Users' Solicitation of Disclosure When Accounting Standards Restrict Managers' Discretion Over Financial Reporting: Evidence from Conference Calls

Musaib Ashraf [a]

Gus De Franco [b]

R. Christopher Small [c]

Spencer Young [d*]

[a] *Eli Broad College of Business, Michigan State University*
[b] *Mitchell E. Daniels, Jr. School of Business, Purdue University*
[c] *C.T. Bauer College of Business, University of Houston*
[d] *M.F. Price College of Business, University of Oklahoma*

We are grateful to Ole-Kristian Hope and workshop participants at Texas Christian University and Oklahoma State University for helpful comments. We thank Michigan State University, Purdue University, the University of Houston, and the University of Oklahoma for financial support. Any errors are our own.

*Corresponding author: spencer.young@ou.edu; M. F. Price College of Business, University of Oklahoma, 307 W Brooks St, Norman, OK 73019

Users' Solicitation of Disclosure When Accounting Standards Restrict Managers' Discretion Over Financial Reporting: Evidence from Conference Calls

Abstract

We examine how GAAP-based restrictions on managers' discretion over financial reporting influence financial statement users' efforts to acquire disclosure from management. During the Q&A part of a firm's conference call, we find that GAAP-based restrictions are associated with more 'account-specific' questions by analysts (i.e., questions related to specific financial statement line items). Managers appear to learn from analysts' questions, particularly when GAAP is restrictive: When an analyst asks a question about a particular account, managers are more likely to provide corresponding account-specific information in the presentation part of the next quarter's call. Furthermore, our tests suggest that when managers answer analysts' account-specific questions, analysts' forecast quality is higher. Our study sheds light on the dynamic nature of the disclosure process between users' efforts to acquire additional financial statement information and managers provision of that information. Overall, our findings suggest that users play an important role in triggering management disclosures and identifying the disclosures that are useful.

Keywords: generally accepted accounting principles, GAAP, accounting choice, discretion, disclosure, information acquisition, analysts, conference calls

JEL Codes: M40; M41; M48: M49

Users' Solicitation of Disclosure When Accounting Standards Restrict Managers' Discretion Over Financial Reporting: Evidence from Conference Calls

1. INTRODUCTION

Folsom, Hribar, Mergenthaler, and Peterson (2017) find that accounting standards that restrict managers' discretion over financial reporting ('restrictive GAAP' hereafter) reduce the informativeness of financial statements. Consistent with the idea that managers provide additional disclosures to substitute for the reduced informativeness of mandatory disclosures, Hribar, Mergenthaler, Roeschley, Young, and Zhao (2022) document that restrictive GAAP is associated with firms offering more non-GAAP earnings estimates, earnings forecasts, and additional discussion in the MD&A section of the financial statements. We extend these studies by empirically examining how restrictive GAAP affects users' efforts to acquire information and how those efforts influence the information that managers provide.

We study our research question in the setting of conference calls, which allows us to better understand the dynamics of the voluntary disclosure process in the context of restrictive GAAP. We expect that when GAAP is restrictive, managers will both (1) plan disclosure by proactively anticipating the needs of users (hereafter anticipatory disclosure) and (2) provide additional disclosure when users explicitly solicit information (hereafter reactionary disclosure). In this study, we focus on analysts' questions that may or may not lead to such reactionary disclosures by managers. Specifically, we examine whether sell-side analysts ask more 'account-specific' questions, which are questions related to specific financial statement line items, when the firm's financial reporting is more affected by accounting standards that restrict managers' discretion.

Folsom et al. (2017) provides evidence that restrictive GAAP is associated with less informative GAAP-based disclosures and Hribar et al. (2022) document that managers respond to

the deficiencies associated with restrictive GAAP by providing anticipatory disclosures. If these disclosures fully offset the deficiencies, users would have no need to solicit additional information from management. In this scenario, anticipatory disclosures would be based on managers' perceptions of what information users incrementally need as a result of restrictive GAAP. However, given the multi-dimensional and complex nature of accounting information and the inherent information asymmetry between managers and users, it is unlikely that managers are able to perfectly calibrate their perception of users' information deficiencies with the actual deficiencies faced by users. Furthermore, given that the agendas of managers can conflict with those of users, managers may prefer to provide anticipatory disclosures that are biased or at a level of detail that is coarser than what users would prefer. This situation leaves a role for users to play in soliciting information, which can lead managers to provide additional reactionary disclosures.

Moreover, the prior argument implicitly assumes that managers providing anticipatory disclosures and users soliciting reactionary disclosures are substitutes (e.g., Verrecchia 2001). This perspective suggests that if managers provide more anticipatory disclosure, then we would observe less solicitation of reactionary disclosures by users. It is possible, however, that the relation is complementary—managements' anticipatory disclosure spurs users to seek additional reactionary disclosure.

We use the set of keywords associated with U.S. GAAP standards developed by Folsom et al. (2017) to identify financial statement-related discussion by managers and by analysts during the call. Keywords are specific to each standard, which allows us to classify each comment as relating to a specific standard, which in turn corresponds to a specific financial statement line item. Discussion of account-specific information occurs frequently. For our sample of conference call transcripts, we identify over 260,000 unique comments (relating to 78 distinct standards) that

contain these keywords in the Q&A part of the call. Of these account-specific comments, 94,252 are made by analysts, which we refer to as analysts' questions. In our final sample, analysts ask account-specific questions in 37% of calls, and of these calls the average number of account-specific questions per call is 2.4. The vast majority of the other comments are made by managers, which we refer to as manager's answers.

Following Hribar et al. (2022), Cheng et al. (2022), and Young (2023), we first measure the extent to which each particular GAAP standard restricts managers' discretion by counting the number of times the obligatory words *shall*, *should*, and *must* are mentioned in that standard. These word counts vary over time as amendments to standards are issued, implementation guidance is issued, or new standards supplant previous ones. Furthermore, these changes occur frequently and exhibit both increases and decreases in these word counts (Hribar et al. 2022). We next measure which standards a firm relies upon. Because each firm's exposure to each accounting standard varies, following Folsom et al. (2017), we measure a firm's reliance on a particular standard based on the number of times standard-specific keywords are discussed in the firm's 10-K filings. We then measure the restrictiveness of GAAP for each firm-year as the weighted sum of the number of obligatory words mentioned in all the standards that the firm relies upon. Our sample consists of 59,234 firm-quarter conference call transcripts for which we can obtain a 10-K document and necessary data on control variables. In our main analysis, we find that restrictive GAAP is positively associated with the number of account-specific questions that analysts ask during conference calls. A one-standard-deviation increase in the restrictiveness of GAAP is associated with a 19.8 percent increase in account-specific questions, relative to the mean.

To strengthen identification and provide assurance that our findings are not driven by underlying firm characteristics, such as a firm's economic activity, we conduct three robustness

analyses. First, we show that the inferences from our main test hold when we include firm fixed effects in our specification and when we estimate the model in changes. Second, our inferences are robust to the inclusion of a control variable that captures the variation in firm-years' exposure to each standard. Although the addition of this control reduces the variation in our variable of interest (and our statistical power), this test addresses the concern that our results may be driven by firms' reliance on certain standards rather than the restrictiveness of those standards.

Third, we follow a research design employed by Cheng et al. (2022) that exploits staggered changes in accounting standards. This design relates time-series variation in the restrictiveness of specific standards to analysts' questions about the account governed by that specific standard, making it difficult to suggest that a firm-level correlated omitted variable drives the results we observe. That is, the independent variable only captures time-series variation in standard-specific restrictiveness; variation in a firm's reliance on certain standards or engagement in certain transactions is not included as part of this measure and therefore cannot explain our results. This design also allows us to control for quarter fixed effects, which ensures that our results cannot be explained by time-varying factors that do not also vary across standards. The sample for this test is more granular and consists of 2,250,892 observations at the firm-quarter-standard level. Corroborating our main test results, we find that variation in the restrictiveness of specific standards is positively associated with the number of analysts' questions about the financial statement account governed by that specific standard. Taken together, these tests provide strong evidence that is consistent with restrictive GAAP inducing users to exert effort to acquire information from managers.

We next consider the role of managers' disclosure in our analysis. We start by showing that the positive relation between restrictive GAAP and analysts' account-specific questions holds

when we control for managers' anticipatory disclosures. This analysis is important because if managers fully anticipate analysts' accounting information needs, our main results would likely be subsumed by these disclosures. Our main results hold when we control for managers' disclosure of account-specific information in their prepared remarks (i.e., before analysts begin asking questions). In addition, the results also hold when we control for the four voluntary disclosure measures examined by Hribar et al. (2022): (i) the number of forecasts issued by management; (ii) managements' decision to disclose non-GAAP earnings; (iii) the length of the MD&A section in the financial statements; and (iv) the MD&A's readability.

We extend this analysis by re-estimating our main specification but including interactions of our restrictive GAAP measure with the just-discussed five disclosure variables. We find positive and statistically significant relations between analysts' questions and the interaction terms for three of the disclosure variables (i.e., managers' disclosure of account-specific information, managements' decision to disclose non-GAAP earnings, and MD&A length). These tests suggest that when GAAP is restrictive, managers' anticipatory disclosure and analysts' solicitation seem to behave more like complements than substitutes. More specifically, given that the voluntary disclosures we study would have been planned and occur before analysts ask their questions during the call, this evidence is consistent with managers' anticipatory disclosure leading analysts to solicit more rather than less information. Our next test, using a lead-lag approach, focuses on providing evidence that managers may react to analysts' solicitation of information. Specifically, we examine whether managers alter disclosures in the future based on analysts' current questions. Our results show that analysts' account-specific questions in the current conference call are associated with managers providing more account-specific information during the prepared remarks in the next quarter's conference call. This result is stronger when managers' discretion is

more restricted by GAAP. Overall, these findings highlight the dynamic and interdependent relation between users' efforts to acquire information and the nature of the disclosures provided by managers.

In our final analysis, we examine how analysts' solicitation and managers' provision of information influences the quality of analysts' future forecasts, as measured by earnings forecast accuracy. Studying forecasts provides insight into how restrictive GAAP and analysts' efforts to solicit disclosure ultimately influence the information that is impounded into users' expectations of future performance. It hence helps us understand the value of analysts soliciting information. Our results provide no evidence that future analysts' forecast quality improves (i) when analysts ask account-specific questions but managers provide no account-specific information and (ii) when managers provide account-specific information but analysts ask no account-specific questions. We cannot, however, make a strong inference about these results because other explanations exist. A potential explanation is that analysts don't benefit when their questions go unanswered or when managers provide disclosures that are misaligned with analysts' interests. In contrast, and more importantly, our results indicate that when firms are more restricted by GAAP and when account-specific information is both solicited by analysts and provided by managers, analysts forecast earnings more accurately. This result suggests that analysts' forecast quality is higher when managers answer analysts' account-specific questions.

Our study makes several contributions to the literature. First, our inferences have important implications for standard setters. The FASB states that the objective of financial reports is to provide useful information to users (see Concept Statement 8). Our analyses, however, suggest that restrictive accounting standards lead users to exert additional effort to acquire information from managers. With the caveat that we are not in the position to systematically evaluate the costs

and benefits of restrictive GAAP, we do point out that this extra effort by users implies that restrictive GAAP imposes a cost on users, which is unlikely to be the intent of standard setters.

