

The Influence of Manager-Analyst Interactions on Street Earnings: Evidence from Conference Calls

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May 2018

We thank Linda Bamber, Dirk Black, Khrystyna Bochkay, Mark Bradshaw, Kimball Chapman, Bill Mayew, Nick Guest, Roy Schmardebeck, Lorien Stice-Lawrence, Eric Weisbrod, Ben Whipple, and workshop participants at Duke University, ESSEC Business School, Exeter University, King's College London, Tilburg University, the University of Georgia, the University of Miami, the University of Oklahoma, the University of Western Ontario, Utah State University, the 2012 BYU Accounting Research Symposium, and the 2015 Yale Fall Accounting Research Conference for helpful comments and suggestions. We also appreciate comments from Ph.D. students at the University of Utah. We express appreciation to Justin Chircop, Willie Goodman, Ben Jumper, Alex Shek, James Shiners, and Eric Swenson for their research assistance. We are grateful to Kurt Gee for sharing earnings announcement data and non-GAAP dictionary phrases, and we thank Frank Ecker for using his algorithm to help us estimate changes in the definition of street earnings.

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ABSTRACT

We analyze earnings conference calls to investigate how this important interaction between analysts and managers influences street earnings. Textual analysis of conference call transcripts indicates that more discussion of non-GAAP earnings and exclusions in the management presentation as well as the question-and-answer (Q&A) portion of the conference call is associated with larger street earnings exclusions, consistent with evidence from prior research that both managers and analysts influence street earnings. However, we also find that discussion of non-GAAP exclusions is associated with (1) greater disagreement among analysts about the definition of street earnings (i.e. more individual analysts are excluded from the consensus) and (2) shifts in the consensus definition of street earnings. In addition, we provide evidence that non-GAAP discussion in the presentation (Q&A) portion of the conference call leads to lower-quality (higher-quality) street earnings exclusions. Moreover, we find that investors react less to negative street earnings surprises in the presence of analyst-driven discussion about non-GAAP earnings and exclusions in the Q&A portion of the call. Taken together, these results provide a more comprehensive view of the roles played by managers and analysts in determining the amount, quality, and informativeness of street earnings exclusions.

Keywords: non-GAAP performance measures; street earnings; conference calls; earnings press releases, analyst disagreement

1. Introduction

Managers, analysts, investors, and other market participants often adjust the standard GAAP earnings number to exclude non-recurring or non-cash items. These non-GAAP performance metrics have received widespread attention in recent years. In particular, since analysts play a vital role in capital markets, their non-GAAP metrics, often referred to as “street earnings,” are particularly important to investors. Early research indicates that analyst-provided street earnings are more highly associated with stock prices than GAAP earnings (Bradshaw and Sloan [2002]). In addition, Frankel and Roychowdhury [2005] find that street earnings are the most relevant performance metric for valuation purposes. Moreover, the results of prior studies suggest that analyst ability (Gu and Chen [2004]) and incentives (Baik, Farber, and Petroni [2009]) partially explain street earnings exclusions. However, other studies argue that street earnings originate with managers (Bradshaw and Soliman [2007], Bradshaw [2011]). For example, Christensen et al. [2011] find evidence suggesting that managers can influence analysts’ street earnings exclusions via earnings guidance during the fiscal period. More recently, Bentley et al. [2018] find that even when managers do not explicitly disclose a non-GAAP performance metric, they can suggest exclusions that are ultimately used by analysts in calculating street earnings. They conclude that *both* managers and analysts play important roles in determining non-GAAP performance metrics. However, our understanding of the interplay between managers and analysts in determining street earnings remains incomplete (Bradshaw and Soliman [2007]). To shed light on this issue, we analyze *direct communications* between managers and analysts to investigate how these interactions influence the determination, quality, and informativeness of analyst-provided street earnings.¹

Why is our analysis of these direct interactions important? In their concluding remarks, Christensen et al. ([2011], p. 524) state, “Our evidence is largely indirect: we do not observe the communication between the managers and analysts”. In discussing their paper, Bradshaw ([2011], pp. 536-537) calls their evidence “preliminary” and suggests that more direct evidence might “help refine our understanding of the information flow from managers to the capital markets”. Moreover, in their

¹ We use the I/B/E/S actual earnings number as our proxy for street earnings. While individual analysts reveal their own street earnings numbers in their analyst reports, the I/B/E/S actual earnings number represents a consensus street earnings measure based on the definition of earnings forecasted by the majority of analysts during the period.

recent review of the non-GAAP literature, Black et al. ([2018], p. 285) argue that “evidence on how [managers and analysts] interact and influence the other party’s non-GAAP reporting practice would be an important step forward in both the non-GAAP and voluntary disclosure literatures”. We aim to advance this line of research using textual analysis to (1) examine the extent to which managers and analysts discuss non-GAAP numbers and exclusions in the earnings conference call and (2) provide more direct evidence of how these interactions influence street earnings.² Importantly, the Q&A segment of the conference call allows us to specifically capture analyst-driven interactions regarding non-GAAP performance metrics and exclusions. By considering how analysts respond to managers’ explanations for non-GAAP earnings and exclusions, we provide a more nuanced and comprehensive view of managers’ and analysts’ unique roles in determining street earnings.

Street earnings numbers are provided by analyst tracking services (e.g., I/B/E/S) in order to supply a realized earnings figure calculated on the same basis (i.e., excluding the same items) as analysts’ ex ante earnings forecasts. As a result, street earnings numbers provide insight about how analysts define and view firm performance, which is arguably influenced by managers.³ As Bradshaw ([2011], p. 532) notes, “it would be unreasonable to argue that analysts and managers act independently” because much of the relevant information used by analysts “certainly originates with management”. Since the primary purpose of conference calls is to discuss earnings performance and since these calls are an important source of information to analysts (e.g., Frankel, Johnson, and Skinner [1999], Matsumoto, Pronk, and Roelofsen [2011]), these public discussions provide an ideal laboratory for examining the interplay between managers and analysts regarding the calculation of street earnings. During the call, managers may attempt to justify exclusions they make in calculating manager-disclosed non-GAAP earnings, or they might discuss particular line items, even if they do not explicitly provide a non-GAAP earnings number (Bentley et al. [2018]). Similarly, the Q&A portion of the conference call provides analysts an opportunity to ask clarifying questions about non-GAAP earnings

² While we focus our discussion on the conference call because both managers and analysts participate, we also measure and control for the amount of non-GAAP discussion in the earnings announcement press release.

³ We provide more detail on the street earnings calculation process in Section 2. We note that individual investors likely obtain information from a particular analyst or brokerage house and may not focus on the I/B/E/S street earnings number. However, because I/B/E/S street earnings are influenced by individual analysts’ opinions, the street earnings number serves as an empirical proxy for the street earnings metric investors receive from individual analysts.

and/or specific income statement line items. As a result, analyzing these communications can increase our understanding of managers' and analysts' roles in determining street earnings. For example, consider a conversation from the Q&A portion of Nuverra Environmental Solution's 2012 Q2 conference call that illustrates how analysts can engage managers to better understand non-GAAP performance metrics and particular line items:

Analyst: *Okay. The startup costs, we're excluding them from the EBITDA. Yet, this is a fairly dynamic market where things change fairly frequently within three- and six-month periods. What gives you guys the confidence of essentially taking what is an item that is increasingly looking like a recurring item, and saying that it is non-recurring? Will it really be a non-recurring item going forward? Will it reduce? Do you see it going away next year? Help us understand that a little bit.*

COO: *We are in the process of building out our platform in both the Marcellus and the Eagle Ford. I think if you look at both those shale plays in Q2 of last year, we had almost no revenue in either place. What will happen is, our businesses gain a little bit of maturity -- and we're still in the process of having that happen -- the organizations become much more stable. And, in both cases, we have significant businesses now in the Marcellus and in the Eagle Ford. And we don't expect to have the recurring startup costs as we go forward, although the market is very dynamic and we certainly could be upset. But the actual reason is just if you look at the growth in both of those areas, it's phenomenal. And we finally, I think, are getting to the point where we have some organizational stability in both plays.*

CEO: *Yes, Scott, I'd got a little step further and say that, if you look at the quarter-over-quarter growth, up 23% in Marcellus and 57% in the Eagle Ford, we're not going to grow 57% a quarter in the Eagle Ford. And we're not going to grow at 23% forever in the Marcellus. To get 57%, there's a lot of hiring, there's a lot of training. There's a lot of drivers training for two and three weeks in the right seat. We brought in literally trailer after trailer after trailer for affordable housing. We run vans from San Antonio to the Eagle Ford until we can get people housing. We do the same thing in the Marcellus. I don't think it is fair to say that these are costs that are going to be there every quarter because we just have so much growth. And until the infrastructure gets in place up there, we don't have any choice but to spend money that you wouldn't ordinarily spend if you were adding five drivers. But, we are adding 50.*

Analyst: *I don't question that. I'm just asking why it would be considered a non-recurring item when it seems like it will recur for a little while.*

CEO: *We didn't have any of it in the Haynesville this quarter. And that's our most mature field. We didn't have any of it there.*

Using a sample of 67,252 quarterly earnings conference calls from 2003 to 2013, we first test whether non-GAAP discussion in the conference call is associated with the magnitude of street earnings exclusions (after controlling for standard determinants). We find that more discussion of non-

GAAP earnings and exclusions in both the management presentation and the Q&A portion of the call is associated with higher levels of street earnings exclusions. This result is consistent with the conclusion from prior research that both managers and analysts influence street earnings (e.g., Bentley et al. [2018]) and it also validates our non-GAAP discussion textual measures.

We next investigate how these non-GAAP discussions relate to disagreement among analysts regarding which items should be excluded in calculating street earnings. Importantly, we capture disagreement among analysts about how a firm's fundamental performance *should be defined* (as opposed to disagreement about the point estimate of forecasted earnings, often measured as the standard deviation of analyst forecasts). For this test, we leverage the I/B/E/S excluded analyst file, which contains the forecasts of individual analysts who are not included in the calculation of the analyst consensus forecast. To our knowledge, we are the first to study determinants of the presence of excluded analysts. We find that non-GAAP discussion in the Q&A (but not the managers' presentation) is associated with the exclusion of more analysts from the consensus group during the next 6- and 12-month periods. This result is notable because it suggests that instead of conference call discussions aligning the views of analysts and managers about how firm fundamental performance should be defined, we find that this interplay between managers and analysts can lead to more disagreement.

To provide further evidence regarding the influence of manager-analyst discussions on the determination of street earnings, we also examine the extent to which these dialogues relate to temporal shifts in the consensus definition of street earnings. Because I/B/E/S does not publish the specific definition of street earnings for particular firm-quarters, we employ two complementary methods for estimating the definition of street earnings.⁴ Using these estimated definitions, we identify points in time when the analyst consensus definition appears to change. We find that the amount of non-GAAP dialogue in conference calls is positively associated with these changes in the definition of street earnings, indicating that managers and analysts discuss these topics when the consensus analyst opinion shifts.

⁴ In other words, researchers cannot see which individual items I/B/E/S excludes in calculating street earnings in specific firm-quarters. We attempted to purchase this data from Thomson Reuters, but our multiple requests were denied. Therefore, we turn to other approaches for inferring the non-GAAP calculation.

While these tests focus on how conference call discussions of non-GAAP earnings are related to the process by which street earnings numbers are determined, we recognize that these figures are ultimately influenced by both managers and analysts. Therefore, our final tests investigate whether these discussions have implications for the quality of street earnings exclusions and the market reaction to reported street earnings. To examine the effect on quality, we follow prior research and estimate the association between current street earnings exclusions and future operating performance (e.g., Doyle, Lundholm, and Soliman [2003], Kolev, Marquardt, and McVay [2008], Bentley et al. [2018]). We find evidence that manager-initiated non-GAAP discussion in the presentation leads to *lower-quality* exclusions, but we also find strong evidence that discussion in the Q&A portion of the conference call results in *higher-quality* exclusions. This evidence is consistent with the notion that while managers might attempt to justify low-quality exclusions, push-back from analysts in the Q&A portion of the call leads to higher-quality exclusions.

Turning to market reactions around earnings announcements, we do not find evidence that non-GAAP discussion in the presentation portion of the call influences short-window market reactions. However, the results indicate that analyst-driven discussion and clarification in the Q&A portion of the conference call are associated with a dampened market response to street earnings surprises. To help interpret this result, we split the sample based on the sign of the earnings surprise and find that the dampened market response is attributable to negative earnings surprises. This evidence is consistent with the notion that analysts' questions may help the market interpret the reasons for firms missing expectations. Taken together, the results of these final two tests provide additional evidence regarding the different roles played by managers and analysts in the calculation of street earnings. In particular, analysts appear to monitor managers in determining street earnings (consistent with Christensen, Gomes, Ma, and Pan [2018]), and their discussions with management may help to clarify the causes of negative firm performance. Our evidence moves the literature forward by providing insights on the influence of direct communication between managers and analysts on the determination, quality, and interpretation of street earnings.

2. Background and Hypothesis Development

2.1 STREET EARNINGS

Prior research concludes that investors rely more on street earnings than on other earnings metrics. Specifically, Bradshaw and Sloan [2002] find that the street earnings surprise is more highly associated with stock returns than the GAAP earnings surprise.⁵ Similarly, Brown and Sivakumar [2003] find that investors use street earnings rather than Compustat's calculated core earnings measure for valuation. While Landsman, Miller, and Yeh [2007] find that income-increasing street exclusions result in overpricing prior to SEC regulatory intervention, Kolev, Marquardt, and McVay [2008] examine the quality of exclusions used to calculate street earnings following Regulation G and find that, in the post-regulation period, exclusions are of higher quality. These studies indicate that street earnings are a significant source of information for market participants. However, we still do not fully understand the process by which street earnings are determined (what happens inside the black box mentioned by Abarbanell and Lehavy [2007]). To shed additional light on this process, we investigate the extent to which the discussion of non-GAAP earnings and exclusions between managers and analysts influences the properties of street earnings.

