analysts, i.e., the sum of the number of firms covered by a firm's analysts in a particular quarter, divided by the number of analysts covering the firm in that quarter (e.g., Barth, Kasznik, and McNichols 2001). We find a positive association between $Revise\_GAAP_{jq+1}$ and the interaction of *Unexp_Excl* and this analyst effort proxy.

For exclusions forecast revisions in Panel B of Table 3, column 1 reports a significant positive coefficient of 0.0011 (t = 4.69) on *Unexp_GAAP*. In column 2, both components of unexpected GAAP earnings have a significant coefficient; the coefficient is −0.0009 (t = −2.20) on *Unexp_Street* and 0.0023 (t = 5.39) on *Unexp_Excl*, providing additional evidence on *Q1b*. Interestingly, analysts' next-quarter expected exclusions are revised to exclude even more income-decreasing items when unexpected street earnings are higher. However, exclusion forecast revisions are *positively* associated with unexpected exclusions, which is inconsistent with the notion that exclusions are transitory.

4.3 Nature and persistence of unexpected exclusions

To provide insight into the nature and persistence of unexpected and expected exclusions, we examine their association with GAAP earnings items, both individually and relative to each other. Descriptive statistics for the earnings items we examine is provided in Panel A of Table 4. Most of the items have a zero median, either because they are reported infrequently or because they have both income increasing and decreasing values (e.g., discontinued items, non-recurring taxes, and other special items). In aggregate, *Income_Recur* and *Income_Nonrecur* have respective means of −0.0155 and −0.0024.

Panel B of Table 4 presents the results of regressions estimating equation 6 using expected exclusions (column 1) and unexpected exclusions (column 2) as the dependent variable. In column 1, we find that *expected* exclusions are significantly positively associated with depreciation and amortization expense, discontinued items, gains and losses, goodwill impairment, non-recurring taxes, other special items, R&D expense, restructuring costs, and stock compensation expense at the ten percent level or better. In contrast to Doyle, Jennings, and Soliman (2013), who use special items to proxy for

expected exclusions and all other exclusions to proxy for unexpected exclusions, we find that expected exclusions cover a broader range of GAAP earnings items.

In column 2, we report that *unexpected* exclusions are positively associated with depreciation and amortization expense, discontinued items, gains and losses, goodwill impairment, non-recurring taxes, other special items, restructuring costs, stock compensation expense, and writedowns. The largest associations with unexpected exclusions are writedowns (coefficient = 3.1403), gains and losses (2.4608), and restructuring costs (1.3866). In column 3, we present the difference between columns 1 and 2, with F-values in parentheses. We observe a significantly larger coefficient on unexpected exclusions than expected exclusions for all earnings items except extraordinary items and stock compensation expense. In columns 4 through 6, we repeat the analysis for the subset of 51,929 firm-quarter observations for which total exclusions are non-zero. We find results that are similar to those for the full sample. The only exception is that we find a significant negative relation ($t = -1.71$) between writedowns and expected exclusions in the smaller subsample.[15]

In Panel C of Table 4, we regress exclusions on the sum of both recurring and non-recurring earnings items, as in equation 7. In columns 1 and 2, we find a positive association between expected and unexpected exclusions and both recurring and non-recurring earnings items.[16] Column 3 presents the difference in coefficients between columns 1 and 2, with F-values in parentheses. We observe a significantly larger coefficient

[15] Our results add to Whipple's (2015) finding that, in a hand-collected sample, analysts' expected earnings exclusions reflect stock compensation expense, amortization expense, and gains/losses.

[16] In untabulated analyses, we continue to find statistically significant coefficients on both recurring and non-recurring items when we re-estimate equation 7 after including industry fixed effects, when we separately examine the four fiscal quarters, and when we standardize the independent variables.

magnitude for unexpected exclusions than expected exclusions for both *Income_Recur* and *Income_Nonrecur*. Columns 4 through 6 include only the subsample of firm-quarters for which total exclusions are non-zero. We find similar evidence for this subsample. This evidence suggests that unexpected exclusions are more highly associated with transitory items such as write-downs at the end of a quarter than expected exclusions. However, unexpected exclusions are also more highly associated with recurring items than expected exclusions. Overall, our results are consistent with unexpected exclusions capturing less permanent items than expected exclusions, but with unexpected exclusions being associated with both recurring and non-recurring items.[17]

To provide evidence related to *Q2a*, we next examine the persistence of exclusions by estimating equation 8. In column 1 of Table 5, Panel A, we include only street earnings (*Street_Earn*) and find a significantly positive coefficient (0.9047, t = 69.42), consistent with prior research. In column 2, we include street earnings and total exclusions. We find a significant positive coefficient on *Total_Excl_Earn* (0.3441, t = 10.99). We note that this coefficient is smaller than the coefficient on *Street_Earn* (0.9091, t = 69.94), consistent with prior research that suggests that exclusions are less persistent that street earnings. Interestingly, after disaggregating into expected and unexpected exclusions in column 3, we find a coefficient on *Exp_Excl_Earn* (1.0518, t = 31.43) that is significantly higher than the coefficient on street EPS (0.9175, t = 72.82), based on an F-test ($p < 0.01$). We also find a positive coefficient on *Unexp_Excl_Earn* (0.2063, t = 7.05), significantly lower than the

[17] In untabulated tests, we collapse the individual earnings items into summary variables that capture income-decreasing and income-increasing items, since prior research finds that analysts are more likely to exclude income-decreasing items (Bradshaw and Sloan 2002; Heflin, Hsu, and Jin 2015). We find that expected and unexpected exclusions are each a function of both income-increasing and income-decreasing earnings items.

coefficient on *Exp_Excl_Earn* (p-value of F-test < 0.01). This evidence suggests that unexpected exclusions capture items that are less persistent than expected exclusions but are significantly positively associated with future earnings. Our finding that expected exclusions are more persistent than unexpected exclusions, and no less persistent than street earnings, is contrary to prior research that assumes all exclusions are less persistent than street earnings. We conclude that both expected and unexpected exclusions are associated with future earnings.[18]

In columns 4 and 5 of Panel A, we re-estimate equation 8 after replacing the dependent variable with each of next-quarter ahead operating earnings and cash flows from operations. We find that expected exclusions are positively associated with future operating earnings but not with future cash flows. In addition, we find a positive but lower relation between unexpected exclusions and future operating earnings and do not find a significant relation between unexpected exclusions and future cash flows. This evidence is consistent with exclusions capturing non-cash earnings items (Whipple 2015).

Panel B of Table 5 provides results when we re-estimate equation 8 after replacing the dependent variable with each of four-quarter-ahead GAAP earnings, operating earnings, and cash flows. Results are similar to those for one-quarter-ahead performance except that there is a significant negative relation between both expected and unexpected exclusions and four-quarter-ahead cash flows. Overall, the evidence suggests that both expected and unexpected exclusions are positively associated with future earnings.

[18] In untabulated analyses, we examine the likelihood that expected exclusions or unexpected exclusions occur, and find that each is associated with the magnitude of both recurring and non-recurring items.

To provide evidence on *Q2b*, out-of-sample tests of the forecast accuracy of models that incorporate total exclusions or expected and unexpected exclusions are reported in Panel C of Table 5. Our baseline model includes only $Street\_Earn_q$; our total exclusions model includes $Street\_Earn_q$ and $Total\_Excl\_Earn_{jq}$, and our disaggregated exclusions model includes $Street\_Earn_q$, $Exp\_Excl\_Earn_{jq}$, and $Unexp\_Excl\_Earn_{jq.}$

Relative to the baseline model that includes only street earnings, we find that including total exclusions in the quarter-ahead (four-quarter ahead) GAAP earnings forecasting model improves forecast accuracy for 59.0 percent (60.1 percent) of the observations and results in significant mean and median improvement in forecast accuracy. Relative to the total exclusions model, disaggregating into expected and unexpected exclusions in the quarter-ahead (four-quarter-ahead) GAAP earnings forecasting model improves forecast accuracy for 59.0 percent (60.3 percent) of the observations and results in significant mean and median improvement in forecast accuracy. This evidence corroborates the findings in the previous panels of Table 5 that incorporating the information in unexpected and expected exclusions is informative for forecasting.

4.4 Unexpected exclusions when earnings meet street but not GAAP forecasts

We next turn to our third set of research questions. Bradshaw et al. (2018) conclude that unexpected exclusions used to meet street but not GAAP earnings are associated with transitory items because they are more associated with non-operating line items than operating income. The evidence in the previous tables suggests, however, that unexpected exclusions are pervasive and associated with both recurring and nonrecurring items. To provide further evidence on whether unexpected exclusions related to meet street but not GAAP behavior are driven by misestimated forecasted recurring exclusions or un-

forecasted nonrecurring exclusions, we distinguish between unexpected exclusions in situations in which analysts did not forecast exclusions (i.e., there are zero expected exclusions) versus situations in which analysts forecasted but misestimated exclusions (i.e., there are non-zero expected exclusions). As shown in Panel B of Table 1, for the 51,929 firm-quarters with non-zero total exclusions, 22,727 firm-quarters (44 percent) have zero expected exclusions while 29,202 firm-quarters (56 percent) have non-zero expected exclusions. This suggests that the mis-estimation of forecasted exclusions is pervasive.

Before proceeding to large-sample regression tests, we examine the components of unexpected exclusions for a sub-sample of hand-collected analyst reports to gain insights into the items underlying misestimated forecasted versus un-forecasted excluded earnings items. Specifically, we randomly select 50 firm-quarters with non-zero unexpected exclusions for which analysts had zero expected exclusions (resulting in 372 analyst-firm-quarter observations), and 50 firm-quarters with non-zero unexpected exclusions for which analysts had non-zero expected exclusions (resulting in 422 analyst-firm-quarter observations). Details of the analyses are provided in Appendix B. In the sample of hand-collected analysts' reports, we observe that forecasted but misestimated exclusions primarily represent errors in forecasting stock-based compensation, amortization, pension costs, and other items, while un-forecasted excluded earnings items primarily reflect GAAP items such as gains and losses and tax-related items, and other items.