Second, our study builds on Hribar et al. (2022). They provide evidence that the presence of external financial statement users, as measured by the number of analysts covering the firm and institutional ownership percentage, increases management disclosure when GAAP is restrictive. They do not distinguish between managers anticipating the needs of these users versus managers reacting to users' solicitation of information. Our study documents that when GAAP is restrictive, explicit solicitation of financial statement information is a mechanism by which additional information from managers is acquired. Our study also shows that in the case of managers' responses during the call, the degree to which managers' additional disclosure is effectively integrated into expectations of future performance depends on whether it was solicited by analysts. In contrast, an implicit premise in Hribar et al. (2022) is that users benefit from all disclosures.

Finally, our methodology builds upon prior work that measures users' efforts to acquire disclosure. Drake et al. (2012) and Drake et al. (2015) respectively measure users' efforts to acquire information by capturing the volume of relevant Google searches and the volume of downloads from SEC EDGAR. However, as Drake et al. (2012; p.1011) caveat, these methodologies do not allow researchers to "observe the precise piece of information the investor demands or acquires" or "observe who is doing the searching." In contrast, our setting and methodology allow us to accurately capture which financial statement accounts are of interest to users, which users are seeking the disclosures, and whether the disclosures sought were likely provided.

2. BACKGROUND AND CONCEPTUAL DEVELOPMENT

Accounting standards determine what information managers must disclose and how they must

do so. Investors rely on GAAP-based disclosures to make investment and contracting decisions that allocate resources (e.g., Holthausen and Leftwich, 1983; Watts and Zimmerman, 1986; Christensen, Nikolaev, and Wittenberg-Moerman, 2016). Consequently, capital providers are heavily interested in and are directly impacted by the information that is or is not conveyed via GAAP-based mandatory disclosures.

One important feature of accounting standards is the degree to which they restrict managers' discretion over financial reporting, which we refer to as 'restrictive GAAP.' Financial reporting prepared under restrictive GAAP could prevent managers from disclosing useful information they would have otherwise conveyed, making financial statements less informative. Alternatively, restrictive GAAP could require managers to convey useful information they would not otherwise convey, making financial statements more informative.

An example of restrictive GAAP limiting analysts' information set is that prior to the new accounting rules governing credit losses, commonly referred to as CECL (Current Expected Credit Losses), GAAP employed an 'incurred loss' model that prevented recognition of loan losses until the loss was probable. Accordingly, managers often did not disclose their best estimate of future loan losses, precisely because "GAAP restricts the ability to record… losses that are expected but… not yet… probable" (ASU 2016-13, p.1). Afterwards CECL prescribed an 'expected loss' model, the accounting rules became *less* restrictive, allowing managers to use "judgment in determining the relevant information and estimation methods that are appropriate" (ASU 2016-13, p. 2). The amount of loans written off as uncollectible is identical pre- and post-CECL, but the timing of estimated loss disclosure is accelerated in the post-CECL expected loss model relative to the pre-CECL incurred loss model. After extensive survey-based research, the CFA Institute, the leading professional organization for financial analysts, stated that "*investors desire ...*

management's expectations of credit losses" and that they:[1]

> "*generally support an expected loss approach because it uses forward-looking information to estimate expected losses, which [they] believe is more consistent with the underlying pricing/valuation of such investments – and, therefore, closer to fair value and more economically relevant. An incurred loss model results in delayed recognition of credit losses, which we do not believe results in decision-useful information. [...] Investors are willing to bear the cost of implementing a new [...] model if it provides greater insight into the underlying risks, their relationship to the expected losses recognized and the development of the expected losses over time*" (Emphasis added; CFA Institute 2013).

Consistent with prior research which has concluded that GAAP-based financial statements are less informative and less useful when GAAP is more restrictive (Folsom et al. 2017; Cheng et al. 2022), the CFA Institute's comments provide a clear example of how analysts' information set can be limited by restrictive GAAP and that the information which is prevented by GAAP from being disclosed is of sufficient import that investors are willing to bear the associated costs of obtaining it.[2] Appendix B provides ubiquitous examples of analysts' questions seeking managers' views about loan losses, and empirical research concurs that analysts forecasts make clear that the "[pre-CECL] incurred loss [model] does not incorporate all available ... information" (Beatty and Liao 2021, p.1)

To remedy the potential informational deficiencies associated with restrictive GAAP, managers could provide anticipatory disclosures, in which managers voluntarily provide information based on what they ex ante predict will best help financial statement users. Hribar et al. (2022) provide evidence consistent with this notion. They document that restrictive GAAP is

[1] Investors were eight times more likely to favor the less restrictive expected loss model relative to the more restrictive incurred loss model (see Credit Losses – Exposure Draft Comment Letter No. 355).

[2] Folsom et al. (2017) find that when GAAP provides less discretion to managers, the persistence of earnings, the association between current earnings and future cash flows, and the contemporaneous relation between unexpected earnings and returns are lower. Further, Cheng et al. (2022) document that lenders are less likely to contract on unadjusted GAAP numbers when GAAP is restrictive and that restrictive GAAP is positively associated with loan spreads. They conclude that when GAAP is restrictive, GAAP earnings is less likely to serve as an efficient contracting measure.

associated with firms offering more non-GAAP earnings estimates, earnings forecasts, and additional discussion in the MD&A section of the financial statements. Issuing anticipatory disclosures, however, is not the only way to address information deficiencies that occur as a result of restrictive GAAP. Managers could also provide reactionary disclosures, in which managers ex post respond to users' requests for information.

The purpose of this study is to better understand financial statement users' questions, which may, or may not, lead to reactionary disclosures by managers. Our setting of conference calls allows us to observe and empirically measure the questions asked by analysts as well as managers' responses to these questions. Our focus on analysts follows from their importance as market intermediaries who collect and process information in an effort to serve investors. Conceptually, any disclosure deficiencies experienced by financial statement users should be reflected in the manner through which analysts solicit disclosure from management. Hence, we consider analysts and their questions to be good proxies for financial statement users and their efforts to acquire additional information from managers, respectively.

Our primary research question is whether sell-side analysts ask more 'account-specific' questions, which are questions related to specific financial statement line items, when the firm's financial reporting is more affected by accounting standards that restrict managers' discretion. As mentioned above, extant research suggests that restrictive GAAP reduces the informativeness of financial statements. It is possible that users do not seek additional disclosure because managers have fully anticipated users' financial statement needs and substituted voluntary disclosure to completely offset any informational deficiencies that arise from restrictive GAAP. We argue that this scenario is unlikely because, although managers at public companies have access to significant accounting resources, it is hard to believe that managers will completely understand all the needs

of their financial statement users, who have heterogenous resources and likely use the information in heterogenous ways. Furthermore, the process of determining and delivering information to users is costly, which would lead managers to weigh the benefits of additional disclosure with its costs. Last, managers may have incentives, such as those induced by equity-based compensation (Cheng and Warfield 2005), to not fully reveal all the information that users want. The more likely scenario is that after managers have provided their 'anticipatory' disclosures, users will still have unmet informational needs. In this case, we expect users to solicit additional 'reactionary' disclosures by asking questions and expecting managers to respond.

An additional consideration is how the information provided by the manager interacts with analysts' questions. The implicit premise of our argument so far is that managers' provision of anticipatory disclosures and users' solicitation of reactionary disclosures are substitutes (e.g., Verrecchia 2001). Said differently, if managers provide more anticipatory disclosure, then we should observe less solicitation of information by users. However, analysts' questions could be a complement to managers' anticipatory disclosure—a situation in which managements' anticipatory disclosure spurs users to seek additional information. Supporting this notion, Drake, Roulstone, and Thornock (2015) provide evidence suggesting that users acquire more information about firms with stronger information environments. Further, Lang and Lundholm (1996) document that more analysts cover firms that have higher quality disclosure practices, consistent with firm disclosures facilitating analysts' ability to interpret firms' economic activity and produce value-added outputs such as forecasts and recommendations.

In summary, although we expect a positive relation between restrictive GAAP and financial statement users' efforts to acquire additional disclosure, the strength of the relation is not clear ex ante and will depend in part on whether analysts' questions and managers' anticipatory disclosure

are substitutes or complements. Our empirical approach described in the following sections is designed to test these ideas.

3. KEY MEASURES

3.1. Analysts' Solicitation of Disclosure

We obtain quarterly earnings conference call transcripts from S&P Global. These transcripts are text-based and allow us to partition the call into the presentation part, when managers offer prepared remarks, and the Q&A part, when participants ask questions and managers respond to the questions. More importantly, these data enable us to identify the person speaking, such as the firm's manager or an analyst asking a question, and what they said. We label each time someone speaks, which starts with the first word they say (after someone else speaks) and ends with the last word they say (before someone else speaks), as a comment. We focus on discussions about financial-statement items made during the Q&A part of call and use the keyword lists of Folsom et al. (2017) to identify these discussions. Folsom et al. (2017) develop a set of keywords that is unique for each standard and thus can be used to identify discussion of the transactions governed by each standard.[3] Each standard also corresponds to specific financial statement line items. For example, we code a comment during the earnings call as relating to SFAS 77 (which is about reporting of the transfers of receivables) if the comment includes the word *transfer* within five words of *receivable*. We refer to comments that include these keywords as 'account-specific' comments.

[3] Folsom et al. (2017) validate their keyword lists by: (i) engaging standard-specific experts from a national Big 4 office review the accuracy and completeness of the word lists; (ii) verifying, where possible, a strong positive correlation between the word counts and the size of the respective line item in the financial statements; and (iii) confirming that words relating to industry-specific guidance is high in industries that the guidance applies to and low in industries that the guidance does not apply to.

We consider the act of asking detailed questions about financial statement line items prima facia evidence that users exert effort to acquire disclosure from managers. Our measurement starts by classifying an account-specific comment made by an analyst during the Q&A as an analyst's question.[4] These questions often reflect a desire to understand managers' accounting choices, how changes in GAAP influence accounting choices, and how future transactions will be represented within financial statements. Analysts' questions cover a broad array of accounts; we find that analysts ask questions related to 78 distinct standards. Untabulated analysis indicates that within our sample, 37% of calls contain such analysts' questions, and of these calls the average number of account-specific questions per call is 2.4.[5]

From these word counts, we create the variable $AnalystsQuestions_{iqs}$, which is the number of account-specific questions asked by analysts in the quarterly transcript for firm i in quarter q about standard s. We sum $AnalystsQuestions_{iqs}$ across all standards to create our primary independent variable $\Sigma AnalystsQuestions_{iq}$, which is the number of account-specific questions asked by analysts for firm i in quarter q about all standards.

3.2. Firm-Level Restrictiveness of GAAP

We follow and use data from Hribar et al. (2022) to measure the degree to which an accounting standard restricts a manager in the context of that standard. The process starts by counting the occurrences of the words *shall*, *should*, and *must* within accounting standard s at time t. We call this intermediate variable, based on word-counts, $StandardRestrictiveWord\#_{ts}$. The legal literature

[4] Although analysts mostly ask explicit questions during conference calls, they can also make comments that are not explicitly questions. Arguably, the latter are also designed to initiate conversation or extract information from management. For expositional convenience, throughout the manuscript we refer to all analysts' comments as 'questions.'