As mentioned previously, street earnings are calculated based on a process known as the “majority rule,” which Thomson Reuters (TR) describes as follows:

[The] goal is to present [street earnings] on an operating basis, whereby a corporation's reported earnings are adjusted to reflect the basis that the majority of contributors [i.e., analysts] use to value the stock. In many cases, the reported figure contains unusual or one-time items that the majority of analysts exclude from their actuals. The majority accounting basis *is determined on a quarter-by-quarter basis* ... [I/B/E/S] examines each reported item, and includes or excludes the item from the [street earnings number] based on how the majority of contributing analysts treat the item *for that period* (Thomson Reuters [2009], emphasis added).

Thus, it appears that I/B/E/S essentially determines the firm's period-specific street earnings definition based on how the majority of contributing analysts view firm performance for a particular firm-quarter.

⁵ Despite subsequent claims that Bradshaw and Sloan's [2002] result is attributable to measurement error, Bradshaw et al. [2018] find that after correcting for misaligned forecasts, investors unconditionally prefer street earnings relative to GAAP earnings as a summary performance measure. However, they also find that disaggregated GAAP earnings provide incremental explanatory power relative to street earnings.

Conversations with a TR product specialist indicate that I/B/E/S does not collect revenue from contributing brokerages, nor does I/B/E/S pay brokerages for their estimates. In other words, I/B/E/S wants to provide data to its subscribers, and brokerage houses want their estimates to be seen by investors, so brokerage firms give I/B/E/S access to their earnings estimates. In addition, TR representatives examine specific line items of a particular company in previous reporting periods. To maintain consistency, they may decide that the majority basis should be amended based on the prior treatment of a particular item, and they may update the I/B/E/S actual value accordingly. Furthermore, TR may check whether managers report non-GAAP numbers in their earnings press releases. When the street and non-GAAP earnings numbers differ, I/B/E/S may decide to endorse at least some of the additional exclusions made by managers.⁶ The final calculation of the actual I/B/E/S earnings number may also reflect analysts' ex-post consensus opinion, as reflected in analysts' ex-post research reports.

This discussion highlights the importance of both analysts and managers in the determination of street earnings. Interestingly, analysts' exclusion decisions are often idiosyncratic because they have the discretion to decide which line items they will forecast (Doyle, Lundholm, and Soliman [2003], Barth, Gow, and Taylor [2012]).⁷ Prior research indicates that analyst ability (Gu and Chen [2004]) and analyst incentives (Baik, Farber, and Petroni [2009]) partially explain analysts' exclusions from GAAP earnings used in calculating street earnings. Christensen et al. [2011] call these "analyst-centric explanations" for the determination of street earnings. Since forecast tracking services base their exclusion decisions on the items excluded by the majority of analysts, these studies suggest that analysts' expertise and incentives play a key role in the determination of street earnings. This evidence implies that if managers want to influence the computation of their firms' street earnings, one channel available to them is to attempt to influence analysts' opinions before they make their forecasts.

⁶ These actions by Thomson Reuters may be related to the phenomenon reported by Brown and Larocque [2013] where the I/B/E/S actual does not correspond to certain analysts' individual actual earnings number. In a concurrent working paper, Kaplan, Martin, and Xie [2018] also investigate I/B/E/S' choice to remove optimistic forecasts in defining the consensus definition. However, we assume that on average the I/B/E/S actual reflects the consensus opinion of analysts following the firm.

⁷ We note that although Doyle, Lundholm, and Soliman [2003] use the term "pro forma earnings," their analyses use I/B/E/S "street earnings."

Christensen et al. [2011] explore managers' influence on the determination of street earnings through ex-ante earnings guidance. They find that managers are able to influence the eventual calculation of street earnings at the end of the year by issuing earnings guidance during the year. Their evidence indicates that managers' earnings guidance influences the dollar amount of items excluded in calculating street earnings. Our objective is to build on this evidence regarding how managers and analysts influence street earnings by exploring their interactions during earnings conference calls.

Figure 1 provides a graphical depiction of the main events that may influence the calculation of street earnings.⁸ First, the dotted lines in the figure represent the majority rule process. That is, analysts forecast firms' earnings and in doing so, they decide which items to include or exclude in preparing their forecasts. Then, after a company announces earnings, the forecast tracking service determines its earnings definition based on how the majority of analysts view the firm's performance (i.e., which income statement items should be included or excluded).⁹

However, as noted previously, managers also have opportunities to influence this process, both before and after the end of an accounting period. These opportunities are represented by solid lines in Figure 1 and are labeled "A" and "B." The first opportunity managers have to influence the process (labeled "A") is to provide earnings guidance during the quarter (which may or may not include non-GAAP exclusions), with the hope that their guidance will influence either the point estimates of particular income statement items or the set of items individual analysts choose to forecast (versus those that they choose to ignore – and therefore "exclude" in determining their forecasts). Christensen et al. [2011] examine this interaction and find a positive association between earnings guidance and street exclusions. Our analyses focus on the second opportunity to influence analysts' opinions (labeled "B"), which comes at the end of the period when managers announce earnings. They might disclose non-GAAP earnings and/or discuss particular line items (Bentley et al. [2018]) in their quarterly earnings press release and/or the subsequent conference call. Importantly, the Q&A portion of the conference call allows analysts to ask questions about any non-GAAP earnings number and/or

⁸ As mentioned previously, we view the I/B/E/S actual EPS number as an empirical proxy for the street earnings metric investors receive from the analysts they follow.

⁹ Analysts' majority opinion may change based on disclosures in the earnings announcement and/or conference call (i.e., if an unexpected impairment occurs during the period, analysts may update their earnings definition).

particular items of interest. These types of questions and comments might be simple requests for clarification, but they could also be more probing in an attempt to identify managers' true motivations. Overall, we contend that this venue for interaction between managers and analysts is an important step in the determination of the street earnings number and provides researchers with an opportunity to learn about the different roles played by each party.¹⁰

2.2 EARNINGS ANNOUNCEMENTS AND CONFERENCE CALLS

The majority of companies issue earnings press releases shortly after the end of the fiscal period to communicate information to investors about current financial performance and perhaps managers' future earnings expectations. Managers sometimes report non-GAAP earnings measures in the press release, which are essentially GAAP earnings adjusted for certain items that managers deem to be transitory or irrelevant to investors. Prior research suggests that the length and information content of earnings press releases has increased over time (Francis, Schipper, and Vincent [2002a], [2002b], Kross and Kim [2000], Lo and Lys [2000], Landsman and Maydew [2002]). This additional information communicated to investors in earnings press releases is incrementally informative relative to the mere announcement of earnings, and previous studies have examined qualitative disclosures included in earnings press releases such as officers' comments (Hoskin, Hughes, and Ricks [1986], Francis, Schipper, and Vincent [2002b]). Prior research also finds that the framing and emphasis of disclosures can influence users of the information (e.g., Katz [2001], Morris et al. [2005], Davis, Piger, and Sedor [2012], Marques [2010]). Bowen, Davis, and Matsumoto [2005] examine the relative emphasis managers place on GAAP versus non-GAAP earnings within the press release and find that managers emphasize the earnings metric that portrays firm performance in a more positive light; they also document higher price reactions when the non-GAAP numbers receive greater emphasis (see also

¹⁰ For simplicity, our discussion of Figure 1 focuses on the potential for manager-analyst interaction to influence the street earnings number for the same quarter, but it is also possible that managers' anticipation of analysts' questions impacts their non-GAAP-related decisions leading up to the earnings announcement. Thus, our results should be interpreted as equilibrium associations between manager-analyst interactions and the properties of street earnings rather than causal evidence that these discussions affect street earnings in a particular quarter.

Allee et al. [2007]). Brown, Christensen, and Elliott ([2012b]) find that some managers strategically time the press release itself when it contains non-GAAP earnings disclosures.¹¹

The information reported in the press release is subsequently discussed during the post-earnings-announcement conference call, which is an important communication medium that represents a valuable source of information to investors and analysts (Frankel, Johnson, and Skinner [1999], Bowen, Davis, and Matsumoto [2002], Bushee, Matsumoto, and Miller [2003], Brown, Hillegeist, and Lo, [2004], Mayew [2008], Lansford, Lee, and Tucker [2009]). A recent National Investor Relations Institute survey finds that 98% of firms surveyed hold conference calls (Allen [2011]), reinforcing the increasing prevalence of this mode of communication between managers and analysts. Conference calls typically take place within one day of the earnings announcement and consist of a presentation and a question-and-answer session.¹² During the presentation session (typically 20 minutes), managers discuss the firm's performance during the quarter and its future prospects. The Q&A session (typically 30 minutes) gives analysts and institutional investors the opportunity to ask for clarifications, challenge managers' interpretation of firm performance, and ask managers for additional information that was not covered during the presentation session or disclosed in the earnings press release (Frankel, Johnson, and Skinner [1999], Hollander, Pronk, and Roelofsen [2010], Matsumoto, Pronk, and Roelofsen [2011], Tasker [1998]). Since the Q&A portion of the conference call is interactive, analysts have the ability to request information that managers did not intend to reveal. Hence, the quantity and type of disclosures made during the presentation (which often reiterates information disclosed in the press release) may differ from information revealed during the Q&A session, when participants can more easily influence the direction of the discussion (Matsumoto, Pronk, and Roelofsen [2011]).¹³

¹¹ As mentioned previously, while our study focuses on manager-analyst interactions during the conference call, we also measure and control for the amount of managers' non-GAAP disclosure in the earnings announcement given its importance to market participants.

¹² Conference calls usually take place at least an hour after the earnings announcement in order to give analysts and institutional investors (the typical audience of quarterly conference calls) time to understand the information reported in the press release (Tasker [1998]). Calls may also take place during trading or non-trading hours. For those occurring during trading hours, the vast majority correspond to earnings announcements released during non-trading hours (i.e., the night before or morning of the call) (Brochet, Kolev, and Lerman [2018]).

¹³ Frankel, Johnson, and Skinner [1999] discuss the advantages of conference calls for managers and analysts. In particular, they note that conference calls represent an efficient way of communicating information to analysts and also of alleviating selective disclosure concerns. Bowen, Davis, and Matsumoto [2002] and Irani [2004] find that conference calls increase analysts' ability to accurately forecast earnings. Mayew [2008] argues that analysts also reap private information benefits from public answers to their conference call questions.

Matsumoto, Pronk, and Roelofsen [2011] also find that while both the manager presentation and analyst discussion periods have incremental information content, the discussion period is relatively more informative. Managers also appear to provide more information during the presentation session when the firm performs poorly, but relatively more information is made public during the discussion session, suggesting that analysts and other participants influence the information ultimately disclosed by managers. A natural question that arises is why some managers disclose additional information during the conference call rather than earlier (i.e., preannouncements or the earnings press release). Frankel, Johnson, and Skinner ([1999], pp. 136-137) note that managers are sometimes “unsure of the informational needs of investors...and so prefer the flexibility of providing information in response to analysts’ questions.” Since conference calls are important information events that provide observable interactions between managers and analysts, we focus on non-GAAP discussions occurring during the conference call to shed light on how these interactions are associated with the determination and properties of street earnings.

2.3 HYPOTHESES

We first examine whether manager-analyst discussions about non-GAAP earnings and related exclusions in quarterly earnings conference calls are associated with the magnitude of street earnings exclusions. Since prior research finds that both managers and analysts influence street earnings, we expect that if our textual measures of non-GAAP discussion are reliable, the dialogue in both the presentation and the Q&A portions of the call will be associated with the amount of street earnings exclusions.¹⁴ In other words, we view this test as an opportunity to (1) verify in our sample that both parties influence the calculation of street earnings and (2) corroborate that our non-GAAP discussion measures are valid. It is likely that manager-analyst discussions about street earnings and exclusions

¹⁴ At first glance, it may seem unlikely that street earnings would be influenced by these types of discussions. If the items excluded in calculating street earnings are primarily based on analysts’ *ex-ante* forecasting decisions, then these “last minute” (*ex-post*) disclosures and discussion may not influence the street earnings calculation. However, Christensen [2007] reports that when street earnings are calculated for the I/B/E/S database, the press release is examined to verify whether managers provide their own adjusted earnings numbers. Christensen [2007] also states, “It is unclear how frequently I/B/E/S determines adjustments solely based on ex-ante forecasts and how frequently manager adjustments affect the [street earnings] number” (p. 745). We find that for 35% of our sample firm-quarters, I/B/E/S activates its street earnings number after the start of the conference call, indicating that it is possible for these discussions to influence street earnings. We thank Eric Weisbrod for this suggestion. In addition, if managers expect analysts to ask questions related to street earnings exclusions, managers’ *ex-ante* disclosure decisions may be affected.

are more common when more items are excluded (or are considered for exclusion). In other words, if managers and/or analysts exclude particular items from their definition of firm performance, we expect these items to be mentioned in the conference call.¹⁵ As a result, we present our first hypothesis:

H₁: The magnitude of street earnings exclusions is positively associated with the level of non-GAAP discussion in the earnings conference call.

In order to provide insight on the potential motivation for manager-analyst discussions about street earnings topics, we next examine the association between these interactions and analyst disagreement about the *definition* of street earnings. We note that while many studies consider disagreement about the *point estimate* of forecasted earnings (commonly measured as the standard deviation of earnings forecasts), we focus on disagreement about which items should be included or excluded from those forecasts. We capture this type of disagreement by counting the number of analysts following a firm whose forecasts have been excluded from the consensus. If managers and analysts discuss non-GAAP disclosures and/or particular line items because of a shared desire to unify opinions about the definition of firm performance, we might expect a negative association between these non-GAAP discussions and the amount of analyst disagreement about the definition. However, if analysts are skeptical about managers' motives for discussing non-GAAP earnings and exclusions, we might see a positive association between the amount of non-GAAP discussion and the degree to which analysts disagree about the definition of firm performance. This logic leads to our second hypothesis stated in the null form:

H₂: Analyst disagreement about the definition of firm performance is not associated with the level of non-GAAP discussion in the earnings conference call.