To provide evidence on *Q3a*, we examine the frequency of earnings meeting or beating street but not GAAP forecasts when analysts forecast versus do not forecast exclusions. In this analysis, we focus on the sub-sample of 51,497 observations with non-zero total and unexpected exclusions. Table 6 provides the descriptive statistics and

frequencies of earnings meeting or beating forecasts for the sub-samples of observations for which analysts did not forecast exclusions (i.e., expected exclusions are zero) and observations for which analysts forecasted exclusions (i.e., expected exclusions are non-zero). First, we observe that in the majority of cases, expected exclusions are non-zero (28,770 of the 51,497).[19] Second, we find that earnings meet or beat street but not GAAP forecasts 5,998 times (41.9 percent of the *MeetStreetNotGAAP* observations) when expected exclusions are zero and in 8,314 times (58.1 percent of the *MeetStreetNotGAAP* observations) when there are non-zero expected exclusions. This difference is significant at the one percent level.

Our evidence indicates that meeting street but not GAAP forecasts is more (less) likely to occur when expected exclusions are non-zero (zero), suggesting that meeting street but not GAAP forecasts is more likely associated with misestimated forecasted exclusions than with un-forecasted nonrecurring exclusions. This evidence is contrary to the suggestion in Bradshaw et al. (2018) that unexpected exclusions used to meet street but not GAAP earnings are more likely driven by transitory items.

To provide evidence on *Q3b* and the information content of unexpected exclusions when earnings meet street but not GAAP earnings and when there are non-zero expected exclusions, Table 7 reports on the persistence of unexpected exclusions conditional on meeting street but not GAAP earnings and conditional on non-zero expected exclusions. We estimate equation 8 for quarter-ahead (four-quarter-ahead) GAAP earnings, operating earnings, and cash flow in columns 1, 2, and 3 (4, 5 and 6), respectively. We find a positive

[19] Note that we exclude from this analysis 5,034 cases in which total exclusions are zero but unexpected exclusions are non-zero (i.e., analysts forecast exclusions that do not occur) and 432 observations in which expected exclusions are non-zero but unexpected exclusions are zero (i.e., analysts perfectly forecast excluded items).

coefficient on the interaction between *Unexp_Excl_Earn* and *MeetStreetNotGAAP* for quarter-ahead GAAP earnings (0.1229, t = 1.90) and quarter-ahead operating earnings (0.1111, t = 2.27). We also find a significant positive coefficient on the interaction between *Unexp_Excl_Earn* and *Exp_Excl_Ind* for quarter-ahead GAAP earnings (0.0713, t = 1.75) and quarter-ahead operating earnings (0.0675, t = 2.00). This evidence indicates that unexpected exclusions are more persistent when earnings meet or beat street but not GAAP forecasts and when analysts forecasted exclusions. Together, the evidence in Tables 6 and 7 suggest that meeting street but not GAAP forecasts is unlikely to be driven by un-forecasted nonrecurring items.

Table 8 examines whether the market and analysts' reactions to unexpected exclusions differ based on whether analysts forecasted exclusions and whether unexpected exclusions yield earnings that meet street but not GAAP forecasts. We re-estimate equations 4 and 5 and interact *Unexp_Street* and *Unexp_Excl* with *MeetStreetNotGAAP* and *Exp_Excl_Ind*. Interestingly, we find that the market places less weight on unexpected exclusions when earnings meet street but not GAAP earnings. In column 1, the coefficient on *Unexp_Street* × *MeetStreetNotGAAP* is insignificant (0.5022, t = 0.78) and the coefficient on *Unexp_Excl* × *MeetStreetNotGAAP* is negative and significant (−0.1873, t = −3.42). Investors place incrementally more weight on street earnings (0.5875, t = 4.05) when analysts forecasted exclusions.

With respect to the analyst response, we find that analysts place less weight on both unexpected street earnings and unexpected exclusions in revising their GAAP forecasts when earnings meet or beat street but not GAAP forecasts. In column 2, the coefficient on *Unexp_Street* × *MeetStreetNotGAAP* is negative and significant (−0.1141, t = −3.71) and the

coefficient on *Unexp_Excl* × *MeetStreetNotGAAP* is negative and significant (−0.0128, *t* = −1.99). Analysts place more weight on unexpected exclusions that represent misestimated, forecasted exclusions. The coefficient on *Unexp_Excl* × *Exp_Excl_Ind* is positive and significant (0.0081, *t* = 1.85). Overall, the results suggest that both investors and analysts place less weight on unexpected exclusions when earnings meet street but not GAAP forecasts and that analysts place more weight on unexpected exclusions when analysts forecasted but misestimated exclusions.

4.5 Earnings response coefficients by signal of street vs GAAP earnings

The results reported in Table 2 to provide evidence on *Q1a* suggest that the market considers unexpected exclusions to be value relevant. While not the primary goal of the study, Bradshaw et al. (2018) directly examine the market reaction to unexpected exclusions based on whether or not street earnings meet or beat street and/or GAAP earnings forecasts. They conclude that unexpected earnings are value relevant when GAAP and street earnings provide different signals about the firm's performance.

In Panel A of Table 9, we examine the value relevance of unexpected exclusions for the sample partitioned based on whether or not street earnings meet or beat street and/or GAAP earnings forecasts using our sample, variable definitions, and control variables. Specifically, we regress market-adjusted buy-and-hold returns during the two-trading-day window beginning on the earnings announcement date (*CAR*) on *Unexp_GAAP*, *Unexp_Street*, and *Unexp_Excl*. We report the pooled results in column 1 and the results for the sample partitioned into those observations for which earnings do not meet street or GAAP forecasts (*MeetStreet*=0; *MeetGAAP*=0) in column 2, earnings do not meet street but meet GAAP forecasts (*MeetStreet*=0; *MeetGAAP*=1) in column 3, earnings meet street but do

not meet GAAP (*MeetStreet*=1; *MeetGAAP*=0) in column 4, and earnings meet street and GAAP forecasts (*MeetStreet*=1; *MeetGAAP*=1) in column 5. Consistent with our prior analyses, we include the sample of 100,890 firm-quarters for 2004 to 2017, use the detailed I/B/E/S data to construct the consensus forecast, include firm and earnings announcement control variables and year-quarter fixed effects, and cluster standard errors by firm and quarter-year. We find a positive and significant coefficient on *Unexp_Excl* for each of the partitions (0.1823, *t* = 4.23 in column 1; 0.2543, *t*=1.94 in column 2; 0.0949, *t*=2.00 in column 3; and 0.1221, *t*=1.75 in column 4). These findings indicate that unexpected exclusions are value relevant regardless of the signal provided.

We note that these findings are inconsistent with those provided in Bradshaw et al. (2018). We therefore attempt to replicate Table 6, Panel B of Bradshaw et al. (2018), using I/B/E/S's summary file's mean to represent the consensus forecast, restricting the sample to 56,759 observations for which total exclusions are non-zero, excluding control variables, and clustering standard errors by the earnings announcement date. The results are reported in Panel B of Table 9. Consistent with Bradshaw et al. (2018), we find that unexpected exclusions are value relevant when street and GAAP earnings provide different signals about the firm's performance. We find a positive and significant coefficient on *Unexp_Excl* only for the partitions in which *MeetStreet*=0/*MeetGAAP*=1 (0.2392, *t* = 2.30) and *MeetStreet*=1/*MeetGAAP*=0 (0.1493, *t*=3.31) but an insignificant coefficient on *Unexp_Excl* for the partitions in which *MeetStreet*=0/*MeetGAAP*=0 and *MeetStreet*=1/*MeetGAAP*=1. The findings suggest that the restricted sample, use of the summary consensus forecast, and lack of control variables leads to the finding that the value relevance of unexpected exclusions is limited to instances in which the street and

GAAP performance signals differ. We note that if we loosen any of the restrictions used in the Bradshaw et al. (2018) regression specification (i.e., we separately include control variables or include observations with zero actual exclusions or use I/B/E/S detailed data or cluster standard errors by earnings announcement date), we no longer find that the value relevance of unexpected exclusions is limited to those partitions in which street and GAAP provide different signals. Therefore, we conclude that the finding of value relevance of unexpected exclusions is robust and pervasive.

5. CONCLUSION

We evaluate the importance of unexpected exclusions from street earnings forecasts. We find a significant positive association between unexpected exclusions and earnings announcement returns as well as analysts' forecast revisions controlling for unexpected street earnings. These findings suggest that investors and analysts find unexpected exclusions to be informative about future earnings. We also find that, relative to analysts' expected exclusions, unexpected exclusions reflect both non-recurring and recurring items. Importantly, we find that unexpected exclusions are less persistent than expected exclusions but positively associated with future earnings, and that separating exclusions into expected and unexpected exclusions improves forecasts of future earnings.

We observe that when unexpected exclusions yield earnings that meet or beat street but not GAAP forecasts, analysts are significantly more likely to have forecasted, but misestimated, exclusions. This evidence suggests that meeting or beating street but not GAAP earnings is less likely to be driven by un-forecasted nonrecurring items (such as one-time charges). We also find evidence that unexpected exclusions are more persistent when

earnings meet or beat street but not GAAP forecasts and when analysts forecasted exclusions. Our evidence suggests that unexpected exclusions are value relevant and useful for forecasting future earnings and that unexpected exclusions to meet street but not GAAP earnings scenarios are more likely associated with misestimated recurring exclusions than by un-forecasted nonrecurring exclusions.

References

Baik, B., D. Farber, and K. Petroni. 2009. Analysts' incentives and Street earnings. *Journal of Accounting Research* 47 (1): 45–69.