[5] Because the Folsom et al. (2017) word lists are relatively precise, we are undercounting the frequency of accounting-related discussion in conference calls because any discussion of accounting that consists of more general words would not be included in our measure. We have no reason to believe that this undercounting is correlated with any variables of interest, and hence should not bias our results.

(e.g., Trosborg 1995) identifies these three words as reliably obligatory within legal contexts. Hribar et al. (2022) validate the obligatory use of these words within accounting standards.[6] The frequency of these obligatory words varies across standards and over time as new standards supersede old standards, new guidance is issued, and amendments are made. Hribar et al. (2022) and Cheng et al. (2022) provide evidence that the restrictiveness of accounting standards exhibits significant variation over time.[7]

We then make several adjustments to *StandardRestrictiveWord#*. First, following Hribar et al. (2022), we scale it by the length of the standard. Second, to reduce the effect of a standard's complexity on our tests, we orthogonalize this scaled version of this variable to two proxies for complexity from Donelson, McInnis, and Mergenthaler (2012): the length of the transaction's definition in the FASB's glossary and the number of times that the FASB refers to the transactions as complex, complicated, or elaborate within the accounting standard. Last, we rescale this value to lie between 0 and 1.[8] The final version of this variable, measured for standard *s* and year *t*, is $StandardRestrict_{ts}$.

We next use a variable that measures a firm's reliance on each standard in each year to develop a firm-year-level measure of the degree to which all accounting standards restrict a firm's manager. We follow Folsom et al. (2017) and count the key words associated with each standard within a

[6] Hribar et al. (2022) validate the obligatory nature of these words within accounting standards by: (i) employing independent evaluators that rated the words *shall*, *should*, and *must* as obligatory in 98 percent of instances appearing in standards; (ii) confirming that standards that are considered 'rules-based' contain more of these three words; and (iii) documenting that constituent comment letters to the FASB discuss constrained discretion more often when standards employ these three words more often.

[7] Hribar et al. (2022) document that the vast majority of standards (84.4 percent) exhibit changes in the use of 'shall,' 'should,' and 'must'.

[8] To scale between zero and one we subtract the minimum and divide by the range. This can be represented by this formula $StandardRestrict_{ts} = [x_i - \min(x)]/[\max(x) - \min(x)]$ where x_i is the version of $StandardRestrictiveWord\#_{ts}$ after being scaled by standard length and orthogonalized to the two measures of complexity. As an example, assume the maximum value of x_i is 9 and the minimum value is negative 3. In these instances, the minimum value would be scaled to [-3+3]/[12] = 0 and the maximum value would be scaled to [9+3]/12 = 1. All other values will lie between these two endpoints.

firm's 10-K. Specifically, $StandardReliance_{its}$ is calculated as the count of words that relate to standard *s* in firm *i*'s 10-K in year *t*. We then re-scale it to have a standard deviation of one and a mean of zero.[9] $Restrict_{it}$, our measure of the degree to which GAAP restricts firm *i* in year *t*, is the weighted sum of $StandardRestrict_{ts}$, where $StandardReliance_{its}$ is the weight:

$$Restrict_{it} = \Sigma_s[StandardReliance_{its} \times StandardRestrict_{ts}] \quad (1)$$

4. MAIN TESTS

4.1. Test Specification

To examine the relation between restrictive GAAP and financial statement users' efforts to acquire account-specific disclosure from managers, we begin by estimating the following ordinary least squares model:

$$\begin{aligned} \Sigma AnalystsQuestions_{iq} = {} & \beta_1 Restrict_{it} + \beta_2 LnMVE_{iq} + \beta_3 MTB_{iq} + \beta_4 ROA_{iq} \\ & + \beta_5 Momentum_{iq} + \beta_6 ReturnVolatility_{iq} \\ & + \beta_7 EarnSurprise_{iq} + \beta_8 Coverage_{iq} + \beta_9 CoverageTime_{iq} \\ & + \beta_{10} CareerLength_{iq} + \delta_i + \gamma_q + \varepsilon_{iq} \end{aligned} \quad (2)$$

As discussed previously, the dependent variable $\Sigma AnalystsQuestions_{iq}$ captures analysts' questions about financial statement line items during firm *i*'s earnings conference call in quarter *q*. *Restrict* is a measure of the extent to which GAAP restricts managers' discretion for firm *i* in year *t*, where *t* refers to the current fiscal year. We use year *t* throughout the paper because year *t* reflects the accounting standards that are currently effective at the time of the conference call and would be of most interest to analysts.[10]

Following Gibbons et al. (2021), who examine analysts' information acquisition via EDGAR, we include a broad set of firm-quarter-level control variables from COMPUSTAT and CRSP that

[9] This scaling is performed by subtracting the standard-year specific mean and dividing by the standard-year specific standard deviation. After scaling, following Folsom et al. (2017), we also "ensure all weights are positive and that standards that do not affect the firm receive a zero weight, [by adding] back the minimum [absolute] score for standard *s* in year *t"* (see Folsom et al. 2017; p. 2600).

[10] We also find that inferences remain the same when *Restrict* is measured at time *t-1*.

proxy for the company's information environment and information uncertainty. These variables include: firm size (*LnMVE*), market-to-book (*MTB*), performance (*ROA*), stock price momentum (*Momentum*), stock return volatility (*ReturnVolatility*), and the earnings surprise (*EarnSurprise*). To control for the information environment of the firm from the perspective of analysts, we include the number of sell-side analysts that follow the firm (*Coverage*) (Lang and Lundholm, 1996; Clement, 1999; Gleason and Lee, 2003; Lang et al., 2003; Zhang, 2006; Ramnath et al., 2008). To control for the experience, expertise, and pre-existing information set of covering sell-side analysts, we also include the average career length in years of the analysts that follow the firm (*CareerLength*) and the average length of time these analysts follow the firm (*CoverageTime*) (Mikhail et al., 1997; Clement, 1999).

We include industry fixed effects (δ_i) to control for time-invariant factors related to each industry and year-quarter fixed effects (γ_q) to control for factors that systematically vary over time or time-specific shocks. For example, software development (SFAS 86) is more likely to be discussed in software-reliant industries and is more likely to be discussed in later years when a greater portion of all firms are more likely to produce customized software for internal use. Standard errors are clustered by firm to address concerns regarding potential serial correlation between firms' observations over time. If, as we expect, *Restrict* increases financial statement users' efforts to acquire additional disclosure information, then β_1 should be positive.

4.2. Descriptive Statistics

The sample for our tests consists of 59,234 firm-quarter observations for the period 2005 to 2017 with available data to estimate our tests.[11] Table 1 reports descriptive statistics for our main dependent and independent variables for this sample. The average firm in our sample is profitable

[11] Our sample is limited to 2017 because we rely on the data from Hribar at al. (2022). We thank them for sharing their data.

with a quarterly return on assets of 0.7%, a market cap of approximately $2.10 billion (unlogged), and a market-to-book ratio of 3.14. On average, analysts cover a firm for 4.29 years. These and other descriptive statistics are generally comparable with prior studies (e.g., Lang and Lundholm, 1996; Amiram, Owens, and Rozenbaum, 2016).

Table 2 presents correlations for our sample. We report Pearson correlations below the diagonal and Spearman correlations above. The correlation between our proxy for user' efforts to acquire additional disclosure, *ΣAnalystsQuestions*, and our proxy for the extent to which GAAP restricts managers' discretion, *Restrict*, is positive and statistically significant (p-value < 0.01). We explore this relation further in multivariate analyses.

4.3. Results

We present the results from estimating Eq. (2) in Panel A of Table 3. We find that the coefficient on *Restrict* is positive and significant (p-value < 0.01), suggesting that restricting managers' discretion is associated with more frequent requests by analysts for account-specific information. This evidence suggests that financial statement users solicit additional disclosures from managers to address the information deficiency associated with restricting managers' discretion over financial reporting. We find that firm size and the earnings surprise are both positively associated with account-specific questions, while ROA is negatively associated with account-specific questions. These findings are consistent with analysts asking more questions when firms are larger, and uncertainty about a firm and its earnings are higher. Analysts that have more firm-specific experience and those that have more experience in general tend to ask more account-specific questions. In terms of economic significance, a one-standard-deviation increase in the restrictiveness of GAAP is associated with a 19.8 percent increase in additional account-specific questions.

To provide stronger identification for this main finding, in Panel B of Table 3, we employ four alternative specifications. Our results and inferences are robust to each of these specifications. Column 1 includes firm fixed effects instead of industry fixed effects. The coefficient on *Restrict* is positive and significantly different from zero (p-value < 0.01). In Column 2, we estimate Eq. (2) in changes instead of in levels. We include the first difference of each independent variable and the first difference of *ΣAnalystsQuestions* as the dependent variable. The coefficient on *ΔRestrict* is positive and significant (p-value < 0.05). Although these two specifications limit the variation in GAAP restrictiveness that we can examine, they help to address the potential alternative explanation that our findings are driven by underlying firm characteristics, such as the firm's business model.

In Column 3, we augment Eq. (2) with an explanatory variable that captures the variation in $StandardReliance_{its}$. This firm-year-specific control variable is calculated as follows:

$$FirmStandardReliance_{it} = \Sigma_s StandardReliance_{its} \quad (3)$$

where $StandardReliance_{its}$ was defined previously. Our primary independent variable of interest, $Restrict_{it}$, consists of two components: (i) the restrictiveness of the standard and (ii) the relative importance of that standard to the firm. $FirmStandardReliance_{it}$ captures the variation in relative importance weights *precisely* as that variation enters the calculation of *Restrict* without capturing variation in the restrictiveness of each standard. By including $FirmStandardReliance_{it}$ in our tests, on the one hand, we reduce the examined variation in our *Restrict* measure and hence our statistical power. On the other hand, we provide assurance that our results are not driven by varying levels of firms' reliance on certain standards. The coefficient on *Restrict* remains positive and significantly different from zero (p-value < 0.01).

In Column 4, we relate staggered changes in the restrictiveness of specific standards with

analysts' questions that pertain specifically to the financial statement item governed by that standard. We estimate:

$$\begin{aligned} AnalystsQuestions_{iqs} = {} & \beta_1 StandardRestrictWord\_scaled_{ts} + \beta_2 LnMVE_{iq} + \beta_3 MTB_{iq} \\ & + \beta_4 ROA_{iq} + \beta_5 Momentum_{iq} + \beta_6 ReturnVolatility_{iq} \\ & + \beta_7 EarnSurprise_{iq} + \beta_8 Coverage_{iq} + \beta_9 CoverageTime_{iq} \\ & + \beta_{10} CareerLength_{iq} + \delta_i + \gamma_q + \varepsilon_{iqs} \end{aligned} \quad (4)$$

This specification is similar to our main test Eq. (2) with two exceptions. The dependent variable $AnalystsQuestions_{iqs}$, defined previously, is the number of analysts' questions asked during the conference call for standard *s* as opposed to for all standards. Our independent variable of interest ($StandardRestrictWord\_scaled_{ts}$) represents the restrictiveness of the corresponding standard. We add the suffix *'_scaled*' to indicate the variable is defined slightly differently than $StandardRestrictWord\#_{ts}$ (which was defined previously in Section 3.2). *StandardRestrictWord_scaled* starts in a similar way with *StandardRestrictiveWord#*, which is the count of the words *shall*, *should*, and *must* within accounting standard *s* at time *t*. But we scale it by the within-sample maximum of each standard. This scaling forces *StandardRestrictWord_scaled* to exhibit a similar range for each individual standard (i.e., the range is bounded by zero and one), which ensures that differences in the volume of restrictions across standards do not influence our results.[12] Importantly, only time-series variation in standard-specific restrictiveness influences *StandardRestrictWord_scaled*.