In addition to our investigation of analyst disagreement about the definition of street earnings, we explore the association between non-GAAP discussions in the conference call and shifts in the consensus definition of street earnings. While our H₂ tests shed light on potential motivation for managers and analysts to engage in these discussions by analyzing analysts whose forecasts have been *excluded* in calculating the consensus, our third hypothesis focuses on changes in opinion of analysts

¹⁵ An alternative possibility is that analysts' comments and questions related to non-GAAP topics are motivated by skepticism about managers' motives. However, we do not expect this type of scrutiny to occur as often given that managers' reported non-GAAP earnings agree with I/B/E/S street earnings most of the time (Bentley et al. [2018]).

included in the consensus group. To the extent that street earnings definitions are relatively stable (i.e., if analysts following a particular firm tend to forecast the same income statement components for the firm each quarter), an association between (1) a shift in the street earnings definition and (2) non-GAAP discussion in conference calls would indicate that managers and/or analysts may use these discussions to suggest changes in the definition of street earnings. For example, managers may want analysts to exclude particular items consistently in the future. Similarly, analysts may use the Q&A forum to ask questions before deciding to make changes to their definition of firm performance. On the other hand, if manager-analyst interactions simply reflect boilerplate discussion of the same topics each quarter, we might not expect to find an association between non-GAAP discussion and shifts in the consensus definition. Our third hypothesis (in the null form) is as follows:

H₃: Shifts in the consensus definition of street earnings are not associated with the level of non-GAAP discussion in the earnings conference call.

While our first three hypotheses consider the association between non-GAAP discussions and the process by which street earnings numbers are determined, our final tests focus on how these discussions influence their quality and informativeness. Prior research (e.g., Kolev, Marquardt, and McVay [2008]) has examined the quality of street earnings exclusions by estimating the association of current street earnings exclusions with future operating performance. In this framework, larger (smaller) associations between current quarter street earnings exclusions and future operating performance is considered a sign of low-quality (high-quality) exclusions. Similar to the arguments leading up to our first hypothesis, it is unclear whether more non-GAAP discussion in conference calls results in higher- or lower-quality street earnings exclusions. If these interactions between managers and analysts are primarily focused on nonrecurring items, quality may increase (i.e., there would be a smaller association between street earnings exclusions and future performance). Similarly, the analyst-driven discussion in the Q&A portion of the conference call may indicate analyst skepticism, reducing the association between street earnings exclusions and future performance. However, if the discussions capture managers' efforts to convince analysts to exclude recurring items, the association between street earnings exclusions and future performance may increase. As a result, we also state our fourth hypothesis in the null form:

H₄: The quality of street earnings exclusions is not associated with the level of non-GAAP discussion in the earnings conference call.

Our final tests examine whether managers' and analysts' discussions of non-GAAP earnings and exclusions influence investors' response to street earnings surprises. As mentioned previously, prior research finds that the street earnings surprise is more highly associated with stock returns than earnings surprises based on other earnings definitions (e.g., Bradshaw and Sloan [2002], Brown and Sivakumar [2003]). If market participants perceive manager-analyst discussions about street earnings as efforts to portray true operating earnings, the association between stock returns and street earnings surprises might be relatively stronger. On the other hand, investors may perceive these discussions as indicators of analyst scrutiny, which could lead to a weaker association between returns and street earnings surprises. Accordingly, we state our final hypothesis in the null form:

H₅: The market reaction to street earnings surprises is not associated with the level of non-GAAP discussion in the earnings conference call.

3. Research Design, Data, and Sample

3.1 RESEARCH DESIGN

3.1.1. Quantifying Non-GAAP Discussion. In order to measure the amount of discussion in earnings conference calls (and the associated press releases) pertaining to non-GAAP earnings and related exclusions, we create a non-GAAP phrase dictionary. The dictionary is based on the terms used by Bentley et al. [2018] to capture non-GAAP earnings (e.g., “non-GAAP” or “adjusted EBITDA”), and we also add words and phrases related to specific exclusions (e.g., “one time charge” or “amortization”).¹⁶ We calculate $NG\%_{CCP}$ ($NG\%_{CCQ\&A}$) as the percentage of total words in the conference call presentation (Q&A session) pertaining to non-GAAP earnings and exclusions. Using these two separate measures from the conference call allows us to examine whether different sources of non-GAAP discussion are more associated with the calculation, quality, and informativeness of

¹⁶ We thank Kurt Gee for sharing information about dictionary phrases used in Bentley et al. [2018]. See Appendix B for a complete list of our dictionary words and phrases and detailed information about our textual parsing methods.

street earnings. We also calculate a similar measure ($NG\%_{EA}$) to capture the amount of discussion about non-GAAP earnings in the earnings announcement press release.

3.1.2. Measuring the Influence of Non-GAAP Discussion in the Determination of Street Earnings (H_1).

Our first analyses explore whether ex-post discussions of non-GAAP earnings metrics and exclusions in the press release and conference call (Channel B from Figure 1) are positively associated with the magnitude of street earnings exclusions after controlling for previously documented determinants (including the potential ex-ante effects of earnings guidance depicted in Channel A from Figure 1). To test H_1 , we estimate equation 1 (where i indexes firms and t identifies quarters):

$$\begin{aligned} \text{TOTAL EXCLUSIONS}_{it} = & \lambda_0 + \lambda_1 NG\%_{CCP,it} + \lambda_2 NG\%_{CCQ\&A,it} + \lambda_3 NG\%_{EA,it} \\ & + \sum_{k=3} \lambda_k \text{CONTROLS}_{k,it} + \varepsilon_{it} \end{aligned} \quad (1)$$

In equation 1, TOTAL EXCLUSIONS is the difference between street EPS and GAAP EPS excluding extraordinary items. The three $NG\%$ variables are defined previously and capture non-GAAP discussion in the conference call presentation, Q&A, and earnings announcement press release. The k controls included in equation 1 are motivated by controls used in prior street earnings studies (e.g., Christensen et al. [2011], Kolev, Marquardt, and McVay [2008]). Specifically, we include SPECIAL (an indicator equal to one if a firm reports special items for the quarter); GUIDE (an indicator equal to one if a firm issues earnings guidance for quarter t during the 12 months leading up to the end of quarter t); TURNOVER (average trading volume in quarter $t-1$); EPRATIO (GAAP operating EPS from quarter $t-1$ scaled by price at the end of quarter $t-1$); MOMENTUM (the buy-and-hold monthly return from quarter $t-1$ minus the buy-and-hold return on the value-weighted market index during the same period); SALEGROWTH (the change in sales between quarter t and quarter $t-4$); SIZE (the natural log of total assets); EARNVOL (the standard deviation of income before extraordinary items over the past eight quarters); LOSS (an indicator equal to one if income before extraordinary items is less than zero); BTM (the book-to-market ratio); AGE (the natural log of the number of years the firm appears on Compustat); NUMANALYST (the natural log of the number of analysts contributing to the last consensus forecast before the earnings announcement date); FCSTDEV (the standard deviation of analyst forecasts in the last consensus forecast before the earnings announcement date); and Q4 (an

indicator equal to one for fiscal fourth quarters).¹⁷ We also include Fama-French-48 industry fixed effects and time fixed effects based on the calendar year-quarter of the earnings announcement date. To test H_1 , we focus on λ_1 and λ_2 where positive coefficient estimates would validate our textual measures and provide evidence consistent with H_1 by indicating that more discussion of non-GAAP earnings and exclusions in the conference call presentation (λ_1) and/or Q&A (λ_2) is associated with more street earnings exclusions.¹⁸

3.1.3. Non-GAAP Discussion and Analyst Disagreement about Defining Firm Performance (H_2). To address our second hypothesis, we leverage the I/B/E/S excluded analyst database to construct a measure to more directly capture analyst opinion about how firm performance should be defined (i.e., the definition of street earnings). TR states, “It is possible that [analyst] estimates are provided on a different accounting basis that differs from the basis of the majority of the [analyst] estimates. When this occurs, TR contacts the analyst for confirmation...of either the estimate itself or the methodology behind it. TR estimates are removed from the database if a satisfactory resolution to the discrepancy is not reached” (Thomson Reuters [2013], p. 24). For each firm-quarter, we create a variable capturing the number of analysts whose forecasts are excluded for this reason. $ANEXCLUDED_{POST6}$ ($ANEXCLUDED_{POST12}$) is the natural log of 1 + the number of unique analysts who had a quarterly earnings forecast excluded from the consensus calculations during the 6-month (12-month) period starting with the day after the earnings announcement. In our view, this measure captures a unique aspect of analyst opinion because it unambiguously indicates the extent to which analysts disagree about how street earnings ought to be defined. In addition, we believe this measure captures significant disagreement “because it is costly for an analyst to have his/her forecast omitted from the consensus” (Baik, Farber, and Petroni [2009], p. 51 citing Bradshaw, Richardson, and Sloan [2006]).¹⁹ To further corroborate this measure, we use a subsample to verify whether the excluded analysts we observe

¹⁷ We provide detailed variable definitions in Appendix A.

¹⁸ Table 2 reports results of estimating equation (1) on three different samples: observations with $TOTAL\ EXCLUSIONS \geq 0$, $TOTAL\ EXCLUSIONS < 0$, and the full sample. For the subsample with $TOTAL\ EXCLUSIONS < 0$, the interpretation of the sign of λ_1 and λ_2 flips; that is, negative coefficient estimates indicate more non-GAAP discussion is associated with more street earnings exclusions.

¹⁹ As mentioned previously, our conversation with a TR product specialist indicated that brokerages want their estimates to be used in by market participants. This is consistent with the idea that analysts would prefer to have their forecasts included in the consensus.

actually participate in the firm’s conference calls. For this subsample, we find that in 51% of the firm-quarters with $ANEXCLUDED_{POST6} > 0$, at least one excluded analyst participates in the conference call, and 29% of all the excluded analysts participate in the call. These numbers are consistent with Mayew’s [2008] evidence that, on average, about 50% of a firm’s I/B/E/S analysts participate in the firm’s conference call.²⁰ As a result, the $ANEXCLUDED$ measures do not simply capture extreme instances of analysts who exert minimal effort when following the firm. We investigate the association of non-GAAP discussion with $ANEXCLUDED$ by estimating the following model:

$$ANEXCLUDED_{it} = \delta_0 + \delta_1 NG\%_{CCP,it} + \delta_2 NG\%_{CCQ\&A,it} + \delta_3 NG\%_{EA,it} + \sum \delta_{3+k} CONTROLS_{k,it} + \epsilon_{it} \quad (2)$$

In equation 2, $ANEXCLUDED$ can be either $ANEXCLUDED_{POST6}$ or $ANEXCLUDED_{POST12}$ as defined previously. The control variables in equation 2 are identical to those in equation 1 except that we also include $TOTAL\ EXCLUSIONS$ (the dependent variable in equation 1). For our tests of H_2 , we focus on the estimates of δ_1 and δ_2 . If non-GAAP discussion between managers and analysts serves to unify opinion, we would expect negative estimates of δ_1 and δ_2 . However, if non-GAAP discussions (particularly those in the Q&A) are motivated by disagreement or uncertainty about the proper definition of street earnings, we would expect positive estimates.

3.1.4. Non-GAAP Discussion and Shifts in the Consensus Definition of Street Earnings (H_3). To test our third hypothesis, we employ two different methods to estimate shifts in the consensus definition of street earnings. This dual-pronged approach is necessary because as researchers we cannot observe the components of the consensus definition in a particular firm-quarter.²¹ For our first method, we construct five measures of EPS using Compustat income statement data. EPS1 is per-share operating income before depreciation; EPS2 is per-share operating income after depreciation; EPS3 is per-share pretax income before interest and non-operating items; EPS4 is pretax income; and EPS5 is per-share income before extraordinary items. We then check which of the five EPS measures is closest (in absolute value) to the I/B/E/S street earnings per share in order to assign a definition to the street

²⁰ We are very grateful to Khrystyna Bochkay for matching our excluded analysts with her data on analysts’ conference call participation. Her conference call transcripts come from a different source which is why we can only provide statistics for a subsample covering 47% of our firm-quarters with $ANEXCLUDED_{POST6} > 0$. In future analyses we plan to check the excluded analyst participation for our full sample.

²¹ As mentioned previously, our attempts to obtain this data from TR were unsuccessful.

earnings number.²² Using this assigned definition, we construct a measure meant to capture shifts in the definition. $SHIFT_{DEF}$ is an indicator variable equal to 1 if the assigned definition in quarter t is different from the assigned definition in quarter $t-1$.

Our second method seeks to estimate the number of line items excluded from street earnings. To accomplish this objective, we follow the algorithm employed by Ecker et al. [2017], section 4.4.²³ Their algorithm attempts to explain the signed difference between the I/B/E/S street earnings and a measure of EPS from Compustat (we use earnings from operations) by considering all possible combinations of a set of income statement components that are non-missing or non-zero for the particular firm-quarter.²⁴ The combination of line items that is closest (in absolute value) to the difference between street earnings and Compustat earnings from operations is assumed to be the set of items excluded from street earnings.²⁵ Using the algorithm output, we create a second proxy for shifts in the definition of street earnings. $SHIFT_{ITEMS}$ is an indicator variable equal to 1 if the number of components excluded from street earnings (scaled by the number of non-zero and non-missing components) in quarter t is different from the number of components excluded (scaled by the number of non-zero and non-missing components) in quarter $t-1$. As a validation of our two SHIFT measures, we first note that they are significantly positively correlated with each other (see Table 1 Panel B), suggesting they capture a similar construct. In addition, we verify whether the SHIFT measures are correlated with the existence of an I/B/E/S “go-forward actual” street earnings number.²⁶ Thomson Reuters explains that these go-forward actuals capture scenarios when the majority of analysts change

²² If two or more EPS measures are equally close to the street earnings number, we assign the definition that is “lower” on the income statement. For example, if $EPS_4 = EPS_5$, and the street earnings number is closer to EPS_4 than EPS_3 , we would assign the street definition as EPS_5 . Results are not sensitive to this choice.

²³ We thank Frank Ecker for performing the algorithm on our sample data.

²⁴ The Compustat-based components we consider are: SG&A expense ($XSGAQ - XRDQ$); R&D expense ($XRDQ$); depreciation and amortization (DPQ); interest expense ($XINTQ$); non-operating income/expense ($NOPIQ$); discontinued operations (DOQ); equity in earnings from unconsolidated subsidiaries ($ESUBQ$); foreign exchange income/loss ($FCAQ$); net interest income ($NIITQ$); non-controlling interest ($MIIQ$); acquisition/merger items ($AQPQ$); gains/losses related to special items ($GLPQ$); goodwill impairment ($GDWLIPQ$); litigation/insurance settlements ($SETPQ$); restructuring costs ($RCPQ$); write-downs ($WDPO$); debt extinguishment ($DTEPQ$); in-process R&D ($RDIPQ$); other special items ($SPIOPQ$); and stock compensation expense ($STKCOQ$). All measures are transformed to be on an after-tax, per-share basis where the tax rate is measured using Compustat variables ($TEXTQ / PIQ$) and shares outstanding is based on Compustat $CSHFDQ$ or $CSHOQ$ (if $CSHFDQ$ is missing). The sign of all items is standardized so that expense (income) items are positive (negative).