Barth, M., I. Gow, and D. Taylor. 2012. Why do pro forma and Street earnings not reflect changes in GAAP? Evidence from SFAS 123R. *Review of Accounting Studies* 17 (3): 526-562.

Bentley, J. W. T. E. Christensen, K. H. Gee, and B. C. Whipple. 2018. Disentangling Managers' and Analysts' Non-GAAP Reporting. *Journal of Accounting Research* 56 (4): 1039-1081.

Bhattacharya, N., E. L. Black, T. E. Christensen, and C. R. Larson. 2003. Assessing the relative in formativeness and permanence of pro forma earnings and GAAP operating earnings. *Journal of Accounting and Economics* 36 (1-3): 285-319.

Black, E. L., T. E. Christensen, P. V. Kiosse, and T. D. Steffen. 2019. The influence of manager-analyst interactions on street earnings: Evidence from conference calls and excluded analysts. Working paper, University of Oklahoma, University of Georgia, University of Exter, and Yale University.

Bochkay, K., S. Markov, M. Subasi, and E. Weisbrod. 2020. The acquisition and integration of street earnings: Evidence from a natural experiment. Working paper, University of Miami, University of Texas at Dallas, University of Maryland, and University of Kansas.

Bradshaw, M. T., T. E. Christensen, K. H. Gee, and B. C. Whipple. 2018. Analysts' GAAP earnings forecasts and their implications for accounting research. *Journal of Accounting and Economics* 66 (1): 46-66.

Bradshaw, M., and R. Sloan. 2002. GAAP versus The Street: An empirical assessment of two alternative definitions of earnings. *Journal of Accounting Research* 40 (1): 41–66.

Bratten, B., S. Larocque, and T. Yohn. 2020. Filling in the GAAPs in individual analysts' street earnings forecasts. Working Paper, University of Kentucky, University of Notre Dame, and Indiana University.

Brown, L. D., A. C. Call, M. B. Clement, and N. Y. Sharp. 2015. Inside the "black box" of sell-side financial analysts. *Journal of Accounting Research* 53 (1): 1-47.

Brown, L., and K. Sivakumar. 2003. Comparing the value relevance of two operating income measures. *Review of Accounting Studies* 8: 561-572.

Call, A., M. Hewitt, J. Watkins, and T. Yohn. 2020. Analysts' annual earnings forecasts and changes to the I/B/E/S database. *Review of Accounting Studies* (Forthcoming).

Chen, C.-Y. 2010. Do analysts and investors fully understand the persistence of the items excluded from Street earnings? *Review of Accounting Studies* 15: 32-69.

Chen, N., and A. Koester. 2020. Do analysts mind the GAAP? Evidence from the Tax Cuts and Jobs Act of 2017. University of Houston and Georgetown University working paper.

Christensen, T. E., K. J. Merkley, J. W. Tucker, and S. Venkataraman. 2011. Do managers use earnings guidance to influence street earnings exclusions? *Review of Accounting Studies* 16 (3): 501-527.

Collins, D.W., and S.P. Kothari. 1989. An analysis of intertemporal and cross-sectional determinants of earnings response coefficients. *Journal of Accounting and Economics* 11 (2-3): 143-181.

Dechow, P., C. Larson, and R. Resutek. 2020. The effect of accrual heterogeneity on accrual quality inferences. Working paper, University of Southern California, University of Houston, and University of Georgia.

Dempsey, S. 1989. Predisclosure information search incentives, analyst following, and earnings announcement price response. *The Accounting Review* 64 (4): 748–757.

Donelson, D, C. Koutney, and L. Mills. 2020. Nonrecurring income taxes: Highly predictable only during tax reform. Working paper, The University of Texas at Austin and George Mason University.

Doyle, J.T., J.N. Jennings, and M.T. Soliman. 2013. Do managers define non-GAAP earnings to meet or beat analyst forecasts? *Journal of Accounting and Economics* 56 (1): 40-56.

Doyle, J. T., R.J. Lundholm, and M. T. Soliman. 2003. The predictive value of expenses excluded from pro forma earnings. *Review of Accounting Studies* 8 (2): 145-174.

Easton, P., and M. Zmijewski. 1989. Cross-sectional variation in the stock market response to accounting earnings announcements. *Journal of Accounting and Economics* 11 (2-3): 116–141.

Fairfield, P.M., R.J. Sweeney, and T. L. Yohn. 1996. Accounting classification and the predictive content of earnings. *The Accounting Review* 71 (3): 337–355.

Frankel, R., S. McVay, and M. Soliman. 2011. Non-GAAP earnings and board independence. *Review of Accounting Studies* 16 (4): 719-744.

Guillamon-Saorin, E., H. Isidro, and A. Marques. 2017. Impression management and non-GAAP disclosure in earnings announcements. Forthcoming in *Journal of Business Finance & Accounting*.

Gu, Z., and T. Chen, 2004. Analysts' treatment of nonrecurring items in Street earnings. *Journal of Accounting and Economics* 38: 129-170.

Hayn, C. 1995. The information content of losses. *Journal of Accounting and Economics* 20 (2): 125-153.

Heflin, F., C. Hsu, and Q. Jin. 2015. Accounting conservatism and Street earnings. *Review of Accounting Studies* 20 (2): 674-709.

Huang, Q., and T.R. Skantz. 2016. The informativeness of pro forma and street earnings: an examination of information asymmetry around earnings announcements. *Review of Accounting Studies* 21 (1): 198-250.

Kaplan, Z., X. Martin, and Y. Xie. 2019. Truncating optimism. Working paper, Washington University in St. Louis.

Leung, E., and D. Veenman. 2018. Non-GAAP earnings disclosure in loss firms. *Journal of Accounting Research* 56 (4): 1083-1137.

McVay, S. 2006. Earnings management using classification shifting: An examination of core earnings and special items. *The Accounting Review* 81 (3): 501–531.

Shane, P. B., and T. Stock. 2006. Security analyst and stock market efficiency in anticipating tax-motivated income shifting. *The Accounting Review* 81 (1): 227–250.

Thomson Reuters, 2009. Methodology for Estimates: A Guide to Understand Thomson Reuters Methodologies, Terms, and Policies for the First Call and I/B/E/S Estimates Databases.

Whipple, B. 2015. The great unknown: why exclude 'other' items from non-GAAP earnings calculations in a post-Reg G world? Working paper, University of Georgia. Available at SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2480663.

APPENDIX A
Variable Definitions

Variable		Definition
ANF	=	The number of I/B/E/S analysts issuing EPS forecasts for firm *j* during year *t*
CAR	=	Market-adjusted buy-and-hold returns during the two-trading-day window beginning on the quarter *q* earnings announcement date for firm *j*
CF	=	Cash flow from operations for the quarter (based on OANCFY), scaled by common shares outstanding and then by assets per share
D&A expense	=	Compustat item DPQ (depreciation and amortization expense), scaled by market value and set equal to zero if missing
Discontinued items	=	Compustat item DOQ (discontinued items), scaled by market value and set equal to zero if missing
DISP	=	Standard deviation of I/B/E/S Street EPS forecasts for quarter *q*
Exp_Excl	=	*Expected Exclusions*, scaled by price
Exp_Excl_Earn	=	*Expected Exclusions,* scaled by assets per share
Exp_Excl_Ind	=	Indicator variable equal to 1 if *GAAP Forecast* differs from *Street Forecast*, zero otherwise
Expected Exclusions	=	*GAAP Forecast – Street Forecast*
Extraordinary items	=	Compustat items XIQ (extraordinary items), scaled by market value and set equal to zero if missing
GAAP Actual	=	Actual GAAP EPS for the quarter from I/B/E/S (GPS)
GAAP_Earn	=	*GAAP Actual*, scaled by assets per share
GAAP Forecast	=	Mean of individual analysts' latest forecasts of GAAP EPS from I/B/E/S (GPS) for firm *j* in quarter *q* made prior to the quarter *q* earnings release
Gains and losses	=	Compustat item GLPQ (Gain/loss), scaled by market value and set equal to zero if missing
Goodwill impairment	=	Compustat item GDWLIAQ (Impairment of goodwill after-tax), scaled by market value and set equal to zero if missing
Income_Nonrecur	=	The sum of *Discontinued items*, *Extraordinary items*, *Goodwill impairment*, *Non-recurring taxes*, *Restructuring charges*, and *Writedowns*
Income_Recur	=	The sum of *Gains and losses*, *Other special items*, *R&D expense*, and *Stock compensation expense*
Lev	=	Leverage of firm *j* as of the end of year *t-1*, calculated as long-term debt (Compustat item DLTT) scaled by total assets (Compustat AT)
Loss	=	Indicator variable that equals one if there is a loss in quarter *q*, and equals zero otherwise
MeetStreetNotGAAP	=	Indicator variable that equals one if quarter *q* earnings both meets or beats street earnings expectations and *does not* meet or beat