Because this test is at the firm-quarter-standard level instead of the firm-quarter level, the number of observations for this test is much larger than the other tests. We include the 38 standards that exhibit time-series variation in the count *shall*, *should*, or *must* in our sample period. The sample consists of 2,250,892 observations, which represents the 59,234 firm-quarter observations

[12] This scaling follows Cheng et al. (2022) and is equivalent to subtracting the minimum and dividing by the range, where the theoretically possible minimum of zero is used as the minimum.

from Panel A of Table 3 multiplied by 38 standards.

This test design has a number of benefits. It relates staggered changes in standard-level restrictiveness with analysts' questions that pertain specifically to the account governed by the relevant standard. Further, this design uses time-series variation in each standard, which varies across standards, making it difficult to suggest that a firm-level correlated omitted variable drives the results we observe. As only time-series variation in standard-specific restrictiveness influences *StandardRestrictWord_scaled*, variation in a firm's reliance on a standard is not included as part of this measure and thus cannot explain our results. Last, this design allows us to control for quarter fixed effects and thus our results cannot be explained by time-varying factors that do not also vary across standards.

In Column 4, the positive and statistically significant (p-value < 0.01) coefficient on *StandardRestrictWord_scaled* shows that when a standard is more restrictive, analysts ask more questions about that standard. Together, these four alternative specifications provide strong evidence corroborating our main results presented in Panel A of Table 3 and support our inference that restrictive GAAP leads financial statement users to solicit disclosure from managers.[13]

5. ANALYSTS' QUESTIONS AND MANAGERS' DISCLOSURES

We next turn to examining how the documented increase in financial statement users' efforts

[13] We also conduct additional untabulated cross-sectional analyses. Prior theoretical research suggests that users will exert more effort to acquire information as new information enters the market (Kim and Verrecchia, 1997) and as the benefits of trading on that information increase (Grossman and Stiglitz, 1980; Diamond and Verrecchia, 1981). At the same time that uncertainty induces a need for acquiring additional information, uncertainty also induces an increase in the expected stock return, further increasing the benefits of incurring the costs necessary to solicit additional information (Amihud, 2002; Amihud, Hameed, Kang, and Zhang, 2015). Consistent with this notion, prior research finds that information acquisition activities increase when the information environment is uncertain (Vlastakis and Markellos 2012). Accordingly, we expect analysts to more frequently solicit additional disclosure when GAAP-restricted information induces increased uncertainty. We test this expectation by estimating Equation 2 augmented with an interaction of *Restrict* and two proxies for changes in investor uncertainty—change in illiquidity (measured following Amihud 2002) and the change in the average natural log of daily trading volume around the earnings release date. The coefficients on the interactions obtain the expected signs, which supports the notion that the relation between GAAP restrictiveness and financial statement users' efforts to acquire additional disclosure is stronger when the disclosure of GAAP-restricted information leads to increased uncertainty.

to acquire information relates to managers' voluntary disclosures. Our intent in doing so is twofold. First, we seek to demonstrate that our findings are distinct from those of Hribar et al. (2022), who show that restrictive GAAP is positively related to firms' anticipatory voluntary disclosures. Second, we examine whether managers' voluntary disclosure and users' efforts to acquire disclosure behave as substitutes or complements.

5.1. Controlling for Anticipatory Voluntary Disclosures

We re-estimate our Eq. (2) main specification augmented with five different measures of managers' anticipatory voluntary disclosure. Our first voluntary disclosure measure is based on executives' prepared remarks that occur as part of the presentation part of the call and before analysts are allowed to ask questions. This measure is analogous to *ΣAnalystsQuestions*, except we focus on the comments of executives during the presentation part of the conference call. $ExecPrepared_{iqs}$ is the number of account-specific words spoken by executives during their presentation comments for firm *i* in quarter *q* about standard *s*. We sum $ExecPrepared_{iqs}$ across all standards to create the firm-quarter variable $\Sigma ExecPrepared_{iq}$. Column 1 of Table 4 shows that the coefficient on *ΣExecPrepared* is positive and highly significant (*p*-value < 0.01), suggesting that some of analysts' questions represent a response to manager's anticipatory disclosures about financial statement line items. This test hence provides preliminary evidence of a complementary relation between managers' disclosures and analysts' questions about financial statement line items. More importantly, the coefficient on *Restrict* remains positive and statistically significant (*p*-value < 0.01), which shows that our main inference of restrictive GAAP leading to more analysts' account-specific questions holds when controlling for executives' prepared remarks.[14]

[14] We note that the 0.68 coefficient on *Restrict* in this specification is less than the 0.099 coefficient on *Restrict* in our main Table 3, Panel A test that excludes the $\Sigma ExecPrepared_{iq}$ variable. The coefficient decrease between these specifications further reinforces the idea that part (but not all) of analysts' questions could be a reaction to manager's anticipatory disclosures.

Our four other voluntary disclosure measures follow those employed by Hribar et al. (2022). Specifically, we augment our main tests with: (i) the number of forecasts issued by management (*MgrForecast*); (ii) an indicator for managements' decision to disclose non-GAAP earnings (*Non-GAAP*); (iii) the MD&A's readability (*MDAFog*); and (iv) the length of the MD&A section in the financial statements (*LogMDALength*). We measure each of these measures so that they capture disclosure choices made in the most recent period prior to the phone call. These tests are respectively presented in Columns 2 to 5 of Table 4. The sample varies across these tests due to the availability of data needed to measure these variables. Our evidence suggests that certain anticipatory voluntary disclosures exhibit complementary relations with analysts' questions. Interestingly, all three language-based anticipatory disclosure proxies (*ΣExecPrepared*, *MDAFog*, and *LogMDALength*) are related to analysts asking additional questions about financial accounts. In contrast, *MgrForecast*, a proxy for a numerical form of disclosure, is negatively associated with account-specific questions, which is more consistent with a substitute relation between this form of anticipatory disclosure and analysts' questions. More importantly, for each of the four columns, the coefficient on *Restrict* remains positive and significant (p-value < 0.01). As an alternative test, Column 6 includes all five voluntary disclosure variables at the same time. As in previous columns, the coefficient on *Restrict* is positive and statistically significant (p-value < 0.01).

Overall, this analysis is important because if managers fully anticipate analysts' financial statement information needs, our main results would likely be subsumed by these voluntary disclosures. However, our main inference about the positive relation between *Restrict* and *ΣAnalystsQuestions* as documented in Table 3 is unchanged.

5.2. Interacting Current Voluntary Disclosures and Restrictive GAAP

In the previous section we examine the relation between managers' anticipatory disclosures

and users' efforts to acquire disclosure about financial statement line items. In this section, we dig deeper to ask whether these relations increase or decrease in the context of restrictive GAAP. Although we expect that analysts will in general ask follow up questions to managers' prepared remarks (consistent with the Table 4 results), it is not clear what will happen when GAAP is more restrictive. It depends on how good managers are at anticipating the informational needs of analysts created by restrictive GAAP. If managers are good, we would expect fewer analysts' questions. Conversely, if managers are not good at anticipating what analysts need, or manager's remarks spur analysts to consider what information restrictive GAAP has precluded managers from disclosing, we would expect even more analysts' questions.

We test this notion by interacting the *Restrict* variable with each of the five measures of managers' anticipatory voluntary disclosure. A value of zero for some of our continuous voluntary disclosure proxies is outside of the relevant range (e.g., *MDAFog*) and thus the main effect of *Restrict* is uninterpretable. Accordingly, we have standardized continuous voluntary disclosure variables to have a mean of zero and a standard deviation of one, annotated by *Std_* before each variable name. Table 5 presents the results of this analysis. When each proxy for voluntary disclosure is examined individually, the relations documented in Table 4 appear to be stronger when GAAP is restrictive (see Columns 1 to 5). In Column 6 we examine all forms of anticipatory disclosure jointly and find that for three out of five variables (i.e., *ΣExecPrepared*, *Non-GAAP*, and *LogMDALength*) the interaction between *Restrict* and voluntary disclosure obtains a positive and statistically significant coefficient. For the other two variables the interaction coefficients are insignificant. These results suggest that anticipatory voluntary disclosures issued in response to restrictive GAAP are associated with users soliciting even more information from managers.

5.3. Future Voluntary Disclosures

The analyses in sections 5.1 and 5.2 are consistent with a complementary relation in which managers' account-specific anticipatory disclosure leads analysts to solicit more information about financial statement line items. We are also interested in examining whether the relation can go in the opposite direction. Implicit in our setting of analysts' questions, and we posit reasonably so, is the notion that if an analyst asks an account-specific question, a manager is likely to answer it. This reasoning is consistent with analysts' solicitation of information causing managers to provide reactionary disclosure. To provide additional evidence of this idea, taking advantage of a lead-lag setting, we ask whether managers alter disclosures in the future based on analysts' current account-specific questions. We estimate:

$$\begin{aligned} \Sigma ExecPrepared_{iq+1} = {} & \beta_1 \Sigma AnalystsQuestions_{iq} + \beta_2 \Sigma ExecPrepared_{iq} \\ & + \beta 3\, LnMVE_{iq} + \beta 4\, MTB_{iq} + \beta_5\, ROA_{iq} + \beta_6\, Momentum_{iq} \\ & + \beta_7\, ReturnVolatility_{iq} + \beta_8 EarnSurprise_{iq} + B_9\, Coverage_{iq} \\ & + \beta_{10}\, CoverageTime_{iq} + \beta_{11}\, CareerLength_{iq} + \delta_i + \gamma_q + \varepsilon_{iq} \end{aligned} \quad (5)$$

In this test, we predict managers' prepared remarks in quarter $q+1$ using analysts' questions in quarter q. We include managers' prepared remarks in quarter q as an explanatory factor to control for the persistent part of what managers say in their opening remarks. Hence, we are essentially predicting the newer aspects of managers' prepared remarks of the $q+1$ call. Our other controls remain the same as in previous tests.

We present the results of this test in Column 1 of Panel A of Table 6. As expected, managers' prepared remarks are highly persistent as evidenced by the positive and highly statistically significant coefficient (p-value < 0.01) on *ΣExecPrepared* in quarter q. For our variable of interest, the coefficient on *ΣAnalystsQuestions* is positive and significant (p-value < 0.01), indicating that managers provide more account-specific information in the presentation part of the next quarters call when analysts solicit such information in the current quarter. When you combine this result

with the result presented in Table 3, in which we establish that restrictive GAAP is positively related to analysts' questions, the combined inference is that restrictive GAAP leads analysts to ask more account-specific questions, which in turn leads to expanded anticipatory disclosure by managers in the next quarter.