²⁵ If multiple combinations are equally close, we retain the combination with fewer components. If the multiple combinations have the same number of components, we choose a combination randomly. This situation is rare.

²⁶ We thank Eric Weisbrod for bringing this to our attention and suggesting that we use go-forward actuals in our analysis.

their view of firm performance either for a particular period or on a “go-forward” basis (Thomson Reuters [2017]). The go-forward data is available starting in 2011, and we observe significantly positive correlations between the presence of a go-forward actual and both SHIFT measures ($p < 0.001$, untabulated). To test H₃, we estimate the following model:

$$\text{SHIFT}_{it} = \eta_0 + \eta_1 \text{NG\%}_{\text{CCP},it} + \eta_2 \text{NG\%}_{\text{CCQ\&A},it} + \eta_3 \text{NG\%}_{\text{EA},it} + \sum \eta_{3+k} \text{CONTROLS}_{k,it} + \varepsilon_{it} \quad (3)$$

In equation 3, SHIFT can take the value of SHIFT_{DEF} or SHIFT_{ITEMS} (described previously). The set of k controls is the same complete set included in equation 2 that captures firm characteristics, performance, and aspects of the information environment. For our tests of H₃, we focus on the estimates of η_1 and η_2 . If managers and/or analysts discuss non-GAAP topics when a shift in the consensus definition is being considered, we expect positive estimates of η_1 and η_2 . However, if managers’ discussions are perceived as aggressive or opportunistic, or if analysts are more likely to ask questions to substantiate their current definition of firm performance, we might expect negative estimates.

3.1.5. Assessing the Quality of Street Earnings Exclusions (H₄). Prior researchers have gauged the appropriateness (quality) of earnings exclusions by regressing future performance measures (such as operating cash flow and operating earnings) on current period exclusion measures (e.g., Doyle, Lundholm, and Soliman [2003], Kolev, Marquardt, and McVay [2008], Brown et al. [2012a], Bentley et al. [2018]). If managers exclude purely transitory (one-time) items, these exclusions should not be statistically related to future performance. However, if managers exclude recurring items, exclusions will be significantly related to future performance. Following the spirit of these studies, we perform analyses to examine the quality of street earnings exclusions in the presence of non-GAAP discussion by managers and analysts. We estimate the following model to test H₄:

$$\begin{aligned} \text{FUTOPINC}_{it} = & \beta_0 + \beta_1 \text{TOTAL EXCLUSIONS}_{it} + \beta_2 \text{NG\%}_{\text{CCP},it} + \beta_3 \text{NG\%}_{\text{CCP},it} \times \text{TOTAL EXCLUSIONS}_{it} \\ & + \beta_4 \text{NG\%}_{\text{CCQ\&A},it} + \beta_5 \text{NG\%}_{\text{CCQ\&A},it} \times \text{TOTAL EXCLUSIONS}_{it} \\ & + \beta_6 \text{NG\%}_{\text{EA},it} + \beta_7 \text{NG\%}_{\text{EA},it} \times \text{TOTAL EXCLUSIONS}_{it} + \sum \beta_{7+k} \text{CONTROLS}_{k,it} + \varepsilon_{it} \quad (4) \end{aligned}$$

Following Kolev, Marquardt, and McVay [2008], FUTOPINC is the sum of GAAP operating EPS over the next four fiscal quarters, and TOTAL EXCLUSIONS is the difference between street earnings per share and GAAP EPS excluding extraordinary items (the dependent variable in equation 1). The controls in equation 4 are the same as those used in equations 2 and 3 except that we also add STREET

(the current quarter street earnings number) following Kolev, Marquardt, and McVay [2008]. Prior researchers argue that high-quality exclusions should be transitory (and thus not related to future operating performance). Kolev, Marquardt, and McVay [2008] find that the coefficient on TOTAL EXCLUSIONS (β_1) is significantly negative, suggesting that expense items excluded from street earnings include recurring items that persist in future periods (and are therefore low-quality). The coefficients of interest for our tests of H4 are the interaction terms β_3 and β_5 . If more non-GAAP discussion from managers and analysts is associated with higher-quality (lower-quality) street earnings exclusions, we would expect to see positive (negative) estimates of β_3 and β_5 .

3.1.6. Investor Perception of Non-GAAP Discussion (H5). Our final analyses test H5 by focusing on the association between street earnings surprises and short-window returns around the earnings announcement. Bradshaw and Sloan [2002], Brown and Sivakumar [2003], and Bhattacharya et al. [2003] find that announcement period abnormal returns are more highly associated with street and managers' non-GAAP earnings than with GAAP earnings. We test whether this association is different in the presence of non-GAAP discussion by managers and analysts. We are interested in these potential effects because they are informative about whether and how the market interprets non-GAAP discussion from managers and analysts. To address these questions, we estimate the following equation:

$$\begin{aligned} \text{CAR}_{it} = & \alpha_0 + \alpha_1 \text{SURPRISE}_{it} + \alpha_2 \text{NG\%}_{\text{CCP},it} + \alpha_3 \text{NG\%}_{\text{CCP},it} \times \text{SURPRISE}_{it} \\ & + \alpha_4 \text{NG\%}_{\text{CCQ\&A},it} + \alpha_5 \text{NG\%}_{\text{CCQ\&A},it} \times \text{SURPRISE}_{it} \\ & + \alpha_6 \text{NG\%}_{\text{EA},it} + \alpha_7 \text{NG\%}_{\text{EA},it} \times \text{SURPRISE}_{it} + \sum \alpha_{7+k} \text{CONTROLS}_{k,it} + \varepsilon_{it} \end{aligned} \quad (5)$$

Following Brown and Sivakumar [2003], CAR is the three-day market-adjusted cumulative abnormal return centered on the earnings announcement date. SURPRISE is the forecast error (street EPS – mean forecast) scaled by assets per share (we use the most recent mean forecast calculated prior to the earnings announcement date).²⁷ Our controls follow Lobo, Song, and Stanford [2017] and include standard determinants of short-window returns around earnings announcements and their

²⁷ Brown and Sivakumar [2003] scale CAR by stock price at the end of the previous fiscal quarter. In order to maintain consistency with variables in our other analyses, we scale by assets per share. We provide additional discussion about our choice of scalar in Section 5.

interactions with SURPRISE.²⁸ We are interested primarily in the estimates of α_3 and α_5 , the coefficients on SURPRISE interacted with conference call discussions of non-GAAP topics. If investors do *not* react differently when managers and/or analysts engage in non-GAAP discussion, α_3 and α_5 will not be statistically different from zero. However, if investors perceive non-GAAP discussion to be associated with the informativeness of street earnings numbers, then α_3 and α_5 will be statistically significant.

3.2 DATA AND SAMPLE SELECTION

In order to reduce the effects of regulatory changes, we choose a sample period beginning after the implementation of Regulation FD (in 2000) and the enactment of the Sarbanes-Oxley Act (in 2002). By doing so, we ensure that conference calls were open to analysts and other market participants and that the non-GAAP earnings regulatory environment remains constant (the Sarbanes-Oxley Act contains specific provisions regulating the disclosure of non-GAAP earnings). We begin our sample selection by identifying all firm-quarters from mid-2002 to 2013, for which we have (1) I/B/E/S analysts' forecasts and street earnings data; (2) an earnings press release; and (3) an earnings conference call transcript. We obtain the conference call transcripts from TR, and we obtain firms' earnings press releases from the SEC's online document database.²⁹ We construct our control variables using data from various databases as defined in Appendix A. Requiring controls data in addition to the first three requirements mentioned previously results in 67,252 firm-quarter observations to estimate our regression models.³⁰

²⁸ Appendix A lists all equation (5) control variables under "CAR Controls".

²⁹ We thank Kurt Gee for sharing the SEC web addresses associated with the earnings announcements identified in Bentley et al. [2018].

³⁰ The procedures required to create the two SHIFT variables used in equation (3) result in fewer observations for these tests. The SHIFT_{DEF} regression uses 53,048 observations while SHIFT_{ITEMS} uses 48,221.

4. Results

4.1 DESCRIPTIVE EVIDENCE

Panel A of Table 1 provides descriptive statistics for the variables of interest and the control variables used in our empirical analyses. Table 1 indicates that the mean value of $NG\%_{CCP}$ is 0.281, meaning that on average, 0.281% of managers' conference call presentation words relate to non-GAAP earnings and/or exclusions. The amount of discussion in the conference call Q&A session is less, with only 0.049% of words relating to non-GAAP topics ($NG\%_{CCQ\&A}$ variable). These statistics reveal that as a percentage of the total conference call disclosure, the majority of the discussion of non-GAAP earnings and exclusions in conference calls takes place in managers' presentations at the start of the calls rather than the Q&A portion. Turning to earnings announcement press releases, the mean value of $NG\%_{EA}$ is 1.170, indicating that as a percentage of total words, earnings announcements contain more non-GAAP discussion than conference calls. The descriptive statistics also indicate that the incidence of manager-initiated non-GAAP discussion is more common than analyst-driven discussion since the 5th and 25th percentiles of $NG\%_{CCQ\&A}$ are zero. In untabulated analyses, we find that 99.5% (92.0%) of the sample observations contain at least one non-GAAP-related term in the press release (conference call presentation), but only 58.7% of the sample observations have at least one non-GAAP term in the Q&A.

Panel B of Table 1 provides Pearson correlations between the three $NG\%$ variables and the dependent variables in equations 1 through 5. While we rely on the full regression models to test our hypotheses, we find that $NG\%_{EA}$, $NG\%_{CCP}$, and $NG\%_{CCQ\&A}$ are significantly positively correlated with street earnings exclusions (TOTAL EXCLUSIONS) and with shifts in the consensus definition of street earnings (the two SHIFT measures). In addition, $NG\%_{CCP}$ and $NG\%_{EA}$ are significantly positively correlated with the two ANEXCLUDED measures ($NG\%_{CCQ\&A}$ is negatively correlated with $ANEXCLUDED_{Lead12}$ and not correlated with $ANEXCLUDED_{Lead6}$). These correlations provide preliminary evidence that more non-GAAP discussion is associated with higher amounts of street earnings exclusions, analyst disagreement about the definition of street earnings, and shifts in the consensus definition. $NG\%_{EA}$ and $NG\%_{CCP}$ are very highly correlated (0.554), indicating that when

managers make a decision to discuss non-GAAP earnings, they are likely to do so in both the earnings press release and the conference call. Significantly positive correlations between both $NG\%_{EA}$ and $NG\%_{CCP}$ and $NG\%_{CCQ\&A}$ yield the same inference: when managers discuss non-GAAP earnings in their earnings press releases and conference call presentations, analysts are more likely to ask questions related to non-GAAP topics.

4.2 THE INFLUENCE OF NON-GAAP DISCUSSION ON STREET EXCLUSIONS (H_1)

Table 2 reports the results of our H_1 tests, which examine whether managers' and analysts' discussions of non-GAAP topics are positively associated with the magnitude of street earnings exclusions. Table 2 reports estimates of equation 1 for the full sample (column 3) and subsamples with $TOTAL\ EXCLUSIONS \geq 0$ (column 1) and $TOTAL\ EXCLUSIONS < 0$ (column 2). As can be seen from the sample sizes in the first two columns, it is much more common for street earnings exclusions to be zero or positive (i.e., expenses are excluded) than negative (i.e., gains are excluded). Across all three specifications of equation 1, we observe significant coefficient estimates for $NG\%_{CCP}$ and $NG\%_{CCQ\&A}$. That is, the more non-GAAP earnings are discussed in the earnings press release or conference call, the higher the amount of total street earnings exclusions (in absolute value).³¹ This result is consistent with evidence from prior research that both managers and analysts play a role in the calculation of street earnings, and we also view these results as corroboratory evidence for our textual non-GAAP discussion measures. In terms of economic significance, a one-standard-deviation increase in $NG\%_{CCP}$ ($NG\%_{CCQ\&A}$) results in a 0.101-standard-deviation (0.015-standard-deviation) increase in the absolute value of $TOTAL\ EXCLUSIONS$.³² To compare with other determinants, the presence of special items results in a 0.305-standard-deviation increase (0.0036 / 0.0118) in absolute $TOTAL\ EXCLUSIONS$ while the presence of management guidance results in a 0.042-standard-deviation increase (0.0005 / 0.0118). Thus, non-GAAP discussions appear to have an economic association with $TOTAL\ EXCLUSIONS$ similar to that of management guidance (documented by Christensen et al.

³¹ As mentioned previously, significantly negative coefficient estimates for $NG\%_{CCP}$ and $NG\%_{CCQ\&A}$ in column 2 are consistent with this interpretation because the sample is restricted to observations with negative values of $TOTAL\ EXCLUSIONS$.

³² As reported in Table 1, the standard deviation of signed $TOTAL\ EXCLUSIONS$ is 0.0122. The standard deviation of the absolute value of $TOTAL\ EXCLUSIONS$ is 0.0118. The 0.101-standard-deviation increase is calculated as $(0.0047 \times 0.2547) / 0.0118$. Similarly, the 0.015-standard-deviation increase is calculated as $(0.0024 \times 0.0715) / 0.0118$.

[2011]). In addition, it is the managers' presentation portion of the discussion that exhibits the stronger association. Interestingly, the association of the Q&A discussion is much stronger when exclusions are negative (column 2 of Table 2). In this specification, a one-standard-deviation increase in $NG\%_{CCQ\&A}$ results in a 0.042-standard-deviation increase in the absolute value of TOTAL EXCLUSIONS. This result likely captures instances of analysts asking questions about unexpected, non-recurring gains reported at the earnings announcement.