		GAAP earnings expectations (according to the median of the latest available individual analysts' forecasts of street and GAAP earnings made prior to the quarterly earnings release), and equals zero otherwise
MtoB	=	Market value as of the end of fiscal year *t-1*, from CRSP, divided by book value as of the end of fiscal year *t-1*, from Compustat for firm *j*
MV	=	Market value of firm *j* as of the end of year *t-1*, according to CRSP
Oper_Earn	=	Diluted earnings per share from operations (OEPSFQ), scaled by assets per share
Other special items	=	Compustat item SPIQ (Special items), scaled by market value, less *Gains and losses*, *Goodwill impairment*, *Restructuring charges*, and *Writedowns*
Non-recurring taxes	=	Compustat item NRTXTQ (Non-recurring taxes), scaled by market value and set equal to zero if missing
R&D expense	=	Compustat item XRDQ (Research and development expense), scaled by market value and set equal to zero if missing
Restructuring charges	=	Compustat item RCPQ (Restructuring cost pre-tax), scaled by market value and set equal to zero if missing
Revise_Excl	=	Mean revision of individual analysts' exclusions forecasts, scaled by price. For each analyst issuing both GAAP and street earnings forecasts, we compute the difference between the analyst's first forecast of quarter *q+1* earnings exclusions (aka, expected exclusions) made following the release of quarter *q* earnings and the same analyst's latest forecast of quarter *q+1* earnings exclusions made prior to the release of quarter *q* earnings.
Revise_GAAP	=	Mean revision of individual analysts' GAAP forecasts, scaled by price. For each analyst issuing both GAAP and street earnings forecasts, we compute the difference between the analyst's first forecast of quarter *q+1* GAAP earnings made following the release of quarter *q* earnings and the same analyst's latest forecast of quarter *q+1* GAAP earnings made prior to the release of quarter *q* earnings.
Stock compensation expense	=	Compustat item STKCPAQ (After-tax stock compensation), scaled by market value. If STKCPAQ is missing, this variable is set to equal Compustat item STKCOQ * (1-.35). If both STKCPAQ and STKCOQ are missing, this variable is set to equal zero.
Street Actual	=	Actual street EPS for the quarter from I/B/E/S (EPS)
Street_Earn	=	*Street Actual*, scaled by assets per share
Street Forecast	=	Mean of individual analysts' latest forecasts of street EPS from I/B/E/S (EPS) for firm *j* in quarter *q* made prior to the quarter *q* earnings release
Total Exclusions	=	*GAAP Actual – Street Actual*
Total_Excl_Earn	=	*Total Exclusions,* scaled by assets per share
Unexpected Exclusions	=	*Total Exclusions* less *Expected Exclusions*
Unexpected GAAP EPS	=	*GAAP Actual – GAAP Forecast*
Unexpected Street EPS	=	*Street Actual – Street Forecast*
Unexp_Excl	=	*Total Exclusions* less *Expected Exclusions*, scaled by price

Unexp_Excl_Earn	=	*Unexpected Exclusions,* scaled by assets per share
Unexp_GAAP	=	*GAAP Actual* less *GAAP Forecast*, scaled by price
Unexp_Street	=	*Street Actual* less *Street Forecast*, scaled by price
Writedowns	=	Compustat item WPDQ (Writedowns pre-tax), scaled by market value and set equal to zero if missing

APPENDIX B
Small sample review of analysts' unexpected exclusions

In order to better understand analysts' unexpected exclusions, we searched Investext (through Mergent) for analyst reports matching the individual analysts' forecasts in our sample. To do so, we required unexpected exclusions and total exclusions of at least five cents per share (positive or negative). We then formed two sub-samples, representing 1) firm-quarters with zero expected exclusions, and 2) firm-quarters with non-zero expected exclusions. To form each sub-sample, we required coverage from the I/B/E/S detailed file by at least five analysts for which we could identify the analyst and broker name using the I/B/E/S historical broker translation file. We then randomly selected fifty firm-quarters for which analysts had zero expected exclusions (resulting in 372 analyst-firm-quarter observations), and fifty firm-quarters for which analysts had non-zero expected exclusions (resulting in 422 analyst-firm-quarter observations).

Zero expected exclusions

The sub-sample of 372 analyst-firm-quarters with zero expected exclusions represents situations where all exclusions are unexpected – in other words, where GAAP earnings items are excluded at the earnings announcement. We located matching analyst reports for 108 (29 percent) of this subsample. For these 108 reports, we attempted to identify the components of exclusions based solely on the contents of the analyst report. (In other words, we did not extract or infer exclusions from the firm's earnings release.) For 41 of the 108 reports, we could not identify the components of exclusions. For the remaining 67 reports, we were able to identify the components of the excluded items. As reported in Panel A, exclusions were most likely to represent gains and losses (18 of 67, or 26.9 percent), tax-related items (10, or 14.9 percent), debt-related items, goodwill impairment, or discontinued items (6, or 9.0 percent for the latter three components). As an example of the wording used in an analyst report to explain excluded

items, a May 6, 2014 Deutsche Bank report on Tenet Healthcare by analyst Darren Lehrich states that Q1/2014 "Adj. EPS excludes $15M in after-tax impairments, restructuring and acquisition-related costs, legal fees and loss on debt extinguishment." In another example, Wells Fargo analyst Andrew Casey issued a January 28, 2013 report on Caterpillar Inc. which stated "Q4 2012 reported EPS of $1.04 included the previously announced $0.87 goodwill impairment charge related to Siwei. Excluding the charge, CAT generated Q4 2012 adjusted EPS of $1.91."

Non-zero expected exclusions

In the sub-sample of 422 analyst-firm-forecasts with non-zero expected exclusions, unexpected exclusions are more likely to represent misestimated expected exclusions. (For example, the analyst excluded $10 million of stock-based compensation (SBC) from their forecast, when in fact $11 million of SBC was ultimately reported by the firm.) We located matching analyst reports for 110 (26 percent) of the sample. For these 110 reports, we attempted to identify the components of exclusions based solely on the contents of the analyst report. For 52 of the 110 reports, we could not identify the components of exclusions (total, expected, or unexpected). For 19 of the reports, we could identify the components of total exclusions, but could not identify the components of expected nor unexpected exclusions. For the remaining 39 reports, we were able to identify the components of expected and unexpected exclusions, including the GAAP earnings components/items that were misestimated. As reported in Panel B, misestimated exclusions include the following items: stock-based compensation (22 of 39, or 56.4 percent), amortization (14, or 35.9 percent), and pension costs (5, or 12.8 percent). As an example of the wording used in an analyst report to explain excluded items, a February 16, 2012 Stephens research bulletin for Itron Inc. by analyst Stephen Sanders states "GAAP EPS of ($1.35) included … higher-than-expected restructuring charges ($65 mil. vs. guidance of $45 mil.)". For some analysts, we

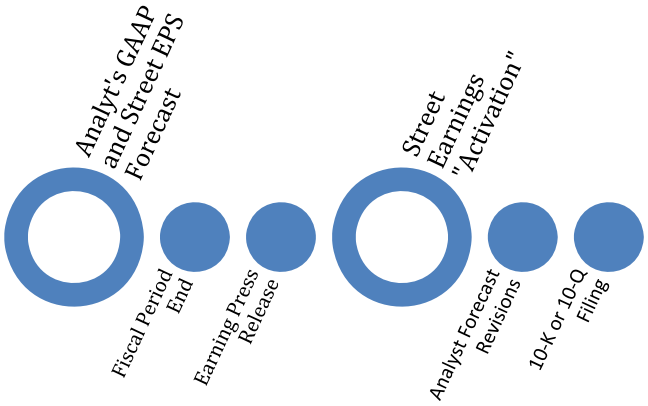
compared the actual, total amount of excluded items with the forecasted amounts included in the financial models contained in the analyst reports. For J.P. Morgan analyst Mark Moskowitz, excluded "options expense" of $0.14/share for NetApp in Q1/2012 (according to the analyst's August 18, 2011 report) compared with the analyst's $0.12/share forecast of options expense (according to the analyst's May 26, 2011 report.).

Table A1: Small sample review of analysts' unexpected exclusions

	Panel A Sample with zero expected exclusions		Panel B Sample with non-zero expected exlusions	
Sample of analyst-firm-quarters:				
Expected/unexpected identified			39	(b)
Expected/unexpected not identified	n/a		19	
Total exclusion components identified	67	(a)	58	
Could not identify exclusion components	41		52	
Matching analyst report not located	264		331	
Total sample	372		422	
	Number of components excluded	Percent of (a)	Number of components misestimated	Percent of (b)
Amortization	3	4.5	14	35.9
Debt	6	9.0	2	5.1
Disc Items	6	9.0	1	2.6
G/W impairment	6	9.0	0	0.0
Gains/Losses	18	26.9	1	2.6
Pension	1	1.5	5	12.8
Restructuring	5	7.5	3	7.7
Stock-based compensation	0	0.0	22	56.4
Tax-related	10	14.9	1	2.6
Writedown	3	4.5	0	0.0
Other	39	58.2	15	38.5

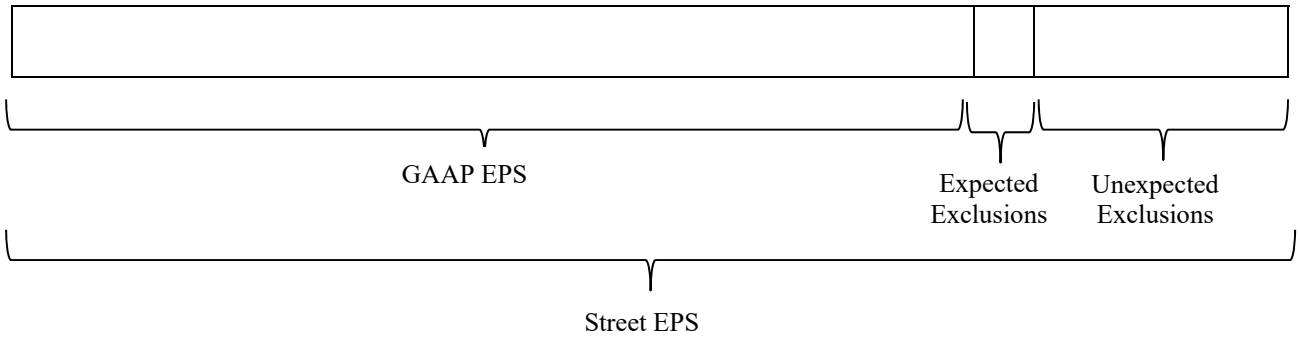
Percents total more than 100 as some analyst reports exclude multiple components/items.