We also test whether the propensity for managers to learn from analysts' questions depends on the degree of restrictive GAAP. In particular, we address a potential concern that managers learn from analysts' questions only when restrictive GAAP is low, which would negate the importance of managerial learning in our context of restrictive GAAP. In Columns 2 and 3, we partition the sample based on whether *Restrict* is above or below the median, and re-estimate Eq. (5). We find that the coefficient on *ΣAnalystsQuestions* is positive and statistically significant (p-value < 0.01) in Column 3. This coefficient is also higher than that in Column 2, when GAAP is less restrictive, and as documented in Table 6, these two coefficients are significantly different (p-value < 0.01). Overall, these findings suggest that managers learn from analysts' efforts to acquire additional disclosure about financial statement line items and adjust future disclosures accordingly, and managers do so to a greater degree when GAAP is more restrictive.

To further enhance the identification of this result, we employ a standard-specific model in which we regress managers' disclosure of information for firm i in quarter $q+1$ related to standard s ($ExecPrepared_{iq+1s}$) on analysts' efforts to acquire disclosure about firm i in quarter q about standard s ($AnalystsQuestions_{iqs}$). Panel B of Table 6 provides the results of this test at the firm-quarter-standard level. As mentioned previously, when we go to this level, the total number of observations is much larger than the firm-quarter level tests. Column 1 shows that the coefficient on *AnalystsQuestions* is positive and statistically significant (p-value < 0.01), which corroborates the firm-quarter results in Panel A of Table 6. As an alternative to simply controlling for

ExecPrepared about a particular standard in quarter *q*, Column 2 restricts the sample to observations in which *ExecPrepared* equals zero in quarter *q.* We continue to find a positive and statistically significant (*p*-value < 0.01) coefficient on *AnalystsQuestions* in this subsample. In this test, because managers have not mentioned information about the specific account in their prepared remarks in quarter *q*, it cannot represent an explanation for why that account is more likely to be mentioned by executives in their prepared remarks in quarter *q+1* when analysts ask questions about the standard in quarter *q*. Overall, the results in this subsection support the idea that analysts' questions lead managers to provide reactionary account-specific disclosures. These findings complement prior research documenting that managers respond to analysts' requests for forward-looking information (Chapman and Green 2018) and to analyst monitoring (Christensen, Gomez, Ma, and Pan 2020).

6. ANALYSTS' FORECAST QUALITY

In this section, we examine how analysts' solicitation and managers' provision of information influences the quality of analysts' future forecasts, as measured by accuracy. Higher quality forecasts represent a direct benefit to analysts. Such forecasts also reflect better information available to other investors listening in on the call. Investors also benefit from improved analysts' reports targeted at investors following the call. Hence these tests help us understand the value of analysts' solicitation of reactionary disclosure from managers during the conference call.

Our test strategy is to predict the quality of analysts' forecasts issued after the conference call as a function of analysts' questions and managers' responses to the questions during the Q&A part of the call. More specifically, we estimate:

$$
\begin{aligned}
LowForecastQuality_{iq+1} = {} & \beta_1 \Sigma AnalystsQuestions_{iq} + \beta_2 \Sigma ExecResponse_{iq} \\
& + \beta_3 \Sigma AnalystsQuestions_{iq} \times \Sigma ExecResponse_{iq} + \beta_4 MVE_{iq} \\
& + \beta_5 MTB_{iq} + \beta_6 ROA_{iq} + \beta_7 Momentum_{iq} + \beta_8 ReturnVolatility_{iq} \\
& + \beta_9 EarnSurprise_{iq} + \beta_{10} Coverage_{iq} + \beta_{11} CoverageTime_{iq} \\
& + \beta_{12} CareerLength_{iq} + \delta_i + \gamma_q + \varepsilon_{iq} \qquad (6)
\end{aligned}
$$

LowForecastQuality is measured as analysts' forecast error ($AbsFE_{q+1}$) which is the absolute value of the difference between the actual earnings and an analyst's forecast issued no more than 90 days prior to the earnings announcement date in the subsequent quarter, scaled by ending share price in the prior quarter. As part of this test, we develop a new variable that measures executives' account-specific responses to analysts' questions. *ΣExecResponse* is analogous to *ΣExecPrepared* except that it is measured using executives' responses to analyst questions during the Q&A part of the call rather than executives' prepared remarks during the presentation part of the call.[15]

Table 7 provides the results of this test. Column 1 shows that the coefficient on the main effect of *ΣAnalystsQuestions* is positive and significantly related (p-value < 0.01) to forecast errors, which translates to reduced forecast quality. Given the presence of the *ΣAnalystsQuestions* × *ΣExecResponse* interactive variable, the interpretation of the main effect is that our tests provide no evidence that analysts' forecast quality improves when account-specific information is solicited and when managers do not provide any account-specific information. Forecast quality may not improve because analysts did not receive critical information from managers. Forecast quality could even decrease if the lack of an answer by managers leads analysts to start presuming more, which has the effect of analysts placing more weight on their idiosyncratic private information when developing the forecast. The coefficient on the main effect of *ΣExecResponse* is also positive and significantly related (p-value < 0.01) to forecast errors, which suggest that when account-

[15] In untabulated tests, we regress $\Sigma ExecResponse_{iq}$ on $\Sigma AnalystsQuestions_{iq}$ and, unsurprisingly, we find a very strong positive association, consistent with analysts often receiving account-specific information from managers (i.e., reactionary disclosures) when they exert the effort necessary to solicit such information.

specific information is provided by management but not solicited by analysts, forecast quality does not improve. In this case, the unsolicited disclosure may not be what analysts want on a topic or may be on a topic that is not of interest to them.

We do caveat readers from making any strong inference from these two particular results because we are not in a position to disentangle the underlying economic effect from our construct of interest, which is the communication (by analysts and managers) about these economic effects. For example, it is possible that certain underlying economic transactions cause more uncertainty, which lead to more analysts' account-specific questions and manager's account-specific responses and, at the same time, also lead to less accurate forecasts. In this scenario, unanswered account-specific analyst questions and unsolicited account-specific manager answers could be helpful but we are not in a position to observe it because of the positive effect of the underlying economics on uncertainty.

The coefficient on *ΣAnalystsQuestions* × *ΣExecResponse* is negative and statistically significant. This result indicates when account-specific information is both solicited by analysts and provided by managers, analysts forecast earnings more accurately. This result contrasts with the opposite relations between forecast accuracy and the main effects of *ΣAnalystsQuestions* and *ΣExecResponse*. This finding is particularly important given that Hribar et al. (2022) document greater anticipatory disclosure by managers when GAAP is restrictive. Our inferences from this forecast accuracy test builds upon that finding by documenting that manager-supplied information appears to be more beneficial when users exert effort to acquire that disclosure, which, as the Table 3 analysis shows, occurs to a greater degree when GAAP is more restrictive.

We next investigate whether the relation observed in Column 1 of Table 7 varies with whether the standards are more or less restrictive of managers' discretion. We split the sample based on

whether it is below or above the median of *Restrict* and respectively present the results in Column 2 and 3. The coefficient on the *ΣAnalystsQuestions* × *ΣExecResponse* interaction term in Column 3 is negative and statistically significant when GAAP is more restrictive but is not significant in Column 2 when GAAP is less restrictive. An untabulated test indicates that the difference between the interaction terms in the low and high *Restrict GAAP* samples is significantly different from zero. This result shows that the positive effect of managers answering analysts' account-specific questions on analysts' forecast quality is stronger when GAAP is more restrictive.

As we did with previous tests, to further enhance the identification of our analysts' questions construct, we employ a standard-specific model that is analogous to Column 1, but has a larger sample because it is estimated at the firm-quarter-standard level. These results are presented in Column 4 of Table 7. The coefficient on the *AnalystsQuestions* × *ExecResponse* interaction term is negative and statistically significant (p-value < 0.01); hence, we continue to find that forecast accuracy is improved when analysts exert effort to acquire information about standard *s* and managers provide information about standard *s*.[16]

7. CONCLUSION

We examine how GAAP-based restrictions of managers' discretion over financial reporting influence (i) financial statement users' efforts to acquire disclosure from management and (ii) how these efforts influence managers' disclosures. Using analysts' questions during conference calls as a proxy for users' efforts to acquire additional disclosure, our results suggest that financial statement users exert more effort to acquire additional disclosure when GAAP restricts the

[16] In untabulated analyses, we employ analysts' forecast dispersion as a measure of *LowForecastQuality*. In these tests, $Dispersion_{q+1}$ is measured as the standard deviation of I/B/E/S earnings forecasts issued no more than 90 days prior to the earnings announcement date in the subsequent quarter, scaled by ending share price in the prior quarter. We find results similar to those presented in Table 7 using this alternative measure.

information that managers can provide in GAAP-based financial statements. Further, our evidence is consistent with users' efforts behaving as complements to, rather than substitutes for, the anticipatory disclosures that managers prepare *ex ante* and voluntarily provide in response to restrictive GAAP. That is, we observe increased effort to acquire information when GAAP is restrictive and more so when managers provide increased voluntary disclosure prior to users' efforts to acquire information. Interestingly, we find that managers appear to learn from users' efforts to acquire disclosure and update future disclosures to align with current requests for disclosure. We interpret these findings as suggesting that users play an important role in triggering management disclosures and identifying the disclosures that are useful. Ultimately, our evidence suggests that disclosure is more useful when users exert effort to acquire additional disclosure.

Our study makes several meaningful contributions. First, our findings shed light on how accounting standards influence the dynamic relation between users' efforts to acquire additional financial statement information and managers provision of that information. As the FASB emphasizes the usefulness of financial statements, the additional effort that users exert when GAAP is restrictive is one factor that the FASB could consider as they set standards in the future. Second, our study builds on Hribar et al. (2022), providing evidence that the effective use of managers' voluntary disclosures depends on the efforts that users exert to acquire those disclosures, perhaps because either the information acquired aligns more with users' needs or because the act of seeking information prepares the user to incorporate the information more effectively into their expectations of performance. Finally, our setting and methodology provides a potentially valuable tool for future researchers because it allows them capture which financial statement accounts are of interest to users, which users are seeking the disclosures, and whether the disclosures sought were likely provided.

References

Amihud, Y. "Illiquidity and Stock Returns: Cross-Section and Time-Series Effects." *Journal of Financial Markets* **5** (2002): 31–56.

Amihud, Y., A. Hameed, W. Kang, and H. Zhang. "The illiquidity premium: International evidence." *Journal of Financial Economics* **117** (2015): 350–368.

Amiram, D., E. Owens, and O. Rozenbaum. "Do information releases increase or decrease information asymmetry? New evidence from analyst forecast announcements." *Journal of Accounting and Economics* **62** (2016): 121–138.

Beatty, A., and S. Liao. "What Do Analysts' Provision Forecasts Tell Us about Expected Credit Loss Recognition?." *The Accounting Review* **96.1** (2021): 1–21.

Chapman, K., and J.R. Green. "Analysts' influence on managers' guidance." *The Accounting Review* **93.1** (2018): 45–69.

Cheng, L., J. Jaggi, and S. Young. "Does restricting managers' discretion through GAAP impact the usefulness of accounting information in debt contracting?" *Contemporary Accounting Research* **39.2** (2022): 826–862.