4.3 NON-GAAP DISCUSSION AND ANALYST OPINION (H₂)

Table 3 presents results of estimating the association between non-GAAP discussion and the number of analysts excluded from the consensus (ANEXCLUDED). These tests are designed to shed light on how managers' non-GAAP discussions influence analyst disagreement and the motivations for analysts asking questions related to non-GAAP topics. As mentioned previously, we capture a unique aspect of analyst opinion because ANEXCLUDED unambiguously indicates the presence of analysts who disagree about how street earnings ought to be defined. Turning to the results in Table 3, we observe positive but insignificant coefficient estimates for $NG\%_{CCP}$ using both $ANEXCLUDED_{POST6}$ (column 1) and $ANEXCLUDED_{POST12}$ (column 2). This evidence indicates that manager-initiated conference call disclosures have very little influence on analyst disagreement about the definition of street earnings.³³ However, the coefficient on $NG\%_{CCQ\&A}$ is significantly positive in both columns. This result is consistent with analyst-driven non-GAAP discussions focusing on potentially controversial exclusions instead of unifying analyst opinion. In terms of economic significance, the effect of a one-standard-deviation increase in $NG\%_{CCQ\&A}$ results in an approximately 0.015-standard-deviation increase in ANEXCLUDED while firms with special items (management guidance) experience an increase in ANEXCLUDED between 0.038 and 0.049 (0.126 and 0.146) standard deviations. Thus, the influence of discussion in the conference call Q&A is not as strongly associated with analyst disagreement as these other determinants but it sheds light on potential motivation for analysts engaging in these discussions with managers.

³³ Interestingly, the $NG\%_{EA}$ coefficients are significantly positive in both models, indicating that non-GAAP discussion in the earnings announcement press release is associated with more analyst disagreement over the next 6-month and 12-month periods.

4.4 NON-GAAP DISCUSSION AND SHIFTS IN THE CONSENSUS DEFINITION OF STREET EARNINGS (H₃)

Table 4 presents results of our tests of H₃. Column 1 presents results with SHIFT_{DEF} as the dependent variable while column 2 presents the SHIFT_{ITEMS} model.³⁴ Across both models, we observe that NG%_{CCP} and NG%_{CCQ&A} are significantly positively associated with the two SHIFT proxies. Taken together, these results are consistent with the notion that non-GAAP discussions between managers and analysts are associated with shifts in analysts' consensus definition of street earnings. If managers hope that analysts modify their opinion of firm performance, it follows that managers would spend more time discussing non-GAAP earnings and exclusions around shifts in the definition. Similarly, analysts are unlikely to pass off on a new definition of street earnings without asking questions. Regarding economic significance, a one-standard-deviation increase in NG%_{CCP} results in a 1.9% to 2.9% greater probability of experiencing a shift in the consensus definition while a one-standard-deviation increase in NG%_{CCQ&A} results in a 0.46% to 0.81% greater probability of a definition shift. In terms of comparison, firm-quarters with special items experience an increased likelihood of between 15.1 and 27.5%.

To summarize our evidence from Tables 2, 3, and 4, we find that non-GAAP discussions between managers and analysts during earnings conference calls are positively associated with the magnitude of street earnings exclusions, are partly motivated by analyst disagreement about the definition of street earnings, and occur at points in time when the consensus definition of street earnings shifts. In other words, these discussions are related to important aspects of the process by which street earnings numbers are determined. Turning to tests of our final two hypotheses, we explore how these manager-analyst interactions relate to the quality and informativeness of street earnings numbers.

4.5 THE QUALITY OF STREET EXCLUSIONS (H₄)

As explained previously, prior researchers have investigated the appropriateness (quality) of earnings exclusions by regressing future performance measures on the amount of current period exclusions (e.g., Doyle, Lundholm, and Soliman [2003], Kolev, Marquardt, and McVay [2008], Brown et al. [2012a], Bentley et al. [2018]). If street earnings exclude purely transitory (one-time) items, these

³⁴ See Section 3 and Appendix A for details on the two SHIFT variables.

exclusions should not be statistically associated with future operating earnings (indicating high-quality exclusions). However, if street earnings exclude recurring items, exclusions will be significantly related to future performance (indicating low-quality exclusions). Table 5 reports the results of estimating equation 4 for the same subsamples presented in Table 2: TOTAL EXCLUSIONS ≥ 0 (column 1); TOTAL EXCLUSIONS < 0 (column 2); and the full sample (column 3).

Consistent with Kolev, Marquardt, and McVay [2008], all models in Table 5 indicate that current street earnings (STREET) is significantly positively associated with future earnings. Also consistent is our evidence that total street exclusions (TOTAL EXCLUSIONS) is negatively associated with future earnings in columns 1 and 3, which suggests that on average, when expenses are excluded in calculating street earnings, the exclusions are recurring (and of low quality). Interestingly, when gains are excluded in calculating street earnings (column 2), we do not find an association between TOTAL EXCLUSIONS and future operating income (indicating that these exclusions are of higher quality). Our tests of H_4 focus on the interaction of TOTAL EXCLUSIONS and the conference call NG% measures. Column 2 indicates that for observations with excluded gains, non-GAAP discussion has no impact on the quality of the exclusions, which is consistent with the lack of a main effect on TOTAL EXCLUSIONS in column 2. However, columns 1 and 3 tell a different story. NG%_{CCP} × TOTAL EXCLUSIONS is significantly negative ($p < 0.10$ in column 1 and $p < 0.05$ in column 3), indicating that when managers discuss more non-GAAP topics in their conference call presentation, the quality of street earnings exclusions decreases (i.e., the negative main effect on TOTAL EXCLUSIONS becomes more negative). However, we observe that when analysts influence the non-GAAP discussions, quality *increases* as the coefficient estimates of NG%_{CCQ&A} × TOTAL EXCLUSIONS in columns 1 and 3 are significantly positive ($p < 0.01$ in both models).

To better understand the impact of managers' and analysts' non-GAAP discussions on the quality of street earnings exclusions, we estimate the marginal effect of TOTAL EXCLUSIONS (in column 3) at different values of the NG% variables. If we set NG%_{CCQ&A} and NG%_{EA} equal to their sample medians (0.0230 and 0.9619, respectively) and allow NG%_{CCP} to vary, the marginal effect of TOTAL EXCLUSIONS goes from -0.3618 at the 5th percentile of NG%_{CCP}, to -0.4482 at the median of NG%_{CCP}, to -0.6992 at the 95th percentile of NG%_{CCP}. Thus, the magnitude of the negative

association of current street earnings exclusions with future operating income increases (i.e., the quality decreases) by 93% as $NG\%_{CCP}$ increases from its 5th percentile to its 95th percentile. We next set $NG\%_{CCP}$ and $NG\%_{EA}$ equal to their sample medians (0.2086 and 0.9619, respectively) and allow $NG\%_{CCQ\&A}$ to vary. The marginal effect of TOTAL EXCLUSIONS goes from -0.4792 at the 5th percentile of $NG\%_{CCQ\&A}$ to -0.4482 at its median, to -0.2099 at its 95th percentile. In other words, the magnitude of the negative association of street exclusions with future operating income *decreases* (i.e., the quality increases) by 56% as $NG\%_{CCQ\&A}$ increases from its 5th percentile to its 95th percentile. To summarize, both manager- and analyst-driven discussions of non-GAAP topics in conference calls have economically significant impacts on the quality of street earnings exclusions, but they move in opposite directions with manager-driven discussion associated with lower quality exclusions while analysts' discussions are associated with higher quality exclusions.

4.6 THE INFLUENCE OF NON-GAAP DISCUSSION ON THE MARKET RESPONSE TO STREET EARNINGS (H₅)

Our final analyses investigate whether investors react to street earnings information differently in the presence of non-GAAP discussions between managers and analysts. Table 6 presents results of estimating equation 5 on the subsample with the earnings surprise ≥ 0 (column 1), earnings surprise < 0 (column 2), and the full sample (column 3). Consistent with prior research, we find a strong association between announcement period abnormal returns (CAR) and the earnings surprise (SURPRISE) in all three columns. To test H₅, we focus on the interactions of SURPRISE with $NG\%_{CCP}$ and $NG\%_{CCQ\&A}$. For the full sample (column 3), we note that only $NG\%_{CCQ\&A} \times SURPRISE$ is significant, and the coefficient is negative (-1.0432, $p < 0.10$). This result indicates that when analysts initiate discussion of non-GAAP topics in the conference call, the market reaction to the earnings surprise is significantly reduced. To shed additional light on this result, we turn to the subsample results presented in columns 1 and 2 of Table 6. For the subsample with SURPRISE ≥ 0 , we do not observe a significant interaction between $NG\%$ and SURPRISE. However, when SURPRISE < 0 , we observe that the negative estimate $NG\%_{CCQ\&A} \times SURPRISE$ coefficient is significantly negative (-1.8130, $p < 0.05$), indicating that the reduced market reaction observed for the full sample is attributable to

observations with negative earnings surprises.³⁵ This evidence suggests that investors react less negatively when firms miss expectations in the presence of analyst-driven discussion of non-GAAP topics. Analysts' questions about these topics perhaps help investors to better understand the one-time nature of the line items that caused expectations to be missed, resulting in a less negative response. Another possibility is that analysts' questions allow investors to better understand particular line items that have positive implications for future performance.³⁶ Coupled with the results in Table 5, our evidence indicates that analysts' discussions with managers about topics related to street earnings positively influence the quality and informativeness of street earnings.

5. Additional Analyses

5.1 NON-GAAP DISCUSSIONS FROM THE PREVIOUS QUARTER

Our main analyses consider properties of street earnings and non-GAAP discussions from the same fiscal quarter. However, it is reasonable to believe that these discussions are somewhat sticky over time. For example, if a firm never provides non-GAAP earnings and its analysts do not make exclusions in calculating street earnings, the non-GAAP discussion should be close to zero each quarter. On the other hand, if a firm has been providing non-GAAP earnings measures for many quarters, and analysts regularly exclude items from street earnings, some baseline amount of non-GAAP discussion is likely to occur each quarter. We consider non-GAAP discussions from the prior quarter to investigate whether our results: (1) capture the effects of non-GAAP discussion at the end of the quarter on properties of street earnings and analyst agreement in that quarter, or (2) capture overall characteristics of the firm's information environment.

Table 7 presents results from repeating the main analyses in Tables 2 through 6 after replacing the NG% variables with NG% variables from the previous fiscal quarter.³⁷ Column 1 presents the

³⁵ Following the recommendations of prior research (e.g., Kothari [2001], Drake, Gee, and Thornock [2016]), we focus on the sign and significance of the interaction terms instead of the coefficient magnitudes. Kothari [2001] argues that in ERC regressions, "the best a researcher can do currently is to test whether a coefficient is statistically significant or whether it is significantly greater than the coefficient on another variable" (p. 143).

³⁶ We thank Alina Lerman for this insight.

³⁷ Because the lagged NG% variables are not available for all observations used in the main analyses, the number of observations in Table 7 decreases when compared to the other tables.

analysis of $AbsValue(TOTAL\ EXCLUSIONS)$, and the results are similar to column 3 of Table 2 in sign and significance for $Lag\ NG\%_{CCP}$, but not for $Lag\ NG\%_{CCQ\&A}$ (t -statistic = 0.57). This evidence suggests that the relation between total exclusions and managers' non-GAAP disclosures in time t reflects managers' similar tendencies over time but that the association between analyst-driven discussion and the magnitude of street earnings is specific to quarter t . Columns 3 and 4 repeat the Table 3 analyses of analysts excluded from the consensus. The results are similar, indicating that the association between analyst disagreement and analyst-driven non-GAAP discussion in the Q&A persists for longer periods of time. Turning to columns 4 and 5, we find that $Lag\ NG\%_{CCP}$ and $Lag\ NG\%_{CCQ\&A}$ are both significantly positively associated with the two SHIFT variables. This result is consistent with the idea that shifts in the consensus definition of street earnings are preceded by discussions between managers and analysts and do not happen all at once. In particular, the coefficient on $Lag\ NG\%_{CCQ\&A}$ in the $SHIFT_{ITEMS}$ model (0.1485, $p < 0.01$) is much larger and more significant than $NG\%_{CCQ\&A}$ in column 2 of Table 4 (0.0639, $p < 0.10$).

Regarding the quality of street earnings exclusions, column 6 of Table 7 indicates that managers' non-GAAP disclosures in the presentation portion of the call from the previous quarter are associated with lower quality exclusions. However, analyst-driven discussions from the previous quarter are not associated with the quality of exclusions. Similar to column 1 of Table 7, this result indicates that the effects of managers' non-GAAP discussions are stickier while analysts' questions (and their impact on street earnings) seem to be period-specific. This result is also corroborated by the replication of the market reaction tests in columns 7 and 8 of Table 7. We do not find significant coefficient estimates for interactions between SURPRISE and $Lag\ NG\%_{CCP}$ and $Lag\ NG\%_{CCQ\&A}$. This result indicates that the impact of analyst-driven non-GAAP discussions documented in Table 6 is period-specific and not simply a characteristic of the information environment.

5.2 ALTERNATIVE SPECIFICATIONS

To test the robustness of our main results, we also repeat several of our tests using alternative specifications and proxies. First, instead of counting the number of excluded analysts (ANEXCLUDED in Table 3), we instead use an indicator variable equal to 1 if there is at least one

excluded analyst. Our results are similar in terms of sign and significance for $NG\%_{CCQ\&A}$ and $NG\%_{CCP}$ except that $NG\%_{CCP}$ is marginally significant ($p < 0.10$) when using the indicator version over the next 6 months (it remains insignificant when using the next 12 months). Second, we consider variations of the SHIFT proxies used as dependent variables in Table 4. We redefine $SHIFT_{DEF}$ as an indicator equal to one when the estimated definition of earnings is the same in quarter $t-1$ and $t-2$, changes in quarter t and then remains the same in quarter $t+1$. We still find that $NG\%_{CCP}$ and $NG\%_{CCQ\&A}$ are significantly positive ($p < 0.05$). In addition, we consider an alternative definition of $SHIFT_{ITEMS}$. Instead of using the Ecker et al. [2017] algorithm to explain the difference between street earnings and Compustat EPS from operations, we use the algorithm to explain the difference between street earnings and Compustat EPS before extraordinary items. The results for $NG\%_{CCP}$ are similar to column 2 of Table 4, but the $NG\%_{CCQ\&A}$ variable is no longer statistically significant (t -statistic = -0.02). This evidence suggests that analysts' non-GAAP discussions from the Q&A are more associated with definition shifts related to recurring exclusions (where more controversy might be expected) than with definition shifts related to total exclusions. Third, because earnings announcements do not always occur on the same day as the corresponding conference call, we repeat our Table 6 analyses using a 4-day CAR. The results are very similar to those reported in Table 6 in terms of sign and significance.