Figure 1. Timeline of events surrounding the calculation of street earnings and exclusions



This figure summarizes the important events following *ex ante* GAAP and Street EPS forecasts made by analysts. Actual GAAP EPS (as well as GAAP EPS forecast error) can be determined immediately following the earnings press release. However, actual street EPS (as well GAAP EPS forecast error and total and unexpected exclusions) cannot be determined until after street EPS is calculated and reported by a forecast data aggregator such as I/B/E/S. Bochkay et al. (2020) refer to the release of street earnings as street earnings "activation" and report that the median delay following the earnings press release is 45 minutes for I/B/E/S. For additional context and events, refer to Bochkay et al. (2020, Figure 1) and Black, Christensen, Kiosse, and Steffen (2019, Figure 1).

Figure 2. De-composition of unexpected and expected exclusions implied by GAAP and Street EPS forecasts



Box sizes match the relative size of GAAP actual EPS vs street actual EPS, and the expected and unexpected portions of the exclusions in our sample.

Table 1
Sample Selection and Descriptive Statistics

Panel A: Sample Selection

	Firm-Quarters	Analyst-firm-quarters
Observations with I/B/E/S street forecasts available for upcoming quarter following prior-quarter Compustat earnings announcement date, during 2004-2017	153,080	1,009,022
Observations with non-missing Compustat and CRSP data	130,952	920,171
Observations with I/B/E/S GAAP forecasts available for upcoming quarter following prior-quarter Compustat earnings announcement date, during 2004-2017	116,657	449,473
Observations with non-missing Compustat and CRSP data	**100,890**	**406,335**

Table 1 (continued)

Panel B: Forecasts and I/B/E/S actual values of GAAP earnings, street earnings, and implied exclusions from street earnings

	N	Mean	Std. Dev.	P25	Median	P75
GAAP Forecast ($/share)	100,890	0.398	3.074	0.088	0.283	0.567
GAAP Actual ($/share)	100,890	0.344	2.855	0.050	0.270	0.580
Street Forecast ($/share)	100,890	0.412	0.739	0.110	0.305	0.590
Street Actual ($/share)	100,890	0.423	0.920	0.110	0.320	0.620
Expected Exclusions ($/share)	100,890	−0.014	2.985	−0.007	0.000	0.000
Positive *Expected Exclusions* ($/share)	5,478	0.330	12.793	0.004	0.014	0.050
Negative *Expected Exclusions* ($/share)	28,758	−0.111	0.247	−0.127	−0.055	−0.019
Unexpected Exclusions ($/share)	100,890	−0.065	3.914	−0.030	0.000	0.000
Positive *Unexpected Exclusions* ($/share)	19,887	0.288	5.464	0.013	0.043	0.160
Negative *Unexpected Exclusions* ($/share)	36,644	-0.336	5.083	-0.200	-0.065	-0.020
Total Exclusions ($/share)	100,890	−0.079	2.546	−0.070	0.000	0.000
Positive *Total Exclusions* ($/share)	11,976	0.453	7.042	0.030	0.090	0.300
Negative *Total Exclusions* ($/share)	39,953	-0.335	1.161	-0.260	-0.110	-0.040
Unexpected GAAP earnings, scaled by price ($Unexp\_GAAP_{j,q,t}$)	100,890	−0.004	0.115	−0.003	0.000	0.002
Unexpected street earnings, scaled by price ($Unexp\_Street_{j,q,t}$)	100,890	−0.000	0.059	−0.001	0.000	0.002
Unexpected exclusions earnings, scaled by price ($Unexp\_Excl_{j,q,t}$)	100,890	−0.004	0.097	−0.001	0.000	0.000
Unexp_Excl when Expected Exclusions = 0 and Total Exclusions ≠ 0 ($/share)	22,727	-0.114	1.014	-0.130	-0.030	0.030
Unexp_Excl when Expected Exclusions ≠ 0 and Total Exclusions ≠ 0 ($/share)	29,202	-0.138	7.219	-0.109	-0.022	0.010
CAR	100,890	0.003	0.082	−0.035	0.001	0.040
Revise_GAAP	93.094	−0.001	0.012	−0.001	−0.000	0.000
Revise_Excl	93,094	-0.000	0.007	0.000	0.000	0.000
MeetStreetNotGAAP	100,890	0.143	0.351	0.000	0.000	1.000

Table 1 (continued)

Panel C: Total, Expected, and Unexpected Exclusions ($/share)

				Total Exclusions			*Expected Exclusions*			*Unexpected Exclusions*		
Year	Firm-quarters with street EPS forecast	Firm-quarters with GAAP EPS forecast	(2) as % of (1)	% of (2) with non-zero	Mean as % of GAAP EPS	Mean	% of (2) with non-zero	Mean as % of GAAP EPS	Mean	% of (2) with non-zero	Mean as % of GAAP EPS	Mean
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
2004	9,049	2,609	28.8	38.0	-0.3	-0.0395	21.8	-1.1	-0.0171	36.1	0.9	-0.0224
2005	9,403	3,575	38.0	41.3	2.3	-0.0196	21.8	6.8	0.0347	39.8	-4.5	-0.0542
2006	9,522	4,710	49.5	44.7	-1.3	-0.0261	25.9	11.6	0.1780	42.7	-12.9	-0.2040
2007	9,276	5,927	63.9	41.0	-3.8	-0.0459	21.3	-4.3	-0.0171	39.8	0.4	-0.0287
2008	7,839	5,940	75.8	41.3	0.7	-0.1767	21.3	-3.2	-0.0218	39.9	3.9	-0.1549
2009	8,927	7,868	88.1	41.0	-6.9	-0.0743	20.7	-5.6	-0.0153	39.2	-1.3	-0.0589
2010	9,105	8,261	90.7	43.3	-2.2	-0.0327	21.2	-4.6	-0.0160	41.2	2.4	-0.0167
2011	8,719	8,073	92.6	48.9	-1.5	-0.0601	23.9	-5.2	-0.0227	47.0	3.7	-0.0375
2012	8,739	8,059	92.2	52.9	-7.2	0.0192	26.7	-12.0	0.0101	50.7	4.8	0.0091
2013	9,584	8,618	89.9	54.4	3.9	-0.0638	28.3	-4.0	-0.0223	52.1	7.9	-0.0415
2014	10,118	9,156	90.5	55.5	-8.7	-0.0922	30.1	-3.9	-0.0282	53.5	-4.8	-0.0641
2015	10,201	9,382	92.0	55.5	-4.8	-0.1582	31.8	-4.7	-0.0368	54.4	-0.1	-0.1214
2016	10,249	9,362	91.3	56.3	-0.1	-0.1399	34.4	-2.3	-0.0461	55.2	2.2	-0.0938
2017	10,221	9,350	91.5	62.4	4.6	-0.1033	35.5	-8.9	-0.0530	61.7	13.5	-0.0503
2004–2017	130,952	100,890	77.0	50.1	−2.1	−0.0789	27.0	−4.0	−0.0138	48.5	2.0	−0.0651

This table contains details regarding sample selection, in Panel A, and descriptive statistics, in Panels B and C. Panel B provides descriptive statistics on analysts' forecasts and the actual value from I/B/E/S of GAAP earnings, street earnings, and the implied earnings exclusions for the 100,890 firm-quarters in our 2004 to 2017 sample with non-missing Compustat and CRSP data. Panel C provides annual details on the number of firm-quarters with street EPS forecasts and with GAAP EPS forecasts as well as mean per-share values of total, expected, and unexpected earnings exclusions. In Panel C, columns 5, 8, and 11 exclude the 718 firm-quarters with zero GAAP EPS. All variables are presented before winsorizing. Variable definitions are in the Appendix.

Table 2
Earnings Response Coefficients

Dependent variable = *CAR*	Pred. sign	(1)		(2)	
Unexp_GAAP	+	0.3727	***		
		(5.76)			
Unexp_Street	+			1.7451	***
				(9.10)	
Unexp_Excl	+			0.1639	***
				(5.34)	
ANF	?	−0.0002	**	−0.0002	***
		(−2.49)		(−3.39)	
DISP	?	0.0060		0.0202	***
		(1.19)		(3.37)	
lnMV		0.0005		0.0004	
		(1.10)		(0.95)	
MtoB		0.0005	***	0.0004	***
		(6.05)		(5.96)	
Lev		−0.0012		−0.0009	
		(−0.38)		(−0.29)	
Loss		−0.0091	***	−0.0060	***
		(−6.40)		(−4.87)	
Fixed Effects		Year-Qtr		Year-Qtr	
Number of firm-quarters		100,890		100,890	
Adj. R^2		0.020		0.045	

This table provides the results of OLS regressions of market-adjusted buy-and-hold returns during the two-trading-day window beginning on the earnings announcement date on unexpected components of earnings, including unexpected GAAP earnings (*Unexp_GAAP*), unexpected street earnings (*Unexp_Street*), and unexpected earnings from excluded items (*Unexp_Excl*) for the 100,890 firm-quarters in our 2004 to 2017 sample. Each of the independent variables is winsorized before inclusion in the regressions. T-statistics are presented in parentheses based on standard errors clustered by firm and quarter-year. ***, **, and * denote significance at the one, five and ten percent levels, respectively, based on two-tailed tests. Variable definitions are in Appendix A.