Cheng, Q., and T.D. Warfield. "Equity incentives and earnings management." *The Accounting Review* **80** (2005): 441–476.

Christensen, T.E., E. Gomez, M. Ma, and J. Pan. "Analysts' role in shaping non-GAAP reporting: evidence from a natural experiment." *Review of Accounting Studies* **26** (2021): 172–217.

Christensen, H.B., V.V. Nikolaev, and R. Wittenberg-Moerman. "Accounting information in financial contracting: The Incomplete Contract Theory perspective." *Journal of Accounting Research* **54** (2016): 397–435.

Clement, M.B. "Analyst forecast accuracy: Do ability, resources, and portfolio complexity matter?." **27** (1999): 285–303.

Diamond, D.W., and R.E. Verrecchia. "Information aggregation in a noisy rational expectations economy." *Journal of Financial Economics* **9** (1981): 221–235.

Donelson, D.C., J.M. McInnis, and R.D. Mergenthaler. "Rules-based accounting standards and litigation." *The Accounting Review* **87** (2012): 1247–1279.

Drake, M.S., D.T. Roulstone, and J.R. Thornock. "Investor information demand: Evidence from Google searches around earnings announcements." *Journal of Accounting Research* **50** (2012):1001–1040.

Drake, M.S., D.T. Roulstone, and J.R. Thornock. "The determinants and consequences of information acquisition via EDGAR." *Contemporary Accounting Research* **32** (2015): 1128–1161.

Financial Accounting Standards Board. "Accounting Standards Update (ASU) No. 2016-13." Accounting Standards Codification. 2016. Retrieved from http://asc.fasb.org/

Folsom, D., P. Hribar, R.D. Mergenthaler, and K. Peterson. "Principles-based standards and earnings attributes." *Management Science* **63** (2017): 2592–2615.

Gibbons, B., P. Iliev, and J. Kalodimos. "Analyst information acquisition via EDGAR." *Management Science* **67** (2021): 769–793.

Gleason, C. A., and C.M. Lee. "Analyst forecast revisions and market price discovery." *The Accounting Review* **78** (2003): 193–225.

Holthausen, R.W., and R.W. Leftwich. "The economic consequences of accounting choice." *Journal of Accounting and Economics* **5** (1983): 77–117.

Hribar, P., R. Mergenthaler, A. Roeschley, S. Young, and C.X. Zhao. "Do managers issue more voluntary disclosure when GAAP limits their reporting discretion in financial statements?" *Journal of Accounting Research* **60** (2022): 299–351

CFA Institute. "Comment Letter on Financial Instruments: Expected Credit Losses (Impairments)" (2013) Credit Losses – Exposure Draft Comment Letter No. 355

Kim, O., and R.E. Verrecchia. "Pre-announcement and event-period private information." *Journal of Accounting and Economics* **24** (1997): 395–419.

Lang, M.H., and R.J. Lundholm. "Corporate disclosure policy and analyst behavior." *The Accounting Review* **71** (1996): 467–492.

Lang, M.H., K.V. Lins, and D.P. Miller. "ADRs, analysts, and accuracy: Does cross listing in the United States improve a firm's information environment and increase market value?." *Journal of Accounting Research* **41** (2003): 317–345.

Mikhail, M.B., B.R. Walther, and R.H. Willis. "Do security analysts improve their performance with experience?." *Journal of Accounting Research* **35** (1997): 131–157.

Ramnath, S., S. Rock, and P.B. Shane. "Financial analysts' forecasts and stock recommendations: A review of the research." *Foundations and Trends in Finance* **2** (2008): 311–421.

Trosborg, A. "Statutes and Contracts: An Analysis of Legal Speech Acts in the English Language of the Law." *Journal of Pragmatics* **23** (1995): 31–53.

Verrecchia, R. E. “Essays on Disclosure.” *Journal of Accounting and Economics* **32** (2001): 97–180.

Vlastakis, N., and R.N. Markellos. “Information demand and stock market volatility.” *Journal of Banking & Finance* **36** (2012): 1808–1821.

Watts, R. L., and J.L. Zimmerman. *Positive Accounting Theory*. 1, Prentice-Hall, 1986.

Young, S. N., “Are Financial Statements More Comparable When GAAP Restricts Managers’ Discretion?.” *Management Science* (2023). https://doi.org/10.1287/mnsc.2023.4961

Zhang, X.F. “Information uncertainty and analyst forecast behavior.” *Contemporary Accounting Research* **23** (2006): 565–590.

Appendix A
Variable Definitions

Dependent Variables

$\Sigma AnalystsQuestions_{iq}$	The number of account-specific references made by analysts for firm *i* in quarter *q*.
$\Sigma ExecPrepared_{iq}$	The number of account-specific references made by executives in their prepared introductory monologue for firm *i* in quarter *q*.
$\Sigma ExecResponse_{iq}$	The number of account-specific references made by executives in their responses to analysts' questions for firm *i* in quarter *q*.
$AnalystsQuestions_{iqs}$	The number of references made by analysts in the quarterly transcript for firm *i* in quarter *q* related to standard *s.*
$ExecPrepared_{iqs}$	The number of references made by executives in their introductory monologue in the quarterly transcript for firm *i* in quarter *q* related to standard *s.*
$ExecResponse_{iqs}$	The number of references made by executives in their responses to analysts' questions for firm *i* in quarter *q* related to standard *s.*
$AbsFE_{iq+1}$	The absolute value of the difference between the actual earnings and the consensus analyst forecast based on I/B/E/S forecasts issued no more than 90 days prior to the earnings announcement date in quarter *q* + 1, scaled by ending share price in the prior quarter.
$Dispersion_{iq+1}$	The standard deviation of I/B/E/S earnings forecasts issued no more than 90 days prior to the earnings announcement date in quarter *q* + 1, scaled by ending share price in the prior quarter.

Variables of Interest

$Restrict_{it}$	The weighted sum of *StandardRestrict* using $RelImp_{its}$ as the weights.
$StandardRestrictiveWord\#_{ts}$	The count of the occurrences of '*shall*', '*should*', and '*must*' within accounting standard *s* at year *t.*
$StandardRestrictWord\_scaled_{ts}$	*StandardRestrictiveWord#* scaled by the within-sample maximum of *StandardRestrictiveWord#* for standard *s*. This measurement follows Cheng et al. (2022).
$StandardRestrict_{ts}$	*StandardRestrictiveWord#* scaled by the length of the standard, orthogonalized to complexity, and scaled to between one and zero, as described in the text of the paper. This measurement follows Hribar et al. (2022).
$StandardReliance_{its}$	The count of words that relate to standard *s* in firm *i*'s 10-K in year *t*, standardized within each standard-year to have a standard deviation of one and a mean of zero. After scaling and following Folsom et al. (2017), we also "ensure all weights are positive and that standards that do not affect the firm receive a zero weight, [by adding] back the minimum [absolute] score for standard s in year t" (see Folsom et al. 2017; p. 2600).

Control Variables

$LnMVE_{iq}$	The natural log of a firm's market value of equity at the end of the prior quarter.
MTB_{iq}	Market value of equity divided by the book value of equity at the end of the prior quarter.
ROA_{iq}	Return on assets for the prior quarter.
$Momentum_{iq}$	Market-adjusted returns measured over the prior quarter.
$ReturnVolatility_{iq}$	The standard deviation of returns measured over the prior 12 months.
$EarnSurprise_{iq}$	The absolute value of the difference between the actual earnings and the consensus analyst forecast based on I/B/E/S forecasts issued no more than 90 days prior to the earnings announcement date in the subsequent quarter, scaled by ending share price in the prior quarter.
$Coverage_{iq}$	The number of analysts covering the firm in quarter *q*.
$CoverageTime_{iq}$	The average length in years that analysts in I/B/E/S have covered the firm as of quarter *q*.
$CareerLength_{iq}$	The average career length in years of analysts in I/B/E/S covering the firm as of quarter *q*.
$FirmStandardReliance_{it}$	$\Sigma_s StandardReliance_{its}$
Non-GAAP	Following Hribar et al. (2022), equal to one if non-GAAP exclusions are not equal to zero, and zero otherwise. To ensure that this variable reflects 'anticipatory' disclosure, we measure this variable in period *t-1*.
MgrForecast	Following Hribar et al. (2022), the number of forecasts issued by management in the 12 months following the issuance of the 10-K. To ensure that this variable reflects 'anticipatory' disclosure, we measure this variable in period *t-2*.
LogMDALength	Following Hribar et al. (2022), the natural log of the word count in the MD&A section of the 10-K. To ensure that this variable reflects 'anticipatory' disclosure, we measure this variable in period *t-1*.
MDAFog	Following Hribar et al. (2022), the Gunning Fog index measured for the MD&A section of the 10-K. To ensure that this variable reflects 'anticipatory' disclosure, we measure this variable in period *t-1*.

Appendix B
Excerpts from conference call transcripts

And regarding your loan losses, you talked about the year-on-year figure, Felipe. Are you going to maintain this at this level? Or is there anything in this quarter that could be seen as a one-off situation?
On the loan loss reserves, I guess because you guys are having less charge-offs its decreasing loan loss reserves year-over-year. Is that right? What's the outlook for these loan loss reserves as this economy is weakening and all the others are negative credit indicators that you guys went over?
Wondering how we think about that reserve over the next 12 months or so.
But the loan loss reserve to loan ratio, it continues to skinny down at 38 basis points. It looks optically low. When do you think we'd see a resumption of provisioning?
And if I am doing the numbers correctly, could you just give us some further color on this high number and also give us an idea what do you expect 2012 where on your base scenario it will be in recession, I assume you will be having higher loan loss charges than 70 or 80 basis points with a consequent impact on earnings?
I was just wondering whether this EUR 1.5 billion loan loss provision is a reasonable base for the next quarters. Also, to have an idea where loan loss provision can move in 2014.
In a response to an earlier question, you said that loan loss provisions obviously were impacted by downgrading some corporate clients. That could continue, but you also said that you don't expect it to impact the expense line too much. Why? It would seem to me, especially in larger companies, where you have some larger exposures, downgrading corporate -- additional corporate credits can have a pretty meaningful impact on your loan-loss provisioning lines. So if you can give more color as to why you think that the corporate -- or why you think corporate downgrades are not going to impact your loan-loss provision line, that would be helpful.
But if you're comfortable with maintaining a reserve in and around -- the loan losses are at the loan, as you know, around 2%. As we move forward, if there's other specific reserves that have to come out you guys look like -- specific reserves run about 54% of those larger loans and then, like you said, 100% in terms of the loan loss reserve itself covers the rest of the delinquencies. If you guys aren't building reserves and see charge offs that are going higher as a function of cleaning up problem credits, can we see a scenario where charge offs are going to continue to exceed your provisioning line?
I hope Bryan didn't fall off his chair when you saw the first quarter loan loss provision at $21.5 million. I guess my question is, I mean the economy has, unfortunately, deteriorated since the end of March. If things remain unchanged, does it sound like, Bryan, that, that ACL to total loan ratio would continue to move higher under that scenario?
Finally, the loan loss provision, and I believe that's associated with the commercial finance business, that was considerably lower than I expected. Is that -- is this level of around $550,000, is that something that I can expect to see going forward or...
you might have addressed this to a degree with Bill Carcache's question, but in terms of the bottoming of the loan loss reserve relative to loan, just wanted to get an idea where you think you could -- the level out there.
Okay. And just one final thing for you, Don. Because you had recoveries and loan losses this year, could you just refresh us on what you think is sort of a normalized through-the-cycle rate of loan loss for you, so we can start to kind of -- and when do you think we will start to see that "normalization of loan losses?"
Shouldn't the loan loss level be able to drop after two, three quarters or so from this level?
My question is related to your loan loss reserve coverage level, which is significantly lower than your historical levels. And if you can give more detail on what that is -- why that is happening and if this is the level you will keep going forward?
And then coming back to the exceptionally low credit losses in end of quarter, and you're saying that you're not expecting to come back to the SEK 12 million. So I mean, a reasonable loan loss level assumption, will that be somewhere like 1%, 1.5% going forward compared to the 2.5% historically?
We hate to keep going over the same things over and over again, but I would like to ask this question so if you can answer it. For several years, the concern has been that loan loss reserving maybe was blamed on the accountants .... How do we get confidence today that as we go forward that you have got your arms around the credits?