Finally, while it is beyond the scope of this paper to settle the debate on the choice of scalar variables and whether to scale or not scale particular regression variables, we comment on our choice of scalar variable. We choose to scale particular variables to promote comparability with the prior research we follow (e.g., Christensen et al., [2011], Kolev, Marquardt, and McVay [2008], Brown and Sivakumar, [2003]). However, these studies (and others) do not always scale by the same variable. For example, Christensen et al. [2011] scale TOTAL EXCLUSIONS by price at the end of the previous year (they use annual data). On the other hand, Kolev, Marquardt, and McVay [2008] scale TOTAL EXCLUSIONS by assets per share. To avoid different scalars throughout our analyses, we choose to scale by assets per share.³⁸ Our primary motivation is that Cheong and Thomas [2011, 2017] document significant problems when scaling by share price. However, because assets per share (our scalar

³⁸ The variables of interest affected by this choice are TOTAL EXCLUSIONS, FUTOPINC, and SURPRISE. The control variables affected by this choice are STREET and SALEGROWTH.

variable) is correlated with our NG% variables and several of our dependent variables (untabulated), we also follow the recommendation of Cheong and Thomas [2017] and add assets per share as an additional control variable in all regressions.³⁹ In terms of sign and significance of our variables of interest, the results are very similar to the main results tabulated in Tables 2 through 6.⁴⁰

6. Conclusion

While prior research has documented that managers and analysts both influence the calculation of street earnings (e.g., Gu and Chen [2004], Baik, Farber, and Petroni [2009], Bradshaw and Soliman [2007], Bradshaw [2011], Christensen et al. [2011], Bentley et al. [2018]), we analyze direct communications between managers and analysts to investigate how these interactions influence the process of determining street earnings exclusions, their quality, and informativeness. Using a sample of 67,252 quarterly observations from 2003 to 2013, our results indicate that managers' and analysts' discussions of non-GAAP earnings and exclusions during earnings conference calls impact the calculation of, quality of, and market response to street earnings. Specifically, results based on textual analysis suggest that manager-initiated and analyst-driven discussions are associated with higher amounts of total street earnings exclusions, consistent with conclusions from prior research that both parties influence street earnings. However, we find that more analyst-driven discussion of non-GAAP earnings and exclusions is associated with greater disagreement among analysts regarding the *definition* of street earnings (i.e. more individual analysts are excluded from the consensus in the months following the earnings announcement), perhaps indicating that analysts' questions stem from uncertainty or skepticism about street earnings exclusions. We also find evidence that these non-GAAP discussions are associated with shifts in the consensus definition of street earnings, suggesting that managers and analysts discuss these topics when the consensus opinion of firm performance is changing.

³⁹ In the Table 3 (Table 4) specifications, we also include the interaction between the inverse of assets per share and TOTAL EXCLUSIONS (SURPRISE).

⁴⁰ The results are also similar if we instead include the inverse of assets per share as an additional control variable instead of assets per share.

Turning to the influence of these discussions on the quality of street earnings exclusions, we find that analyst-driven discussions of non-GAAP topics in the Q&A portion of the conference call result in higher-quality street earnings exclusions while manager-driven discussions lead to lower-quality exclusions. Finally, we find that the market reacts less to negative street earnings surprises when analysts ask questions about street earnings topics during the conference call. These results highlight the different roles played by managers and analysts regarding the quality and informativeness of street earnings numbers. In particular, our evidence indicates that analysts monitor managers' street earnings disclosures and positively influence the quality and informativeness of the associated exclusions. Our additional analyses of non-GAAP discussions from the previous quarter also bolster these conclusions by providing evidence suggesting that the associations between analyst-driven discussions and quality and informativeness are not simply artifacts of the firm's information environment. We contribute to the street earnings literature by shedding further light on how street earnings are determined and by taking a step toward answering the call from prior research for more direct evidence on "the information flow from managers to the capital markets" (Bradshaw [2011], p. 537) and "how [managers and analysts] interact and influence the other party's non-GAAP reporting practice" (Black et al. [2018], p. 285). By simultaneously considering manager-initiated non-GAAP disclosures and analyst-driven non-GAAP discussions in the conference call Q&A, we are able to shed light on the interplay between managers and analysts in the determination of street earnings.

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APPENDIX A Variable Definitions*

Textual Variables⁺

NG _{%CCP}	=	the percentage of total words in the earnings conference call presentation pertaining to non-GAAP earnings and exclusions.
NG _{%CCQ&A}	=	the percentage of total words in the earnings conference call Q&A session pertaining to non-GAAP earnings and exclusions.
NG _{%EA}	=	the percentage of total words in the earnings announcement press release pertaining to non-GAAP earnings and exclusions.

Dependent Variables

TOTAL EXCLUSIONS	=	(I/B/E/S actual earnings - Compustat EPSFXQ), scaled by (Compustat ATQ / Compustat CSHFDQ).
ANEXCLUDED _P	=	Natural log of (1 + number of unique analysts making an excluded forecast during period P). The number of unique analysts is counted from the group of analysts making a forecast with FPI = 6, 7, 8, or 9 in the IBES Unadjusted Excluded Analyst file. We count the excluded analysts during different periods (subscript P). For $P = POST6$ ($POST12$), we consider excluded forecasts happening during the 6 months (12 months) after the earnings announcement date.
SHIFT _{DEF}	=	an indicator variable equal to 1 if the estimated definition of street earnings in quarter t is different from the estimated definition of street earnings in quarter $t-1$. The definition of street earnings is estimated by constructing five measures of EPS from Compustat income variables: OIBDPQ, OIADPQ, (OIADPQ - XINTQ + NOPIQ), PIQ, and IBQ. Each is then divided by CSHFDQ to convert it into a per-share number. We then check which constructed measure is closest (in absolute value) to the street earnings number from I/B/E/S. If the street earnings number is equally close to two different Compustat EPS measures, we assign the "lower" definition (e.g., IBQ would be chosen instead of PIQ).
SHIFT _{ITEMS}	=	an indicator variable equal to 1 if the estimated number of income statement line items excluded from street earnings (scaled by the number of potential items that could be excluded) in quarter t is different than the estimated number from quarter $t-1$. To estimate the number of excluded income statement line items, we follow the algorithm from Ecker et al. (2017). To summarize, the algorithm considers all possible combinations of 20 Compustat income statement line items after adjusting them to be after-tax and per-share. The combination that is closest to the difference between the I/B/E/S actual earnings and Compustat OEPSXQ is retained, and we count the number of items in that combination. We thank Frank Ecker for performing this analysis for us. See footnote 24 for details on the 20 Compustat income statement line items.
FUTOPINC	=	Sum of Compustat OEPSXQ from quarter $t+1$ to quarter $t+4$, scaled by (Compustat ATQ / Compustat CSHFDQ) in quarter t .
CAR	=	Three-day market-adjusted cumulative abnormal return centered on the earnings announcement date. CRSP VWRETD is used to adjust for market returns. If the beginning or end of the three-day period falls on a non-trading day, the starting (ending) date is the next-earliest (next-latest) trading day in the CRSP Daily Stock File.

Control Variables

SPECIAL	=	Indicator variable equal to 1 if Compustat SPIQ is not missing and not equal to zero.
GUIDE	=	Indicator variable equal to 1 if managers issue guidance for the fiscal quarter any time during the 12 months ending with the fiscal quarter end date.
TURNOVER	=	Average monthly trading volume scaled by shares outstanding during the previous fiscal quarter based on data from the CRSP Monthly Stock File.
EPRATIO	=	Compustat OEPSXQ from the previous quarter scaled by stock price at the end of that quarter.
MOMENTUM	=	Buy-and-hold monthly returns from from the previous quarter minus the buy-and-hold monthly returns on the value-weighted market index during the same period based on data from the CRSP Monthly Stock File.
SALEGROWTH	=	(Compustat SALEQ from quarter t - SALEQ from quarter $t-4$) scaled by CSHFDQ. This value is then scaled by (ATQ / CSHFDQ) in quarter t .
SIZE	=	Natural log of total assets.
EARNVOL	=	Standard deviation of (Compustat IBCOMQ / Compustat ATQ) over the past eight quarters (at least 6 must be non-missing).
LOSS	=	Indicator variable equal to 1 if Compustat IBCOMQ is less than 0.
BTM	=	Compustat SEQQ / (Compustat LTQ + (Compustat CSHOQ × Compustat PRCC_F)).
AGE	=	Natural log of (1 + number of years the firm appears on Compustat).
NUMANALYST	=	Natural log of (1 + number of analysts contributing to the last consensus forecast before the earnings announcement date). Measured as the NUMEST variable in the I/B/E/S Unadjusted Summary file.
FCSTDEV	=	Standard deviation of analyst forecasts contributing to the last consensus forecast before the earnings announcement date. Measured as the STDEV variable in the I/B/E/S Unadjusted Summary file. When there is only one contributing analyst, STDEV is always missing. In these situations (5,026 firm-quarters in our sample), we set FCSTDEV = 0.
Q4	=	Indicator variable equal to 1 for fiscal fourth quarters.
STREET	=	I/B/E/S actual earnings, scaled by (Compustat ATQ / Compustat CSHFDQ).
SURPRISE	=	(I/B/E/S actual earnings - I/B/E/S mean consensus forecast) scaled by (Compustat ATQ / Compustat CSHFDQ). We use the last consensus forecast before the earnings announcement date.
CAR Controls	=	Variables listed as "Control Variables" in Lobo et al.'s (2017) Appendix A: LOSS (as defined above); SPECIALVAL (absolute value of Compustat special items scaled by sales); RDVAL (absolute value of R&D scaled by sales); NUMANALYST (as defined above); SIZE (as defined above); MTB (inverse of BTM defined above); PASTRETVOL (standard deviation of daily returns starting from two days after the earnings announcement from quarter $t-1$ through the first trading day after the earnings announcement from quarter t); EXTREME (indicator equal to 1 if SURPRISE is below the sample 5th percentile or above the sample 95th percentile); PERSIST (slope coefficient of quarterly EPSFXQ regressed on lagged EPSFXQ estimated for each firm-year using the prior three years as the estimation window; the coefficients are normalized to be between 0 and 1); POSSURP (indicator equal to 1 if SURPRISE > 0); POSSALEG (indicator equal to 1 if sales from quarter t is greater than sales from quarter $t-1$); FCSTDEV (as defined above). Each of these variables is also interacted with SURPRISE in Table 6.

* Note that all Compustat data are taken from the as-first-reported quarterly files to ensure that all data reflects numbers originally reported and acquired by the market and analysts. The following variables are winsorized at 1% and 99%: TOTAL EXCLUSIONS, FUTOPINC, CAR, EPRATIO, MOMENTUM, SALEGROWTH, SIZE, BTM, STREET, SURPRISE, SPECIALVAL, RDVAL, MTB, and PERSIST (before normalization). The following variables are winsorized at 99%: NG_{%CCP}, NG_{%CCQ&A}, NG_{%EA}, ANEXCLUDED_L, TURNOVER, EARNVOL, AGE, NUMANALYST, FCSTDEV, and PASTRETVOL.

+ See Appendix B for additional information on textual parsing process and the words and phrases used to capture non-GAAP earnings and exclusions.

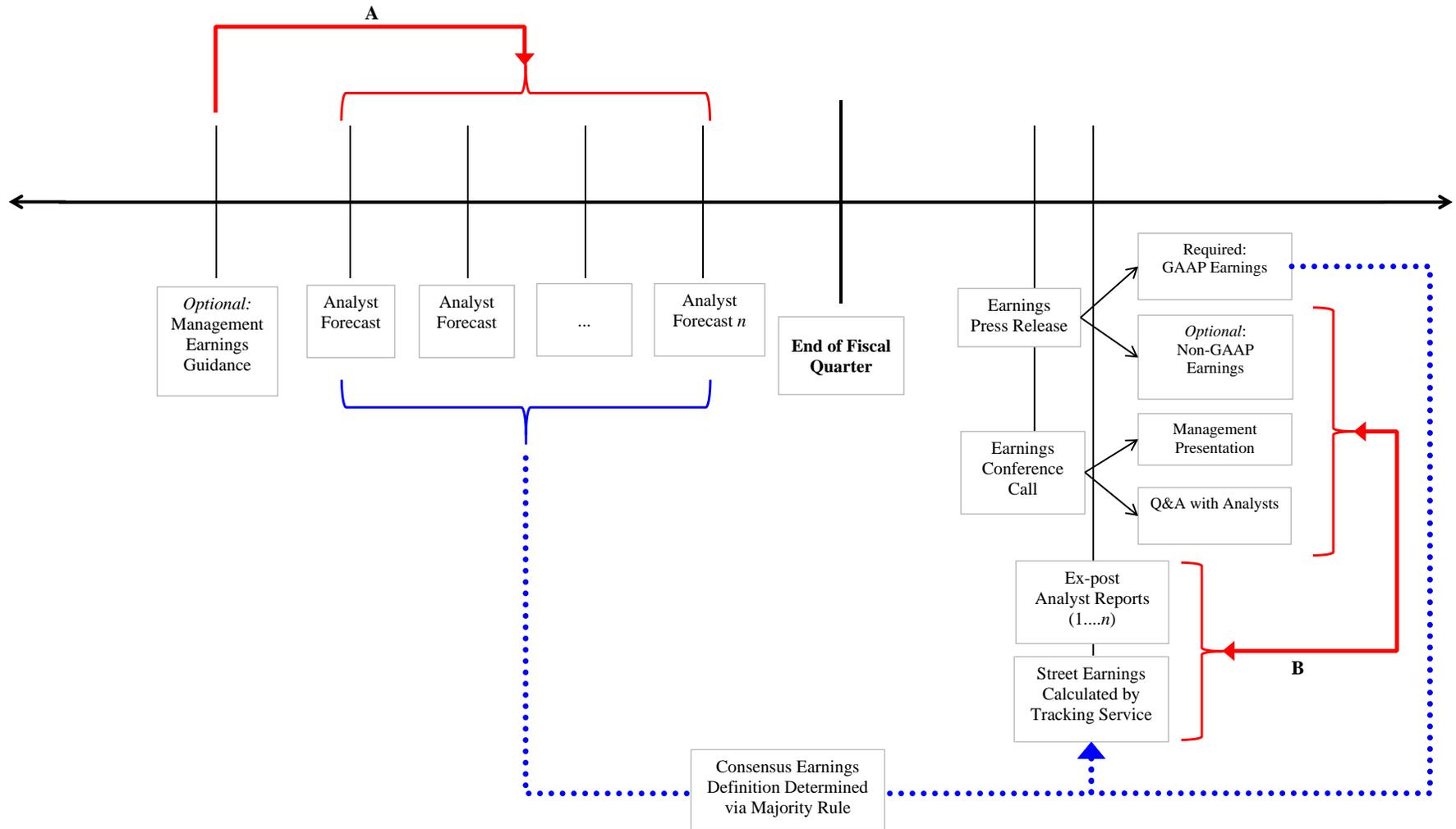
APPENDIX B
List of Perl Regular Expressions Used to Capture Non-GAAP Words and Phrases

Textual Parsing Notes

Each individual text file (earnings announcement, conference call presentation, or conference call Q&A) is first searched for the non-GAAP words and phrases listed below. When a word or phrase is found, we replace it with "BCKSNONGAAP". Then, each file is split into tokens, where a token is any combination of at least two alphabetic letters (not numbers, symbols, etc.). The instances of "BCKSNONGAAP" are then counted and form the numerator for our NG% variables. The denominator is determined by counting the number of tokens that appear in the Loughran and McDonald master dictionary (available at Bill McDonald's website: http://www3.nd.edu/~mcdonald/Word_Lists.html) and adding the total number of instances of "BCKSNONGAAP". The process is run separately for the non-GAAP earnings words and phrases and the exclusion words and phrases. Because this can result in slightly different denominators for the same document, the two resulting denominators are averaged when computing the final NG% variables. We note that the two slightly different denominators are correlated above 0.99.