Table 3
Analysts' Revisions

Panel A: Analyst GAAP Forecast Revisions

Dependent variable = *Revise_GAAP*

	Pred. sign	(1)		(2)	
Unexp_GAAP	+	0.0287	***		
		(7.66)			
Unexp_Street	+			0.1103	***
				(13.57)	
Unexp_Excl	+			0.0178	***
				(13.40)	
ANF	?	−0.0000	***	−0.0000	***
		(−6.92)		(−8.11)	
DISP	?	−0.0043	***	−0.0035	***
		(−5.67)		(−4.94)	
lnMV		0.0003	***	0.0003	***
		(15.39)		(15.42)	
MtoB		0.0000	***	0.0000	***
		(6.91)		(7.21)	
Lev		−0.0005	***	−0.0005	***
		(−4.08)		(−4.03)	
Loss		−0.0006	***	−0.0004	***
		(−6.34)		(−5.05)	
Fixed Effects		Year-Qtr		Year-Qtr	
Number of firm-quarters		91,853		91,853	
Adj. R^2		0.077		0.109	

Table 3 (continued)

Panel B: Analyst Exclusion Forecast Revisions

Dependent variable = *Revise_Excl*

	Pred. sign	(1)		(2)	
Unexp_GAAP	+	0.0011	***		
		(4.69)			
Unexp_Street	+			−0.0009	**
				(−2.20)	
Unexp_Excl	+			0.0023	***
				(5.39)	
ANF	?	−0.0000	**	−0.0000	*
		(−2.18)		(−1.86)	
DISP	?	0.0000		0.0000	
		(1.10)		(0.51)	
lnMV		0.0000		0.0000	
		(1.42)		(1.41)	
MtoB		0.0000		0.0000	
		(1.30)		(1.09)	
Lev		0.0000		0.0000	
		(1.07)		(1.27)	
Loss		−0.0000	**	−0.0000	***
		(−4.50)		(−4.31)	
Fixed Effects		Year-Qtr		Year-Qtr	
Number of firm-quarters		91,853		91,853	
Adj. R^2		0.003		0.005	

This table provides the results of OLS regressions of the mean revision in the consensus analyst forecasts of next-quarter GAAP earnings (in Panel A) and excluded earnings (in Panel B) made during the quarter following release of prior-quarter earnings on unexpected components of prior-quarter earnings, including unexpected GAAP earnings (*Unexp_GAAP*), unexpected street earnings (*Unexp_Street*), and unexpected earnings from excluded items (*Unexp_Excl*) for the 91,853 firm-quarters in our 2004 to 2017 sample for which we can observe the revision of individual analysts' forecasts of next-quarter earnings. Each of the variables is winsorized before inclusion in the regressions. T-statistics are presented in parentheses based on standard errors clustered by firm and quarter-year. ***, **, and * denote significance at the one, five and ten percent levels, respectively, based on two-tailed tests. Variable definitions are in Appendix A.

Table 4
Association Between Analysts' Earnings Exclusions and Compustat Earnings

Panel A: Descriptive statistics for Compustat earnings items

	% non-zero	Mean	Std. Dev.	P1	Median	P99
D&A expense^{R}	90.4	−0.0105	0.0190	−0.0796	−0.0056	0.0000
Discontinued items^{N}	15.5	0.0000	0.0114	−0.0066	0.0000	0.0083
Extraordinary items^{N}	0.2	-0.0000	0.0070	0.0000	0.0000	0.0000
Gains and losses^{R}	4.6	0.0002	0.0061	-0.0000	0.0000	0.0031
Goodwill impairment^{N}	2.4	−0.0017	0.0318	−0.0153	0.0000	0.0000
Non-recurring taxes^{N}	7.2	0.0003	0.0148	−0.0062	0.0000	0.0112
Other special items^{R}	48.5	−0.0002	0.0129	−0.0170	0.0000	0.0122
R&D expense^{R}	34.3	−0.0034	0.0083	−0.0354	0.0000	0.0000
Restructuring costs^{N}	22.2	−0.0005	0.0042	−0.0092	0.0000	0.0001
Stock compensation expense^{R}	89.6	−0.0017	0.0036	−0.0120	−0.0009	0.0000
Writedowns^{N}	5.0	−0.0004	0.0096	−0.0061	0.0000	0.0000
Income_Recur	98.4	−0.0155	0.0254	−0.0990	−0.0102	0.0036
Income_Nonrecur	38.8	−0.0024	0.0389	−0.0626	0.0000	0.0220

Table 4 (continued)

Panel B: Association between analysts' earnings exclusions and Compustat earnings items

Sample =	Full Sample						*Total_Excl* ≠ 0					
Dependent variable =	*Exp_Excl* (1)		*Unexp_Excl* (2)		(1) – (2) (3)		*Exp_Excl* (4)		*Unexp_Excl* (5)		(4) – (5) (6)	
D&A expense^{R}	0.0067	***	0.1425	***	−0.1358	***	0.0031		0.2402	***	−0.2371	***
	(2.84)		(6.35)		(35.10)		(0.92)		(6.49)		(39.59)	
Discontinued items^{N}	0.0529	***	1.2625	***	−1.2096	***	0.0624	***	1.7245	***	−1.6621	***
	(4.61)		(12.65)		(148.70)		(4.56)		(15.72)		(226.02)	
Extraordinary items^{N}	−2.7849		−2.4673		−0.3176		1.9193		−4.1606		6.0799	
	(−1.45)		(−0.20)		(0.00)		(0.71)		(−0.25)		(0.10)	
Gains and losses^{R}	0.1349	***	2.4608	***	−2.3259	***	0.2938	***	3.4091	***	−3.1153	***
	(4.58)		(13.69)		(159.18)		(7.96)		(15.01)		(177.34)	
Goodwill impairment^{N}	0.0163	***	0.9049	***	−0.8886	***	0.0141	***	1.1001	***	−1.086	***
	(10.14)		(10.58)		(109.57)		(9.62)		(14.04)		(187.08)	
Non-recurring taxes^{N}	0.0087	***	0.9018	***	−0.8931	***	0.0107	**	0.9623	***	−0.9516	***
	(4.41)		(19.48)		(392.32)		(2.60)		(17.85)		(357.94)	
Other special items^{R}	0.0707	***	0.6995	***	−0.6288	***	0.0537	***	0.8768	***	−0.8231	***
	(8.89)		(11.83)		(128.74)		(7.16)		(23.11)		(385.64)	
R&D expense^{R}	0.1127	***	−0.0208		0.1335	***	0.2090	***	−0.0264		0.2354	***
	(12.46)		(−1.55)		(69.49)		(19.35)		(−1.31)		(95.60)	
Restructuring costs^{N}	0.2526	***	1.3866	***	−1.134	***	0.1293	***	1.2207	***	−1.0914	***
	(10.71)		(12.44)		(106.03)		(5.85)		(7.26)		(39.06)	
Stock comp. expense^{R}	0.2825	***	0.2250	***	0.0575		0.4539	***	0.3828	***	0.0711	
	(10.90)		(4.97)		(0.95)		(12.69)		(4.99)		(0.53)	
Writedowns^{N}	0.0194		3.1403	***	−3.1209	***	−0.0349	*	3.5308	***	−3.5657	***
	(1.17)		(8.26)		(67.20)		(−1.71)		(11.00)		(119.12)	
Fixed Effects	Year-Qtr		Year-Qtr				Year-Qtr		Year-Qtr			
Number of firm-quarters	100,890		100,890				51,929		51,929			
Adj. R^2	0.179		0.376				0.285		0.459			

Table 4 (continued)

Panel C: Association between analysts' earnings exclusions and recurring and non-recurring earnings items

Sample =	Full Sample			*Total_Excl* ≠ 0		
Dependent variable =	*Exp_Excl*	*Unexp_Excl*	(1) – (2)	*Exp_Excl*	*Unexp_Excl*	(4) – (5)
	(1)	(2)	(3)	(4)	(5)	(6)
Income_Recur	0.0433 ***	0.1498 ***	−0.1065 ***	0.0586 ***	0.2401 ***	−0.1815 ***
	(13.27)	(11.14)	(57.18)	(12.20)	(10.78)	(59.25)
Income_Nonrecur	0.0177 ***	0.7862 ***	−0.7685 ***	0.0153 ***	0.9537 ***	−0.9384 ***
	(5.79)	(11.76)	(141.85)	(8.56)	(18.92)	(347.31)
Fixed Effects	Year-Qtr	Year-Qtr		Year-Qtr	Year-Qtr	
Number of firm-quarters	100,890	100,890		51,929	51,929	
Adj. R^2	0.072	0.440		0.087	0.551	
Income_Recur –	0.0256 ***	−0.6364 ***		0.0433 ***	−0.7136 ***	
Income_Nonrecur (F-stat)	(46.86)	(76.29)		(92.16)	(120.89)	

This table presents the results of tests of the association between analysts' earnings exclusions and Compustat earnings items. Panel A presents descriptive statistics (N= 100,890 firm-quarters) for the Compustat earnings items used in our tests. Panels B and C present the results of OLS regressions where the dependent variable is either *Exp_Excl* or *Unexp_Excl. Exp_Excl*, i.e., expected exclusions, is the difference between the consensus analyst GAAP and street EPS forecasts, scaled by price. *Unexp_Excl*, i.e., unexpected exclusions, is the difference between *Total_Excl* (the difference between GAAP and street actual EPS, scaled by price) and *Exp_Excl*. The dependent variables are regressed on individual Compustat earnings items in Panel B, and on *Income_Recur* and *Income_Nonrecur* in Panel C, each of which is scaled by market value. *Income_Recur* represents the sum of depreciation and amortization expense, gains and losses, other special items, research and development expense, and stock compensation expense (items denoted with superscript ^{R} in Panel B), while *Income_Nonrecur* represents the sum of discontinued items, extraordinary items, goodwill impairment, non-recurring taxes, restructuring costs, and writedowns (items denoted with superscript ^{N} in Panels A and B). All variables are winsorized before inclusion in the regressions. In columns 1, 2, 4, and 5 of Panels B and C, t-statistics appear in parentheses based on standard errors clustered by firm and quarter-year. In the third (sixth) column of Panels B and C, we present the difference in coefficients in columns 1 and 2 (4 and 5) using seemingly unrelated regressions, with F-values in parentheses. ***, **, and * denote significance at the one, five and ten percent levels, respectively, using two-tailed tests. Variable definitions are in Appendix A.