Table 1
Summary Statistics

Variable	N	Mean	Std. Dev.	Q1	Median	Q3
ΣAnalystsQuestions	59,234	0.912	1.616	0.000	0.000	1.000
Restrict	59,234	3.583	1.829	2.373	3.260	4.436
LnMVE	59,234	7.683	1.602	6.531	7.599	8.719
MTB	59,234	3.136	4.802	1.273	2.096	3.627
ROA	59,234	0.007	0.032	0.002	0.010	0.020
BHAR	59,234	0.009	0.177	-0.092	0.001	0.096
ReturnVolatility	59,234	0.106	0.061	0.063	0.091	0.132
EarnSurprise	59,234	0.005	0.010	0.001	0.002	0.004
Coverage	59,234	7.754	6.195	3.000	6.000	11.000
CoverageTime	59,234	4.288	2.719	2.199	3.878	5.861
CareerLength	59,234	13.499	5.170	10.366	13.655	16.622

Table 1 provides descriptive statistics for variables used in our tests. The sample consists of earnings call transcript observations from 2005 to 2017. See Appendix A for variable definitions.

Table 2
Correlations

	Variable	1	2	3	4	5	6	7	8	9	10	11
1	*ΣAnalystsQuestions*	1	**0.187**	**0.133**	**-0.129**	**-0.041**	-0.002	**-0.080**	**0.038**	**0.046**	**0.074**	**0.053**
2	*Restrict*	**0.203**	1	**0.220**	**-0.190**	**-0.152**	0.003	**-0.032**	**0.104**	**0.109**	**0.074**	**0.029**
3	*LnMVE*	**0.118**	**0.204**	1	**0.294**	**0.300**	*-0.010*	**-0.500**	**-0.387**	**0.526**	**0.402**	**0.189**
4	*MTB*	**-0.073**	**-0.099**	**0.144**	1	**0.351**	**-0.032**	**-0.118**	**-0.325**	**0.103**	**-0.021**	**-0.015**
5	*ROA*	0.001	**-0.051**	**0.278**	**0.045**	1	**0.081**	**-0.231**	**-0.310**	**0.111**	**0.090**	**0.036**
6	*BHAR*	**-0.011**	0.000	**-0.047**	**-0.017**	**0.056**	1	**-0.021**	**-0.083**	**-0.017**	-0.001	0.006
7	*ReturnVolatility*	**-0.042**	0.005	**-0.460**	**-0.036**	**-0.292**	0.083	1	**0.351**	**-0.103**	**-0.279**	**-0.150**
8	*Earn Surprise*	**0.051**	**0.088**	**-0.297**	**-0.109**	**-0.260**	**-0.093**	**0.351**	1	**-0.184**	**-0.138**	**-0.083**
9	*Coverage*	**0.019**	**0.089**	**0.534**	**0.050**	**0.088**	**-0.025**	**-0.094**	**-0.130**	1	**0.297**	**0.148**
10	*CoverageTime*	**0.069**	**0.077**	**0.388**	**-0.038**	**0.091**	*-0.008*	**-0.229**	**-0.082**	**0.215**	1	**0.416**
11	*CareerLength*	**0.044**	**0.039**	**0.171**	**-0.018**	**0.053**	**-0.001**	**-0.115**	**-0.058**	**0.108**	**0.425**	**1**

Table 2 provides Pearson (below) and Spearman (above) correlation for variables used in our regression analysis. All variables have been winsorized at the 1st and 99th percentiles. Bold typeface indicates significance at the 1% level and italic typeface indicates significance at the 5% level. See Appendix A for variable definitions.

Table 3
Panel A: Analysts' Efforts to Acquire Disclosure and GAAP Restrictions

	ΣAnalystsQuestions		
Variables	Coef.	*t*-stat	
Restrict	**0.099**	**9.34**	*******
LnMVE	0.117	9.11	***
MTB	-0.011	-5.81	***
ROA	-0.939	-3.34	***
Momentum	-0.026	-0.74	
ReturnVolatility	0.308	1.35	
EarnSurpise	6.590	6.31	***
Coverage	-0.004	-1.48	
CoverageTime	0.011	2.32	**
CareerLength	0.005	2.50	**
Quarter FE	Yes		
Industry FE	Yes		
Observations	59,234		
Adjusted-R^2	0.120		

Panel A of Table 3 reports the results of the test examining the effect of GAAP-imposed restrictions (*Restrict*) on analysts' efforts to acquire disclosure (*ΣAnalystsQuestions*). The sample consists of firm-quarter observations from 2005 through 2017. See Appendix A for variable definitions. *T*-statistics are computed using robust standard errors clustered by firm. *, **, and *** respectively indicate two-tailed significance at the 10%, 5%, and 1% levels.

Table 3
Panel B: Analysts' Efforts to Acquire Disclosure and GAAP Restrictions – Robustness

	ΣAnalystsQuestions			*ΔΣAnalystsQuestions*			*ΣAnalystsQuestions*			*AnalystsQuestions*		
	(i)			(ii)			(iii)			(iv)		
Variables	Coef.	*t*-stat		Coef.	*t*-stat		Coef.	*t*-stat		Coef.	*t*-stat	
Restrict	**0.040**	**3.27**	***				**0.064**	**2.90**	***			
ΔRestrict				**0.039**	**2.19**	**						
StandardRestrictWord_scaled										**0.038**	**12.75**	***
LnMVE	0.010	0.43					0.117	9.04	***	0.004	11.09	***
MTB	-0.002	-1.23					-0.011	-5.75	***	0.000	-7.22	***
ROA	-0.761	-2.76	***				-0.920	-3.16	***	-0.010	-1.22	
Momentum	-0.059	-1.68	*				-0.023	-0.65		-0.001	-1.07	
ReturnVolatility	0.326	1.48					0.278	1.20		0.010	1.96	*
EarnSurpise	3.081	2.98	***				7.444	6.45	***	0.128	5.57	***
Coverage	0.004	2.09	**				-0.004	-1.55		0.000	0.66	
CoverageTime	-0.007	-1.61					0.011	2.32	**	0.000	1.46	
CoverageLength	0.001	0.83					0.005	2.49	**	0.000	1.56	
FirmStandardReliance							0.004	1.80	*			
ΔLnMVE				-0.100	-3.05	***						
ΔMTB				0.002	1.00							
ΔROA				-0.280	-0.68							
ΔMomentum				-0.124	-2.71	***						
ΔReturnVolatility				0.267	1.11							
ΔEarnSurpise				2.235	1.69	*						
ΔCoverage				0.004	1.49							
ΔCoverageTime				-0.003	-0.41							
ΔCareerLength				-0.002	-0.77							
Quarter FE	Yes			Yes			Yes			Yes		
Industry FE	No			No			Yes			Yes		
Firm FE	Yes			No			No			No		
Observations	58,952			40,641			59,234			2,250,892		
Adjusted-R^2	0.290			0.006			0.120			0.006		

Panel B of Table 3 reports the results of the test examining the effect of GAAP-imposed restrictions (columns 1 and 3 *Restrict*, column 2 *ΔRestrict*, or column 4 *StandardRestrictWord_scaled*) on analysts' efforts to acquire disclosure (*ΣAnalystsQuestions* or *AnalystsQuestions*). The sample consists of firm-quarter observations from 2005 through 2017. See Appendix A for variable definitions. *T*-statistics are computed using robust standard errors clustered by firm. *, **, and *** respectively indicate two-tailed significance at the 10%, 5%, and 1% levels.

Table 4
Analysts' Efforts to Acquire Disclosure and GAAP Restrictions – Controlling for Voluntary Disclosure

	ΣAnalystsQuestions																	
	(i)			(ii)			(iii)			(iv)			(v)			(vi)		
Variables	Coef.	*t*-stat		Coef.	*t*-stat		Coef.	*t*-stat		Coef.	*t*-stat		Coef.	*t*-stat		Coef.	*t*-stat	
Restrict	**0.068**	**7.36**	***	**0.099**	**9.35**	***	**0.097**	**9.13**	***	**0.124**	**10.19**	***	**0.112**	**8.68**	***	**0.084**	**7.18**	***
ΣExecPrepared	0.052	17.61	***													0.051	15.78	***
MgrForecast				-0.016	-3.52	***										-0.018	-3.93	***
Non-GAAP							0.034	1.38								0.001	0.05	
MDAFog										-0.102	-4.35	***				-0.120	-5.26	***
LogMDALength													0.082	1.87	*	0.054	1.31	
LnMVE	0.118	9.81	***	0.118	9.18	***	0.117	9.02	***	0.088	6.42	***	0.087	6.27	***	0.092	7.10	***
MTB	-0.011	-5.72	***	-0.011	-5.82	***	-0.011	-5.62	***	-0.010	-5.11	***	-0.009	-4.99	***	-0.010	-5.01	***
ROA	-0.876	-3.21	***	-0.916	-3.25	***	-0.954	-3.38	***	-0.796	-2.61	***	-0.622	-2.05	**	-0.711	-2.41	**
Momentum	-0.008	-0.22		-0.025	-0.72		-0.025	-0.73		-0.023	-0.59		-0.026	-0.68		-0.001	-0.04	
ReturnVolatility	0.150	0.69		0.305	1.33		0.300	1.30		0.061	0.25		0.006	0.02		-0.043	-0.18	
EarnSurpise	4.976	5.11	***	6.570	6.30	***	6.706	6.38	***	6.318	5.36	***	6.313	5.37	***	4.820	4.37	***
Coverage	-0.005	-1.93	*	-0.003	-1.34		-0.004	-1.52		-0.001	-0.34		-0.001	-0.54		-0.002	-0.59	
CoverageTime	0.010	2.27	**	0.012	2.48	**	0.011	2.26	**	0.004	0.85		0.007	1.26		0.005	1.03	
CareerLength	0.005	2.30	**	0.005	2.45	**	0.005	2.48	**	0.004	1.83	*	0.004	1.79	*	0.003	1.63	
Quarter FE	Yes			Yes			Yes			Yes			Yes			Yes		
Industry FE	Yes			Yes			Yes			Yes			Yes			Yes		
Observations	59,234			59,234			58,988			46,253			47,812			46,248		
Adjusted-R^2	0.156			0.120			0.120			0.132			0.132			0.168		

Table 4 reports the results of the test examining the effect of GAAP-imposed restrictions (*Restrict*) on analysts' efforts to acquire disclosure (*ΣAnalystsQuestions*) while controlling for proxies for voluntary disclosure provided *ex ante* by managers. The sample consists of firm-quarter observations from 2005 through 2017. See Appendix A for variable definitions. *T*-statistics are computed using robust standard errors clustered by firm. *, **, and *** respectively indicate two-tailed significance at the 10%, 5%, and 1% levels.