Non-GAAP Words and Phrases	Frequency	Percent	Cumulative Percent
non.?gaap	115,826	17.57%	17.57%
r\&d	77,653	11.78%	29.35%
amortization	58,979	8.95%	38.30%
depreciation	51,733	7.85%	46.15%
interest.expenses?	49,834	7.56%	53.71%
adjusted.?ebit(da)?	33,114	5.02%	58.73%
pro.?forma	28,080	4.26%	62.99%
adjust(ed)ing)?.?(e\.?p\.?s (net.?)(earnings? loss(es)? income)(.?.of.?\$?(d\ .)+)?(?.per.?(common basic diluted)?.?share)?)	24,864	3.77%	66.76%
stock.based.compensation	19,451	2.95%	69.71%
gains?.on	17,865	2.71%	72.42%
restructuring.charges?	15,124	2.29%	74.72%
research.and.development	14,418	2.19%	76.90%
impairment.charges?	13,621	2.07%	78.97%
discontinued.operations?	10,915	1.66%	80.63%
loss(es)?.on	10,873	1.65%	82.28%
tax.expenses?	10,045	1.52%	83.80%
special.items?	8,784	1.33%	85.13%
other.expenses?	8,708	1.32%	86.45%
(e\.?p\.?s (net.?)(earnings? loss(es)? income)(.?.of.?\$?(d\ .)+)?(?.per.?(common basic diluted)?.?share)?).?before	8,173	1.24%	87.69%
stock.compensation	7,500	1.14%	88.83%
loss(es)?.from	7,388	1.12%	89.95%
gains?.from	7,138	1.08%	91.04%
core.?(e\.?p\.?s (net.?)(earnings? loss(es)? income)(.?.of.?\$?(d\ .)+)?(?.per.?(common basic diluted)?.?share)?)	4,799	0.73%	91.76%
cash.?(e\.?p\.?s (net.?)(earnings? loss(es)? income)(.?.of.?\$?(d\ .)+)?(?.per.?(common basic diluted)?.?share)?)	4,479	0.68%	92.44%
ongoing.?basis	4,329	0.66%	93.10%
unusual.items?	4,097	0.62%	93.72%
special.charges?	3,736	0.57%	94.29%
one.time.charges?	3,675	0.56%	94.85%
cash.?basis	3,405	0.52%	95.36%
tax.charges?	3,315	0.50%	95.86%
share.based.compensation	3,133	0.48%	96.34%
non.operating	2,983	0.45%	96.79%
(e\.?p\.?s (net.?)(earnings? loss(es)? income)(.?.of.?\$?(d\ .)+)?(?.per.?(common basic diluted)?.?share)?).?excluding	2,296	0.35%	97.14%
other.charges?	1,685	0.26%	97.40%
normalized?.?basis	1,668	0.25%	97.65%
non.cash.items?	1,663	0.25%	97.90%
one.time.expenses?	1,630	0.25%	98.15%
ongoing.?(e\.?p\.?s (net.?)(earnings? loss(es)? income)(.?.of.?\$?(d\ .)+)?(?.per.?(common basic diluted)?.?share)?)	1,529	0.23%	98.38%
core.?operations	1,344	0.20%	98.58%
normalized?.?(e\.?p\.?s (net.?)(earnings? loss(es)? income)(.?.of.?\$?(d\ .)+)?(?.per.?(common basic diluted)?.?share)?)	1,328	0.20%	98.79%
research.\&.development	817	0.12%	98.91%
debt.extinguishment	802	0.12%	99.03%
debt.retirement	742	0.11%	99.14%
base.?(e\.?p\.?s (net.?)(earnings? loss(es)? income)(.?.of.?\$?(d\ .)+)?(?.per.?(common basic diluted)?.?share)?)	614	0.09%	99.24%
(e\.?p\.?s (net.?)(earnings? loss(es)? income)(.?.of.?\$?(d\ .)+)?(?.per.?(common basic diluted)?.?share)?).?adjust(ed)ing	606	0.09%	99.33%
interest.charges?	585	0.09%	99.42%
core.?basis	559	0.08%	99.50%
impairment.loss(es)?	537	0.08%	99.58%
recurring.?(e\.?p\.?s (net.?)(earnings? loss(es)? income)(.?.of.?\$?(d\ .)+)?(?.per.?(common basic diluted)?.?share)?)	512	0.08%	99.66%
(e\.?p\.?s (net.?)(earnings? loss(es)? income)(.?.of.?\$?(d\ .)+)?(?.per.?(common basic diluted)?.?share)?).?including	506	0.08%	99.74%
miscellaneous.items?	466	0.07%	99.81%
(e\.?p\.?s (net.?)(earnings? loss(es)? income)(.?.of.?\$?(d\ .)+)?(?.per.?(common basic diluted)?.?share)?).?without	348	0.05%	99.86%
management.?(e\.?p\.?s (net.?)(earnings? loss(es)? income)(.?.of.?\$?(d\ .)+)?(?.per.?(common basic diluted)?.?share)?)	344	0.05%	99.91%
impairment.expenses?	275	0.04%	99.96%
change.in.accounting.principles?	229	0.03%	99.99%
(e\.?p\.?s (net.?)(earnings? loss(es)? income)(.?.of.?\$?(d\ .)+)?(?.per.?(common basic diluted)?.?share)?).?absent	21	0.00%	99.99%
share.compensation	18	0.00%	100.00%
gaap.?(one.?time.?)?adjusted	13	0.00%	100.00%
(e\.?p\.?s (net.?)(earnings? loss(es)? income)(.?.of.?\$?(d\ .)+)?(?.per.?(common basic diluted)?.?share)?).?except.?for	7	0.00%	100.00%
TOTAL	659,181	100.00%	100.00%

FIGURE 1
The Calculation of Street Earnings



Notes: The dotted lines represent the tracking services' majority rule process of determining street earnings. That is, they decide on a consensus definition of earnings based on the definition used by the majority of analysts forecasting earnings. They then apply this definition to the income statement line-items announced by firms in their earnings press releases. The line labeled A indicates optional management guidance as a potential channel for management to influence analyst opinion. Christensen et al. (2011) provide evidence for Channel A, showing that managers' guidance is associated with the exclusions made by analysts. We investigate the line labeled B: whether managers' and analysts' non-GAAP discussions in earnings announcements and conference calls are associated with properties of street earnings.

TABLE 1
Descriptive Statistics and Correlations

Panel A: Descriptive statistics							
	Mean	St. Dev.	5%	25%	Median	75%	95%
<u>Textual Variables:</u>							
NG% _{CCP}	0.2806	0.2547	0.0000	0.0960	0.2086	0.3891	0.8147
NG% _{CCQ&A}	0.0493	0.0715	0.0000	0.0000	0.0230	0.0690	0.1996
NG% _{EA}	1.1697	0.8550	0.1765	0.4929	0.9619	1.6554	2.9031
<u>Dependent Variables:</u>							
TOTAL EXCLUSIONS	0.0031	0.0122	-0.0028	0.0000	0.0000	0.0017	0.0197
ANEXCLUDED _{POST6}	0.7586	0.7040	0.0000	0.0000	0.6931	1.0986	2.0794
ANEXCLUDED _{POST12}	1.0844	0.7700	0.0000	0.6931	1.0986	1.6094	2.3979
SHIFT _{DEF}	0.1617	0.3682	0.0000	0.0000	0.0000	0.0000	1.0000
SHIFT _{ITEMS}	0.2061	0.4045	0.0000	0.0000	0.0000	0.0000	1.0000
FUTOPINC	0.0314	0.1194	-0.1787	0.0086	0.0422	0.0849	0.1753
CAR	0.0024	0.0877	-0.1324	-0.0379	0.0012	0.0427	0.1389
<u>Control Variables:</u>							
SPECIAL	0.4199	0.4935	0.0000	0.0000	0.0000	1.0000	1.0000
GUIDE	0.2175	0.4125	0.0000	0.0000	0.0000	0.0000	1.0000
TURNOVER	0.2085	0.1681	0.0414	0.0978	0.1613	0.2623	0.5485
EPRATIO	0.0045	0.0352	-0.0528	0.0033	0.0117	0.0182	0.0348
MOMENTUM	0.0155	0.1968	-0.2795	-0.0977	0.0011	0.1062	0.3605
SALEGROWTH	0.0156	0.0541	-0.0662	-0.0020	0.0098	0.0358	0.1053
SIZE	7.2837	1.8314	4.3788	5.9650	7.2339	8.4583	10.4829
EARNVOL	0.0195	0.0316	0.0009	0.0039	0.0084	0.0198	0.0799
LOSS	0.2243	0.4171	0.0000	0.0000	0.0000	0.0000	1.0000
BTM	0.2917	0.1928	0.0495	0.1572	0.2619	0.3849	0.6655
AGE	2.9699	0.6377	2.0794	2.4849	2.8904	3.4657	4.0604
NUMANALYST	2.0478	0.7067	0.6931	1.6094	2.0794	2.5649	3.1355
FCSTDEV	0.0349	0.0469	0.0000	0.0100	0.0200	0.0400	0.1200
Q4	0.2398	0.4270	0.0000	0.0000	0.0000	0.0000	1.0000
STREET	0.0082	0.0323	-0.0445	0.0025	0.0112	0.0220	0.0453
SURPRISE	0.0005	0.0088	-0.0108	-0.0006	0.0005	0.0024	0.0115

TABLE 1, continued

Panel B: Pearson correlation matrix

	NG% _{CCP}	NG% _{CCQ&A}	NG% _{EA}	TOTAL EXCLUSIONS	ANEXCLUDED <i>POST6</i>	ANEXCLUDED <i>POST12</i>	SHIFT _{DEF}	SHIFT _{ITEMS}	FUTOPINC
NG% _{CCQ&A}	0.2047*								
NG% _{EA}	0.5537*	0.0631*							
TOTAL EXCLUSIONS	0.2169*	0.0546*	0.2030*						
ANEXCLUDED _{POST6}	0.0697*	0.0007	0.1338*	0.0335*					
ANEXCLUDED _{POST12}	0.0487*	-0.0099*	0.1294*	0.0215*	0.8428*				
SHIFT _{DEF}	0.1178*	0.0544*	0.1127*	0.2339*	0.0107*	0.0016			
SHIFT _{ITEMS}	0.1285*	0.0329*	0.1635*	0.1100*	0.0840*	0.0791*	0.1356*		
FUTOPINC	-0.0195*	-0.0270*	0.0225*	-0.0857*	0.0792*	0.1108*	-0.1108*	0.0011	
CAR	0.0112*	0.0014	0.0147*	-0.0339*	-0.0085*	-0.0059	-0.0367*	-0.0084	0.1085*

Panel A presents descriptive statistics for the variables used in our analyses. We define all variables in Appendix A. Panel B presents Pearson correlations between the textual measures and dependent variables examined in later tables. All descriptive statistics and correlations are based on 67,252 observations except for the statistics and correlations for the two SHIFT variables. Due to data availability, the statistics and correlations for SHIFT_{DEF} and SHIFT_{ITEMS} are based on 53,048 and 48,221 observations, respectively. In Panel B, * indicates $p < 0.05$.