Table 5
Regressions of future performance on street earnings and earnings exclusions

Panel A: One-quarter ahead tests

Dependent variable =		$GAAP\_Earn_{q+1}$		$GAAP\_Earn_{q+1}$		$GAAP\_Earn_{q+1}$		$Oper\_Earn_{q+1}$		CF_{q+1}	
	Pred. sign	(1)		(2)		(3)		(4)		(5)	
$Street\_Earn_q$	+	0.9047	***	0.9091	***	0.9175	***	0.8889	***	0.8381	***
		(69.42)		(69.94)		(72.82)		(62.71)		(59.02)	
$Total\_Excl\_Earn_q$	+			0.3441	***						
				(10.99)							
$Exp\_Excl\_Earn_q$	+					1.0518	***	0.9552	***	−0.0678	
						(31.43)		(26.49)		(−1.60)	
$Unexp\_Excl\_Earn_q$	+					0.2063	***	0.1318	***	0.0249	
						(7.05)		(5.85)		(1.15)	
Fixed Effects		Year-Qtr		Year-Qtr		Year-Qtr		Year-Qtr		Year-Qtr	
Number of firm-quarters		100.435		100,435		100,435		100,423		100,443	
Adj. R^2		0.536		0.550		0.559		0.649		0.341	
F-tests:											
Street_Earn = Total_Excl_Earn				333.67	***						
Street Earn = Exp_Excl_Earn						13.87	***	2.91	*	406.86	***
Street Earn = Unexp_Excl_Earn						507.62	***	829.48	***	1026.75	***
Exp_Excl_Earn = Unexp_Excl_Earn						281.39	***	305.98	***	3.74	*

Table 5 (continued)

Panel B: Four-quarter ahead tests

Dependent variable =		$GAAP\_Earn_{q+4}$		$GAAP\_Earn_{q+4}$		$GAAP\_Earn_{q+4}$		$Oper\_Earn_{q+4}$		CF_{q+4}	
	Pred. sign	(1)		(2)		(3)		(4)		(5)	
$Street\_Earn_q$	+	0.8756	***	0.8793	***	0.8887	***	0.8640	***	0.8025	***
		(50.91)		(50.60)		(53.13)		(48.78)		(55.54)	
$Total\_Excl\_Earn_q$	+			0.2887	***						
				(7.23)							
$Exp\_Excl\_Earn_q$	+					1.0754	***	0.9477	***	−0.1035	**
						(19.06)		(21.15)		(−2.02)	
$Unexp\_Excl\_Earn_q$	+					0.1371	***	0.0735	***	−0.0460	***
						(5.21)		(3.92)		(−2.77)	
Fixed Effects		Year-Qtr		Year-Qtr		Year-Qtr		Year-Qtr		Year-Qtr	
Number of firm-quarters		97,914		97,91		97,914		97,902		97,930	
Adj. R^2		0.452		0.460		0.470		0.578		0.319	
F-tests:											
Street_Earn = Total_Excl_Earn				259.98	***						
Street Earn = Exp_Excl_Earn						10.45	***	3.26	*	287.48	***
Street Earn = Unexp_Excl_Earn						864.78	***	1685.01	***	1399.68	***
Exp_Excl_Earn = Unexp_Excl_Earn						304.28	***	390.43	***	1.13	

Table 5 (continued)

Panel C: Out-of-sample tests

	$\lvert GAAP\_Earn_{q+1} - GAAP\_Earn_{q+1} \rvert$				$\lvert GAAP\_Earn_{q+4} - GAAP\_Earn_{q+4} \rvert$			
	Mean		Median		Mean		Median	
Absolute forecast error - baseline model	0.01168		0.00519		0.01242		0.00541	
Absolute forecast error - total exclusions	0.01145		0.00512		0.01232		0.00540	
Absolute forecast error - disaggregated exclusions	0.01116		0.00496		0.01211		0.00532	
Improvement: baseline model to total exclusions	0.00022		0.00005		0.00011		0.00005	
% positive improvement			59.0%				60.1%	
test statistic	15.32	***	38.18	***	7.62	***	36.74	***
Improvement: total to disaggregated exclusions	0.00029		0.00005		0.00021		0.00007	
% positive improvement			59.0%				60.3%	
test statistic	28.61	***	38.12	***	16.56	***	37.36	***
Number of firm-quarters	79,529				77,602			

This table presents the results of OLS regressions of the association of next-quarter and four-quarter ahead GAAP earnings ($GAAP\_Earn_{q+1 \text{ or } q+4}$), operating earnings ($Oper\_Earn_{q+1 \text{ or } q+4}$), or cash flow from operations ($CF_{+1 \text{ or } q+4}$) on current-quarter street earnings ($Street\_Earn_q$) and either $Total\_Excl\_Earn_{jq}$ or $Exp\_Excl\_Earn_{jq}$ and $Unexp\_Excl\_Earn_{jq}$ for the firm-quarters in our 2004 to 2017 sample for which we can observe next-quarter or four-quarter ahead GAAP earnings, operating earnings, or cash flow from operations. *Total_Excl_Earn*, i.e., total exclusions, is the difference between GAAP and street actual EPS. *Exp_Excl_Earn*, i.e., expected exclusions, is the mean difference between the consensus analyst GAAP and street EPS forecasts. *Unexp_Excl_Earn*, i.e., unexpected exclusions, is the difference between *Total_Excl_Earn* and *Exp_Excl_Earn*. All variables are winsorized before inclusion in the regressions, and are scaled by assets. Panel A presents in-sample next-quarter ahead tests and Panel B presents in-sample four-quarter ahead tests. T-statistics appear in parentheses, based on two-tailed tests based on standard errors clustered by firm and quarter-year.

Panel C presents out-of-sample analyses using at least 20 quarters to form an expectation for $GAAP\_Earn_{q+1}$ or $GAAP\_Earn_{q+4}$. Our baseline model includes only $Street\_Earn_q$, our total exclusions model includes $Street\_Earn_q$ and $Total\_Excl\_Earn_{jq}$, and our disaggregated exclusions model includes $Street\_Earn_q$, $Exp\_Excl\_Earn_{jq}$, and $Unexp\_Excl\_Earn_{jq}$. We report the mean and median absolute forecast error from each model and test the relative improvement (on an observation-by-observation basis) using a t-test against zero for the mean and a Wilcoxon signed-rank test for the median.

***, **, and * denote significance at the one, five and ten percent levels, respectively. Variable definitions are in Appendix A.

Table 6
Forecasting of Exclusions and Meeting or Beating Street Earnings

	Exp_Excl_Ind=0	*Exp_Excl_Ind=1*	Difference	
Total Observations	22,727	28,770		
Observations *MeetStreetNotGAAP*	5,998	8,314		
% of *MeetStreetNotGAAP* observations	41.9%	58.1%	16.2%	***

This table provides descriptive statistics for the 51,497 firm-quarters in our 2004 to 2017 sample with non-zero *Total Exclusions* and non-zero *Unexpected Exclusions*, across partitions based on whether expected exclusions are zero (*Exp_Excl_Ind=0*) or non-zero (*Exp_Excl_Ind=1*). We report the number of observations in each partition and the number of observations in which earnings meet or beat the median of analysts' street forecasts but not the median of analysts' GAAP forecasts (*MeetStreetnotGAAP*). The bottom row reports the percentage of the overall *MeetStreetNotGAAP* that are in each partition. *** indicates that the differences in percentages is significant at the one percent level, based on a binomial probability test. Variable definitions are in Appendix A.

Table 7
Persistence of Unexpected Exclusions Conditional on Meeting or Beating Street Earnings

Dependent variable =	$GAAP\_Earn_{q+1}$	$Oper\_Earn_{q+1}$	CF_{q+1}	$GAAP\_Earn_{q+4}$	$Oper\_Earn_{q+4}$	CF_{q+4}
	(1)	(2)	(3)	(4)	(5)	(6)
$Unexp\_Excl\_Earn_q$	0.1092 ***	0.0501 *	−0.0527	0.1286 ***	0.0481 **	−0.0600 **
	(2.90)	(1.77)	(−1.13)	(4.35)	(2.22)	(−2.60)
$Unexp\_Excl\_Earn_q \times MeetStreetNotGAAP_q$	0.1229 *	0.1111 **	0.0392	0.0848 **	0.0946 ***	0.0362
	(1.90)	(2.27)	(0.79)	(2.46)	(3.06)	(0.74)
$Unexp\_Excl\_Earn_q \times Exp\_Excl\_Ind_q$	0.0713 *	0.0675 *	0.0630	−0.0471	−0.0067	−0.0041
	(1.75)	(2.00)	(1.31)	(−1.14)	(−0.27)	(−0.13)
$Unexp\_Excl\_Earn_q \times MeetStreetNotGAAP_q$	−0.0065	−0.0132	0.0277	−0.0389	−0.0436	−0.0250
$\times Exp\_Excl\_Ind_q$	(−0.08)	(−0.22)	(0.46)	(−0.78)	(−1.35)	(−0.57)
$Street\_Earn_q$	Included	Included	Included	Included	Included	Included
$Exp\_Excl\_Earn_q$	Included	Included	Included	Included	Included	Included
$MeetStreetNotGAAP_q$	Included	Included	Included	Included	Included	Included
$Exp\_Excl\_Ind_q$	Included	Included	Included	Included	Included	Included
Fixed Effects	Year-Qtr	Year-Qtr	Year-Qtr	Year-Qtr	Year-Qtr	Year-Qtr
Number of firm-quarters	100,435	100,423	100,443	97,914	97,902	97,930
Adj. R^2	0.559	0.649	0.342	0.470	0.578	0.319
Sums of coefficients on $Unexp\_Excl\_Earn_q$:						
$Exp\_Excl\_Ind_q$=0; $MeetStreetNotGAAP_q$=0	0.1092 ***	0.0501 *	−0.0527	0.1286 ***	0.0481 **	−0.0600 **
$Exp\_Excl\_Ind_q$=0; $MeetStreetNotGAAP_q$=1	0.2321 ***	0.1612 ***	−0.0135	0.2134 ***	0.1427 ***	−0.0238
$Exp\_Excl\_Ind_q$=1; $MeetStreetNotGAAP_q$=0	0.1805 ***	0.1176 ***	0.0103	0.0815 *	0.0414	−0.0641 *
$Exp\_Excl\_Ind_q$=1; $MeetStreetNotGAAP_q$=1	0.2969 ***	0.2155 ***	0.0772 **	0.1274 ***	0.0924 ***	−0.0529 *