Table 5
Analysts' Efforts to Acquire Disclosure and GAAP Restrictions – Interacting with Voluntary Disclosure

	ΣAnalystQuestions																	
	(i)			(ii)			(iii)			(iv)			(v)			(v)		
Variables	Coef.	*t*-stat		Coef.	*t*-stat		Coef.	*t*-stat		Coef.	*t*-stat		Coef.	*t*-stat		Coef.	*t*-stat	
Restrict × *Std_ΣExecPrepared*	0.053	6.64	***													0.051	5.57	***
Restrict × *Std_Mgrforecast*				-0.016	-2.45	**										-0.006	-0.93	
Restrict × *Non-GAAP*							0.038	2.39	**							0.028	1.73	*
Restrict × *Std_MDAFog*										0.005	0.61					-0.009	-1.32	
Restrict × *Std_LogMDALength*													0.030	3.85	***	0.017	2.23	**
Restrict	0.059	6.98	***	0.098	9.31	***	0.068	4.90	***	0.124	10.22	***	0.102	8.25	***	0.046	3.05	***
Std_ΣExecPrepared	0.111	3.34	***													0.110	2.80	***
LnMVE	0.118	9.81	***	0.118	9.17	***	0.118	9.06	***	0.088	6.45	***	0.089	6.51	***	0.093	7.39	***
MTB	-0.011	-5.74	***	-0.011	-5.81	***	-0.011	-5.67	***	-0.010	-5.11	***	-0.010	-5.15	***	-0.010	-5.16	***
ROA	-0.858	-3.18	***	-0.938	-3.34	***	-0.949	-3.36	***	-0.801	-2.63	***	-0.664	-2.19	**	-0.734	-2.53	**
Momentum	-0.004	-0.11		-0.026	-0.74		-0.025	-0.73		-0.022	-0.59		-0.022	-0.58		0.004	0.11	
ReturnVolatility	0.086	0.40		0.308	1.35		0.303	1.32		0.065	0.26		-0.015	-0.06		-0.105	-0.46	
EarnSurpise	4.770	4.89	***	6.532	6.27	***	6.794	6.50	***	6.317	5.35	***	6.313	5.37	***	4.752	4.35	***
Coverage	-0.005	-1.96	*	-0.003	-1.37		-0.004	-1.56		-0.001	-0.35		-0.002	-0.68		-0.002	-0.73	
CoverageTime	0.009	2.07	**	0.012	2.47	**	0.011	2.22	**	0.004	0.85		0.006	1.22		0.004	0.82	
CareerLength	0.004	2.25	**	0.005	2.39	**	0.005	2.45	**	0.004	1.85	*	0.004	1.72	*	0.003	1.45	
Std_MgrForecast				0.023	1.09											-0.015	-0.70	
Non-GAAP							-0.091	-1.76	*							-0.078	-1.50	
Std_MDAFog										-0.077	-2.63	***				-0.038	-1.51	
Std_LogMDALength													-0.081	-2.60	***	-0.035	-1.22	
Quarter FE	Yes			Yes			Yes			Yes			Yes			Yes		
Industry FE	Yes			Yes			Yes			Yes			Yes			Yes		
Observations	59,234			59,234			58,988			46,253			46,285			46,248		
Adjusted-R^2	0.161			0.121			0.121			0.132			0.133			0.1732		

Table 5 reports the results of the test examining the effect of GAAP-imposed restrictions (*Restrict*) on analysts' efforts to acquire disclosure (*ΣAnalystsQuestions*) while interacting *Restrict* with proxies for voluntary disclosure provided *ex ante* by managers. The sample consists of firm-quarter observations from 2005 through 2017. See Appendix A for variable definitions. *T*-statistics are computed using robust standard errors clustered by firm. *, **, and *** respectively indicate two-tailed significance at the 10%, 5%, and 1% levels.

Table 6
Panel A: Impact of Analysts' Questions on Future Disclosure

	$\Sigma ExecPrepared_{q+1}$								
	(i) Full Sample			(ii) Low Restrict			(iii) High Restrict		
Variables	Coef.	*t*-stat		Coef.	*t*-stat		Coef.	*t*-stat	
ΣAnalystsQuestions	**0.143**	**8.10**	***	**0.095**	**3.91**	***	**0.161**	**7.16**	***
ΣExecPrepared	0.673	86.70	***	0.690	68.73	***	0.646	62.63	***
LnMVE	0.017	0.68		-0.018	-0.63		-0.027	-0.70	
MTB	-0.003	-0.70		0.005	0.89		-0.01	-2.03	**
ROA	-0.570	-0.86		-0.161	-0.21		-0.841	-0.77	
Momentum	0.098	0.94		0.032	0.24		0.137	0.82	
ReturnVolatility	0.754	1.63		0.130	0.24		0.980	1.32	
EarnSurpise	-3.243	-1.46		-9.126	-3.04	***	-2.040	-0.67	
Coverage	-0.002	-0.35		0.005	0.65		-0.005	-0.77	
CoverageTime	0.002	0.19		-0.005	-0.46		0.005	0.36	
CareerLength	0.007	1.76	*	0.004	0.72		0.011	1.55	
Difference between coefficient on *ΣAnalystsQuestions* in columns (ii) and (iii)					**0.066** **[2.62]***				
Quarter FE	Yes			Yes			Yes		
Industry FE	Yes			Yes			Yes		
Observations	59,234			29,629			29,605		
Adjusted-R^2	0.512			0.522			0.494		

Table 6 Panel A reports the results of the test examining whether managers provide additional account-specific disclosure in future quarters in response to analysts' questions in the current quarter. The sample consists of firm-quarter observations from 2005 through 2017. Columns 2 and 3 split the sample below and above the median of *Restrict* and are respectively labeled Low Restrict and High Restrict. See Appendix A for variable definitions. *T*-statistics are computed using robust standard errors clustered by firm. *, **, and *** respectively indicate two-tailed significance at the 10%, 5%, and 1% levels.

Table 6
Panel B: Impact of Analysts' Questions on Future Disclosure at the Line-item Level

	ExecPrepared$_{q+1}$					
	(i) Full Sample			(ii) *ExecPrepared*$_q$*=0*		
Variables	Coef.	*t*-stat		Coef.	*t*-stat	
AnalystsQuestions	**1.284**	**22.82**	***	**0.836**	**23.83**	***
ExecPrepared	0.703	37.77	***			
LnMVE	0.012	8.25	***	0.008	11.97	***
MTB	0.000	-1.42		-0.001	-4.99	***
ROA	0.061	1.63		-0.022	-1.34	
Momentum	0.004	0.85		0.001	0.45	
ReturnVolatility	-0.065	-2.03	**	-0.001	-0.08	
EarnSurpise	-0.614	-4.59	***	-0.031	-0.69	
Coverage	-0.001	-1.57		0.000	-2.95	***
CoverageTime	0.000	-0.38		0.001	2.23	**
CareerLength	0.001	2.97	***	0.000	3.44	***
Quarter FE	Yes			Yes		
Industry FE	Yes			Yes		
Observations	2,250,892			2,120,736		
Adjusted-R^2	0.457			0.032		

Table 6 Panel B reports the results of the test examining whether managers provide additional disclosure related to a specific account in future quarters in response to analysts' questions about that same account in the current quarter. The sample in Column 2 is limited to observations where managers did not provide voluntary disclosure about the relevant account in quarter q. The sample consists of firm-quarter observations from 2005 through 2017. See Appendix A for variable definitions. *T*-statistics are computed using robust standard errors clustered by firm. *, **, and *** respectively indicate two-tailed significance at the 10%, 5%, and 1% levels.

Table 7
Impact of Account-Specific Questions on Analysts' Forecasts – Accuracy

	$AbsFE_{q+1}$											
	(i) Full Sample			(ii) Low Restrict			(iii) High Restrict			(iv) Line-item sample		
Variables	Coef.	*t*-stat		Coef.	*t*-stat		Coef.	*t*-stat		Coef.	*t*-stat	
ΣAnalystsQuestions × ΣExecResponse	**-0.001**	**-2.30**	**	**0.001**	**1.12**		**-0.002**	**-2.54**	**			
ΣExecResponse	0.007	3.23	***	0.002	0.86		0.006	1.90	*			
ΣAnalystsQuestions	0.021	4.49	***	0.007	1.15		0.025	3.81	***			
AnalystsQuestions × ExecResponse										**-0.002**	**-3.86**	***
ExecResponse										0.006	3.24	***
AnalystsQuestions										0.014	3.32	***
LnMVE	-0.068	-14.64	***	-0.078	-13.18	***	-0.080	-10.79	***	-0.065	-13.99	***
MTB	-0.006	-7.32	***	-0.005	-4.32	***	-0.008	-5.39	***	-0.007	-7.57	***
ROA	-1.652	-8.53	***	-1.901	-7.71	***	-1.390	-4.28	***	-1.677	-8.63	***
Momentum	-0.405	-13.66	***	-0.397	-10.93	***	-0.434	-8.84	***	-0.405	-13.67	***
ReturnVolatility	42.258	32.88	***	36.056	20.04	***	44.717	26.80	***	42.438	33.01	***
EarnSurpise	2.391	16.81	***	1.862	10.48	***	2.839	13.29	***	2.400	16.91	***
Coverage	-0.001	-1.24		0.000	-0.25		-0.002	-1.12		-0.001	-1.33	
CoverageTime	0.010	4.98	***	0.015	5.23	***	0.007	2.34	**	0.010	5.08	***
CareerLength	-0.002	-1.75	*	-0.002	-1.85	*	-0.002	-1.25		-0.002	-1.63	
Quarter FE	Yes			Yes			Yes			Yes		
Industry FE	Yes			Yes			Yes			Yes		
Observations	59,203			29,610			29,593			2,249,714		
Adjusted-R^2	0.331			0.288			0.364			0.331		

Table 7 reports the results of tests examining whether the additional information provided by executives (*ΣExecResponse*) in response to analysts' questions *(ΣAnalystsQuestions*) improves future forecast accuracy ($AbsFE_{q+1}$). Columns 2 and 3 split the sample below and above the median of *Restrict* and are respectively labeled Low Restrict and High Restrict. Column 4 employs the line-item specific versions of the measures for information provided by executives (*ExecResponse*) and analysts' questions *(AnalystsQuestions*). The sample consists of firm-quarter observations from 2005 through 2017. Coefficients have been multiplied by 100 for expositional purposes. See Appendix A for variable definitions. *T*-statistics are computed using robust standard errors clustered by firm. *, **, and *** respectively indicate two-tailed significance at the 10%, 5%, and 1% levels.