TABLE 2
The Association between Non-GAAP Discussion in Conference Calls and Street Earnings Exclusions

Sample: Dependent Variable: Column:	TOTAL EXCLUSIONS ≥ 0 TOTAL EXCLUSIONS (1)	TOTAL EXCLUSIONS < 0 TOTAL EXCLUSIONS (2)	Full Sample <i>AbsValue</i> (TOTAL EXCLUSIONS) (3)
NG% _{CCP}	0.0048*** (9.81)	-0.0011** (-1.99)	0.0047*** (10.20)
NG% _{CCQ&A}	0.0021** (2.24)	-0.0048*** (-3.46)	0.0024*** (2.76)
NG% _{EA}	0.0011*** (8.28)	0.0002 (1.34)	0.0010*** (8.20)
SPECIAL	0.0036*** (22.60)	-0.0008*** (-4.09)	0.0036*** (24.12)
GUIDE	0.0006*** (3.02)	0.0005* (1.71)	0.0005** (2.58)
TURNOVER	0.0015*** (2.70)	-0.0041*** (-5.04)	0.0018*** (3.34)
EPRATIO	0.0103** (2.47)	0.0151*** (4.79)	0.0077** (2.06)
MOMENTUM	-0.0014*** (-5.10)	-0.0001 (-0.20)	-0.0011*** (-4.36)
SALEGROWTH	-0.0039*** (-2.62)	-0.0038 (-1.60)	-0.0033** (-2.45)
SIZE	-0.0003*** (-3.28)	0.0011*** (11.23)	-0.0003*** (-4.30)
EARNVOL	0.0122*** (3.24)	-0.0532*** (-10.64)	0.0172*** (4.72)
LOSS	0.0091*** (28.44)	0.0028*** (7.81)	0.0081*** (26.40)
BTM	-0.0007 (-1.17)	0.0011 (1.45)	-0.0005 (-0.95)
AGE	-0.0002 (-1.34)	0.0004** (2.27)	-0.0002* (-1.70)
NUMANALYST	0.0011*** (6.05)	-0.0003 (-1.47)	0.0010*** (5.79)
FCSTDEV	-0.0068*** (-3.43)	-0.0063*** (-2.96)	-0.0049*** (-2.66)
Q4	0.0014*** (8.27)	-0.0011*** (-3.56)	0.0015*** (9.42)
Industry and time fixed effects	Yes	Yes	Yes
N	59821	7431	67252
Adjusted R ²	0.232	0.271	0.215

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. t -statistics are reported in parentheses underneath the corresponding coefficient estimates. Standard errors are heteroskedasticity-robust and clustered by firm. The dependent variable in columns 1 and 2 is TOTAL EXCLUSIONS (the difference between street EPS and GAAP EPS excluding extraordinary items); column 1 (column 2) includes only those observations with TOTAL EXCLUSIONS ≥ 0 (< 0). Column 3 includes the full sample, and the dependent variable is the absolute value of TOTAL EXCLUSIONS. Detailed variable definitions are provided in Appendix A.

TABLE 3
The Association between Non-GAAP Discussion in Conference Calls and Analysts Excluded from the Consensus

Dependent variable:	ANEXCLUDED _{POST6}	ANEXCLUDED _{POST12}
Column:	(1)	(2)
NG% _{CCP}	0.0353 (1.49)	0.0036 (0.14)
NG% _{CCQ&A}	0.1414*** (3.15)	0.1680*** (3.47)
NG% _{EA}	0.0308*** (4.07)	0.0332*** (3.91)
SPECIAL	0.0344*** (4.10)	0.0293*** (3.17)
GUIDE	0.0888*** (6.84)	0.1123*** (7.74)
TURNOVER	0.3377*** (9.23)	0.3924*** (9.86)
EPRATIO	-0.1566 (-1.60)	-0.1107 (-1.01)
MOMENTUM	0.0107 (0.95)	0.0254** (2.21)
SALEGROWTH	0.1547** (2.15)	0.2503*** (3.01)
SIZE	0.0409*** (7.42)	0.0545*** (8.60)
EARNVOL	0.2391 (1.53)	0.3385* (1.90)
LOSS	0.0332*** (3.27)	0.0256** (2.27)
BTM	0.0996*** (3.50)	0.0673** (2.02)
AGE	-0.0058 (-0.56)	-0.0121 (-1.00)
NUMANALYST	0.3767*** (35.54)	0.4960*** (40.60)
FCSTDEV	0.2285** (2.23)	0.2356** (2.08)
Q4	0.0254*** (5.16)	-0.0218*** (-5.55)
TOTAL EXCLUSIONS	-0.6412** (-2.40)	-0.8631*** (-2.89)
Industry and time fixed effects	Yes	Yes
N	67252	67252
Adjusted R-squared	0.284	0.380

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. t -statistics are reported in parentheses underneath the corresponding coefficient estimates. Standard errors are heteroskedasticity-robust and clustered by firm. ANEXCLUDED _{P} is the natural log of (1 + number of unique analysts making an excluded forecast during period P). For $P = POST6$ ($POST12$), we consider excluded forecasts happening during the 6 months (12 months) after the earnings announcement date. Control variables are the same as Table 2 except that TOTAL EXCLUSIONS is also included (the dependent variable in Table 2). Appendix A provides detailed variable definitions.

TABLE 4
The Association between Non-GAAP Discussion in Conference Calls
and Shifts in the Consensus Definition of Street Earnings

Dependent variable:	SHIFT _{DEF}	SHIFT _{ITEMS}
Column:	(1)	(2)
NG% _{CCP}	0.0748*** (4.61)	0.1138*** (6.01)
NG% _{CCQ&A}	0.1139*** (3.21)	0.0639* (1.67)
NG% _{EA}	0.0383*** (7.34)	0.0678*** (10.71)
SPECIAL	0.1505*** (24.13)	0.2753*** (34.52)
GUIDE	-0.0013 (-0.15)	-0.0092 (-0.94)
TURNOVER	0.0589*** (2.70)	0.1523*** (6.12)
EPRATIO	-0.1599* (-1.82)	-0.5179*** (-5.24)
MOMENTUM	-0.0092 (-0.89)	0.0054 (0.51)
SALEGROWTH	-0.2076*** (-4.02)	-0.1301** (-2.24)
SIZE	0.0092** (2.51)	0.0364*** (8.48)
EARNVOL	0.9376*** (7.50)	0.5142*** (4.55)
LOSS	0.1280*** (13.98)	-0.0383*** (-4.25)
BTM	0.0600*** (2.90)	0.0611** (2.48)
AGE	-0.0102 (-1.46)	-0.0044 (-0.52)
NUMANALYST	-0.0496*** (-6.79)	-0.0556*** (-6.85)
FCSTDEV	0.0454 (0.62)	0.3497*** (3.69)
Q4	0.0207*** (3.92)	-0.0040 (-0.72)
TOTAL EXCLUSIONS	1.6885*** (6.01)	2.0454*** (7.07)
Industry and time fixed effects	Yes	Yes
N	53048	48221
Adjusted R-squared	0.120	0.185

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. t -statistics are reported in parentheses underneath the corresponding coefficient estimates. Standard errors are heteroskedasticity-robust and clustered by firm. SHIFT_{DEF} is an indicator = 1 when the firm's estimated definition of street earnings in quarter t is different than the estimated definition in quarter $t-1$. SHIFT_{ITEMS} an indicator variable = 1 if the estimated number of income statement line items excluded from street earnings (scaled by the number of potential items that could be excluded) in quarter t is different than the estimated number from quarter $t-1$. The control variables are the same as in Table 3. Appendix A provides detailed variable definitions for SHIFT_{DEF}, SHIFT_{ITEMS}, and control variables. All models are estimated using OLS (instead of logit or probit) because our models include industry and time fixed effects (see Greene [2008, p. 566], Puri, Rocholl, and Steffen [2011], Wooldridge [2010]).

TABLE 5
The Association between Non-GAAP Discussion in Conference Calls and the Quality of Street Earnings Exclusions

Sample: Dependent Variable: Column:	TOTAL EXCLUSIONS ≥ 0 FUTOPINC (1)	TOTAL EXCLUSIONS < 0 FUTOPINC (2)	Full Sample FUTOPINC (3)
TOTAL EXCLUSIONS	-0.4600** (-2.46)	0.3857 (1.27)	-0.3688** (-2.19)
NG% _{CCP}	-0.0008 (-0.31)	0.0056 (1.21)	-0.0009 (-0.38)
NG% _{CCP} \times TOTAL EXCLUSIONS	-0.3856* (-1.89)	0.6655 (0.96)	-0.4142** (-2.23)
NG% _{CCQ&A}	0.0150** (2.08)	-0.0118 (-1.07)	0.0170** (2.51)
NG% _{CCQ&A} \times TOTAL EXCLUSIONS	1.6819*** (3.19)	-3.0856 (-1.48)	1.3490*** (2.75)
NG% _{EA}	-0.0027*** (-3.45)	-0.0046*** (-3.30)	-0.0028*** (-3.74)
NG% _{EA} \times TOTAL EXCLUSIONS	-0.0211 (-0.32)	-0.3222 (-1.55)	-0.0249 (-0.41)
SPECIAL	0.0036*** (3.44)	-0.0011 (-0.65)	0.0025*** (2.69)
GUIDE	0.0038*** (2.83)	0.0050** (2.32)	0.0040*** (3.04)
TURNOVER	-0.0162*** (-3.53)	-0.0318*** (-3.48)	-0.0180*** (-4.03)
EPRATIO	0.2077*** (8.25)	0.1831*** (4.11)	0.2061*** (8.65)
MOMENTUM	0.0063*** (3.00)	0.0150*** (2.69)	0.0073*** (3.69)
SALEGROWTH	-0.0075 (-0.66)	-0.0050 (-0.18)	-0.0070 (-0.63)
SIZE	0.0007 (1.05)	-0.0005 (-0.49)	0.0006 (1.03)
EARNVOL	-0.1573*** (-4.92)	-0.1720*** (-2.96)	-0.1641*** (-5.38)
LOSS	-0.0041** (-2.19)	0.0205*** (4.55)	-0.0026 (-1.45)
BTM	-0.0374*** (-8.79)	-0.0333*** (-4.45)	-0.0369*** (-9.04)
AGE	0.0043*** (4.09)	0.0048*** (2.75)	0.0042*** (4.21)
NUMANALYST	0.0053*** (4.15)	0.0057*** (3.04)	0.0054*** (4.42)
FCSTDEV	-0.0391*** (-2.87)	-0.0398* (-1.79)	-0.0401*** (-3.14)
Q4	0.0004 (0.41)	0.0024 (1.02)	0.0004 (0.40)
STREET	2.6120*** (48.86)	2.7288*** (24.74)	2.6227*** (50.20)
Industry and time fixed effects	Yes	Yes	Yes
N	59821	7431	67252
Adjusted R-squared	0.676	0.581	0.669

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. t -statistics are reported in parentheses underneath the corresponding coefficient estimates. Standard errors are heteroskedasticity-robust and clustered by firm. FUTOPINC is the dependent variable in all models, where FUTOPINC is the sum of operating income from quarter $t+1$ to quarter $t+4$. The same controls are included in each model and are the same controls as in Tables 3 and 4 except that STREET is also added following Kolev et al. (2008). Appendix A provides detailed variable definitions. Similar to Table 2, column 1 (column 2) includes only those observations with TOTAL EXCLUSIONS ≥ 0 (< 0) while column 3 includes the full sample.

TABLE 6
The Association between Non-GAAP Discussion in Conference Calls
and Investor Reaction to Street Earnings Surprises

Sample:	SURPRISE ≥ 0	SURPRISE < 0	Full Sample
Dependent Variable:	CAR	CAR	CAR
Column:	(1)	(2)	(3)
SURPRISE	3.7155*** (6.53)	2.9319*** (5.34)	3.6113*** (9.80)
NG% _{CCP}	0.0000 (0.02)	-0.0044 (-1.25)	-0.0013 (-0.81)
NG% _{CCP} \times SURPRISE	0.0142 (0.04)	0.1082 (0.30)	0.1694 (0.71)
NG% _{CCQ&A}	-0.0004 (-0.07)	-0.0067 (-0.74)	0.0018 (0.40)
NG% _{CCQ&A} \times SURPRISE	-0.1609 (-0.17)	-1.8130** (-2.11)	-1.0432* (-1.83)
NG% _{EA}	-0.0003 (-0.47)	0.0019* (1.83)	0.0008 (1.63)
NG% _{EA} \times SURPRISE	-0.0014 (-0.01)	-0.1182 (-1.00)	-0.1290 (-1.58)
Controls	Yes	Yes	Yes
N	46333	20919	67252
Adjusted R-squared	0.083	0.041	0.131

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. t -statistics are reported in parentheses underneath the corresponding coefficient estimates. Standard errors are heteroskedasticity-robust and clustered by firm. CAR is the dependent variable in all models, where CAR is the three-day market-adjusted cumulative abnormal return centered on the earnings announcement date. Controls follow Lobo et al. (2017) and include calendar year fixed effects, control variable main effects and control variable interactions with SURPRISE. Appendix A provides detailed variable definitions. Column 1 includes observations with SURPRISE ≥ 0 ; column 2 includes observations with SURPRISE < 0 ; and column 3 includes all observations.

TABLE 7
Non-GAAP Discussion from the Previous Quarter

Sample:	Full Sample	Full Sample	Full Sample	Full Sample	Full Sample	Full Sample	SURPRISE < 0	Full Sample
Dependent Variable:	<i>AbsValue</i> (TOTAL EXCLUSIONS)	ANEXCLUDED _{POST6}	ANEXCLUDED _{POST12}	SHIFT _{DEF}	SHIFT _{ITEMS}	FUTOPINC	CAR	CAR
Colmun:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Lag</i> NG% _{CCP}	0.0031*** (6.63)	0.0144 (0.59)	-0.0073 (-0.28)	0.0833*** (4.96)	0.1211*** (6.58)	-0.0031 (-1.25)	-0.0094** (-2.58)	-0.0022 (-1.39)
<i>Lag</i> NG% _{CCQ&A}	0.0005 (0.57)	0.1396*** (2.97)	0.1561*** (3.13)	0.1316*** (3.64)	0.1485*** (3.93)	0.0167** (2.47)	-0.0079 (-0.79)	-0.0030 (-0.63)
<i>Lag</i> NG% _{CCP} × TOTAL EXCLUSIONS						-0.5220*** (-2.78)		
<i>Lag</i> NG% _{CCQ&A} × TOTAL EXCLUSIONS						0.7044 (1.25)		
<i>Lag</i> NG% _{CCP} × SURPRISE							-0.2838 (-0.73)	0.2786 (1.10)
<i>Lag</i> NG% _{CCQ&A} × SURPRISE							0.0283 (0.03)	-0.3455 (-0.59)
N	62101	62101	62101	49135	48189	62101	19151	62101
Adjusted R-squared	0.207	0.281	0.378	0.120	0.187	0.666	0.044	0.133
Specification	Table 2 Column 3	Table 3 Column 1	Table 3 Column 2	Table 4 Column 1	Table 4 Column 2	Table 5 Column 3	Table 6 Column 2	Table 6 Column 3

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. t -statistics are reported in parentheses underneath the corresponding coefficient estimates. Standard errors are heteroskedasticity-robust and clustered by firm. In this table we repeat the main analyses from Tables 2, 3, 4, 5, and 6 and replace the NG% variables with the NG% variables from the previous fiscal quarter. For brevity, only the coefficient estimates for the conference call NG% variables are presented. All additional control variables and specification details remain the same as reported in previous tables.