This table evaluates differences in the persistence of unexpected exclusions depending on whether earnings meet or beat the median of analysts' street forecasts but not the median of analysts' GAAP forecasts (*MeetStreetnotGAAP*) and whether analysts' expected exclusions were zero or non-zero. It presents the results of OLS regressions of the association between next-quarter and four-quarter ahead GAAP earnings ($GAAP\_Earn_{q+1\ or\ q+4}$), operating earnings per shares ($Oper\_Earn_{q+1\ or\ q+4}$), or cash flow from operations ($CF_{q+1\ or\ q+4}$) on current-quarter street earnings ($Street\_Earn_q$), $Exp\_Excl\_Earn_q$, and $Unexp\_Excl\_Earn_q$ for the firm-quarters in our 2004 to 2017 sample for which we can observe next-quarter or four-quarter ahead GAAP earnings, operating earnings or cash from operations. $Exp\_Excl\_Ind_q$ is equal to 1 if the mean of individual analysts' forecasts of GAAP earnings differs from the mean of analysts' forecasts of street earnings, zero otherwise. All variables are winsorized before inclusion in the regressions, and are scaled by assets. T-statistics are presented in parentheses based on standard errors clustered by firm and quarter-year. ***, **, and * denote significance at the one, five and ten percent levels, respectively, based on two-tailed tests. All variable definitions are in Appendix A.

Table 8
Market & Analyst Responses Conditional on Meeting or Beating Street Earnings

Dependent variable =	*CAR*		*Revise_GAAP*		*Revise_Excl*	
	(1)		(2)		(3)	
Unexp_Street	1.5798	***	0.1080	***	−0.0004	
	(8.30)		(11.07)		(−1.24)	
Unexp_Excl	0.2494	***	0.0180	***	0.0007	*
	(5.57)		(4.61)		(1.79)	
Unexp_Street × *MeetStreetNotGAAP*	0.5022		−0.1141	***	−0.0081	*
	(0.78)		(−3.71)		(−1.72)	
Unexp_Excl × *MeetStreetNotGAAP*	−0.1873	***	−0.0128	*	−0.0008	
	(−3.42)		(−1.99)		(−1.33)	
Unexp_Street × *Exp_Excl_Ind*	0.5875	***	0.0219	**	0.0009	
	(4.05)		(2.32)		(0.65)	
Unexp_Excl × *Exp_Excl_Ind*	−0.0349		0.0081	*	0.0042	***
	(−0.94)		(1.85)		(6.07)	
Unexp_Street × *MeetStreetNotGAAP*	−0.2531		−0.0211		−0.0148	**
× *Exp_Excl_Ind*	(−0.39)		(−0.48)		(−2.08)	
Unexp_Excl × *MeetStreetNotGAAP*	0.0819		−0.0106		−0.0058	***
× *Exp_Excl_Ind*	(1.09)		(−1.56)		(−4.44)	
Controls	Included		Included		Included	
Fixed Effects	Year-Qtr		Year-Qtr		Year-Qtr	
Number of firm-quarters	100,890		91,853		91,853	
Adj. R^2	0.046		0.113		0.015	
Sums of coefficients on *Unexp_Street*:						
Exp_Excl_Ind=0; *MeetStreetNotGAAP*=0	1.5798	***	0.1080	***	−0.0004	
Exp_Excl_Ind=1; *MeetStreetNotGAAP*=0	1.5449	***	0.1161	***	0.0038	
Exp_Excl_Ind=0; *MeetStreetNotGAAP*=1	2.0820	***	−0.0061		−0.0085	*
Exp_Excl_Ind=1; *MeetStreetNotGAAP*=1	2.4164	***	−0.0053		−0.0224	***
Sums of coefficient on *Unexp_Excl*:						
Exp_Excl_Ind=0; *MeetStreetNotGAAP*=0	0.2494	***	0.0180	***	0.0007	*
Exp_Excl_Ind=1; *MeetStreetNotGAAP*=0	0.2145	***	0.0261	***	0.0049	***
Exp_Excl_Ind=0; *MeetStreetNotGAAP*=1	0.0621		0.0052		−0.0001	
Exp_Excl_Ind=1; *MeetStreetNotGAAP*=1	0.1091	**	0.0027		−0.0017	*

This table evaluates differences in market and analysts' reactions depending on whether earnings meet or beat the median street forecast but not the median GAAP forecast (*MeetStreetnotGAAP*) and whether analysts' expected exclusions were zero or non-zero. It provides the results of regressing market returns and mean analyst revisions on unexpected components of earnings, including unexpected GAAP earnings (*Unexp_GAAP*), unexpected street earnings (*Unexp_Street*), and unexpected earnings from excluded items (*Unexp_Excl*) for our 2004 to 2017 sample. *Exp_Excl_Ind* equals one if the mean analyst forecast of GAAP EPS differed from the mean forecast of Street EPS, zero otherwise. All independent variables are winsorized before inclusion in the regressions. T-statistics are presented in parentheses based on standard errors clustered by firm and quarter-year. ***, **, and * denote significance at the one, five and ten percent levels, respectively, based on two-tailed tests. All variable definitions are in Appendix A.

Table 9
Earnings Response Coefficients by Signal of GAAP vs. Non-GAAP

Panel A: ERC by Signal of GAAP vs. Non-GAAP in Full Sample

Subsample=	Full Sample		MeetStreet=0 MeetGAAP=0		MeetStreet=0 MeetGAAP=1		MeetStreet=1 MeetGAAP=0		MeetStreet=1 MeetGAAP=1	
	(1)		(2)		(3)		(4)		(5)	
Unexp_Street	1.7451	***	0.5510	***	0.6298	**	2.4317	***	2.0213	***
	(9.10)		(4.88)		(2.52)		(5.81)		(10.66)	
Unexp_Excl	0.1639	***	0.1823	***	0.2543	*	0.0949	*	0.1221	*
	(5.34)		(4.23)		(1.94)		(2.00)		(1.75)	
ANF	−0.0002	***	−0.0006	***	−0.0006	***	−0.0001		−0.0001	*
	(−3.39)		(−4.84)		(−3.90)		(−1.16)		(−1.88)	
DISP	0.0202	***	0.0606	***	0.0468	***	−0.0388	***	−0.0327	***
	(3.37)		(8.28)		(3.42)		(−3.38)		(−4.47)	
lnMV	0.0004		0.0039	***	0.0034	***	0.0017	**	−0.0014	***
	(0.95)		(6.01)		(3.97)		(2.62)		(−3.07)	
MtoB	0.0004	***	0.0002	**	−0.0002		0.0002	*	0.0006	***
	(5.96)		(2.31)		(−0.94)		(1.72)		(5.43)	
Lev	−0.0009		0.0191	***	0.0094		0.0068		−0.0099	***
	(−0.29)		(5.66)		(1.27)		(1.38)		(−2.75)	
Loss	−0.0060	***	0.0019		−0.0112	**	−0.0012		−0.0131	***
	(−4.87)		(1.23)		(−2.46)		(−0.54)		(−7.73)	
Fixed Effects	Year-Qtr		Year-Qtr		Year-Qtr		Year-Qtr		Year-Qtr	
Number of firm-qtrs	100,890		30,821		3,755		14,466		51,848	
Adj. R^2	0.045		0.020		0.014		0.014		0.027	

Table 9 (continued)

Panel B: Replication of Bradshaw et al. (2018)

Subsample=	Alternative Sample		MeetStreet=0 MeetGAAP=0		MeetStreet=0 MeetGAAP=1		MeetStreet=1 MeetGAAP=0		MeetStreet=1 MeetGAAP=1	
	(1)		(2)		(3)		(4)		(5)	
Unexp_Street	1.8526	***	0.4224	***	0.1590		2.5033	***	2.0367	***
	(20.30)		(4.08)		(0.71)		(7.26)		(12.93)	
Unexp_Excl	0.1308	***	0.0632		0.2392	**	0.1493	***	−0.1067	
	(4.61)		(1.52)		(2.30)		(3.31)		(−1.59)	
Intercept	0.0031	***	−0.0267	***	−0.0147	***	0.0019	**	0.0170	***
	(6.93)		(−26.14)		(−9.98)		(2.09)		(24.25)	
Number of firm-qtrs	56,785		14,469		3,683		15,678		22,955	
Adj. R^2	0.037		0.005		0.001		0.014		0.015	

This table provides the results of OLS regressions of market-adjusted buy-and-hold returns during the two-trading-day window beginning on the earnings announcement date (*CAR*) on *Unexp_GAAP*, *Unexp_Street*, and *Unexp_Excl*. Panel A partitions our sample (as shown in Table 2) using the 100,890 firm-quarters in our 2004 to 2017 sample, and t-statistics are presented in parentheses based on standard errors clustered by firm and quarter-year. Panel B presents our attempt to replicate Table 6, Panel B of Bradshaw et al. (2018), using I/B/E/S's summary file's mean to construct the consensus forecast, restricted to 56,785 observations for which actual exclusions are non-zero, and clustering standard errors by the earnings announcement date. In both panels, the independent variables are winsorized before inclusion in the regressions. ***, **, and * denote significance at the one, five and ten percent levels, respectively, based on two-tailed tests. Variable definitions are in Appendix A.