

Analysts' Strategic Information Revelation in Conference Calls

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1. INTRODUCTION

We study strategic information revelation by financial analysts via their questions in earnings conference calls, as well as its implications for firms' information environments. Prior literature studies conference calls as strategic information exchanges between analysts and managers, with analysts depending on management-provided information to generate accurate earnings forecasts (Bowen et al. 2002). For instance, Mayew (2008) and Allee et al. (2021) provide evidence that firms strategically “*stage*” their conference calls by favoring certain analysts, and Haag et al. (2022) find that analysts' negative and assertive question phrasing is associated with more informative manager responses. In this paper, we adopt a novel perspective by analyzing conference calls as strategic information exchanges *among analysts*.

During their question turn, we posit that analysts can chose to ask questions regarding topics that are of relevance but not addressed in the management presentation, are of relevance and addressed by the management, and are of no relevance. If an analyst addresses a relevant topic that was previously not addressed by the management in comparison to an already addressed one, the respective analyst is arguably revealing more information in the question. Consequently, the respective management response should be more informative (and less biased), leading to an overall

more informative conversation. Given that better-informed analysts already have a relatively high information endowment in comparison to their less-informed peers, they arguably have lower marginal benefits of revealing information in their questions as less-informed peers can free-ride on that information, which, *ceteris paribus* diminishes the better-informed analysts' relative ex-post information endowment. Hence, since analysts are evaluated based on their forecast accuracy relative to their peers (e.g., Hong and Kubik 2003; Brown et al. 2015; Emery and Li 2009), better-informed analysts face a trade-off: By benefiting their peers, analysts' information revelation via their questions may jeopardize their own relative information advantage, thus reducing their willingness to reveal this information in the conference call.¹

These strategic interactions among analysts, while likely shaping the informativeness of conference calls, are less well understood than those between analysts and managers. Hence, we examine the trade-off related to analysts' information revelation during conference calls, as well as the broader implications of this strategic behavior for the firm's information environment. More specifically, our main research question asks whether better-informed analysts strategically reveal less information than less-informed analysts via their questions in conference calls. In subsequent analyses we shed light on better-informed analysts' underlying trade-off between their individual benefits and costs of information revelation, as well as the implications of this strategic behavior for the overall informativeness of conference calls and associated equity market outcomes.

We expect better-informed analysts to reveal their endowed information strategically by trading off the benefits and cost of revealing information via their questions. In terms of benefits, Minson et al. (2018) provide experimental evidence that a questioner can increase the quality of

¹ We consider an analyst as revealing information in the conference call when their question contains information that goes beyond what managers had previously revealed in that call (i.e., when questions address issues that managers chose not to discuss in the presentation section). We avoid referring to the opposite behavior, "information withholding," where doing so would connote that an analyst has more information than they reveal, which is challenging to establish empirically.

the response by revealing information in their question. Consequently, analysts may increase the usefulness of managers' answers by revealing information in their questions. However, since analysts compete with their peers (Emery and Li 2009; Bowers et al. 2014; Brown et al. 2015), enhancing their peers' information set by revealing private information in their questions is potentially costly for better-informed analysts. Strategically withholding private information is a potential way for better-informed analysts to safeguard their information advantage. Since better-informed analysts depend less on management-provided information and have a greater information advantage to protect, we expect them to be less willing than less-informed analysts to reveal information via questions in conference calls – thus shielding their information advantage. Finally, we expect better-informed analysts' strategic information revelation to shape the overall informativeness of conference calls, in particular by affecting the informativeness of managers' answers. Overall, this strategic behavior is predicted to have a measurable impact on equity market outcomes.

We test our predictions using 260,576 analyst speech portions from quarterly earnings conference calls of all listed U.S. firms in the period 2008 to 2020. Our primary measure of analysts' information endowment is the accuracy of their forecast for next quarter's earnings relative to their peer analysts, issued *prior* to a conference call (*ex-ante* abnormal, or relative, forecast accuracy).² We capture an analyst's information revelation by using the abnormal thematic difference (cosine modification) between the management presentation section and the analyst's question, which captures the extent to which the analyst's question contains information that is incremental to what management had previously revealed during the conference call (see Lee 2016; Cicon 2017).³

We find that better-informed analysts reveal less information in their questions than less-informed analysts. Consistent with a strategic motive, this behavior is stronger (weaker) where

² Appendix C provides an illustrative example of the calculation of our measures related to information endowment.

³ Appendix B provides an illustrative example of the calculation of our information revelation measure.

analysts are exposed to more intense competition among peer analysts (higher forecasting uncertainty). In a subsequent ‘mechanism analysis’, we then conduct several tests to shed light on the benefits and costs that characterize the trade-off underlying analysts’ information revelation. In terms of benefits, to the extent that, by revealing information in their questions, better-informed analysts do trigger more informative manager answers, they benefit in terms of higher own *absolute* ex-post forecast accuracy, lower ex-post information uncertainty, and a greater extent of being herded by their peer analysts. In terms of costs, we find that information revelation is associated with a decrease in analysts’ own *relative* accuracy of forecasts issued after the conference call.

Finally, we explore the implications of analysts’ strategic information revelation for the informativeness of conference calls. More information revelation in analysts’ questions is accompanied by manager answers containing relatively more information that is incremental to the presentation section, especially when questions are phrased relatively more negatively and less specifically. Analyzing related equity market outcomes, we find that lower information revelation in analysts’ questions is associated with higher trading volume, suggesting higher investor disagreement, and higher bid-ask spreads, indicating higher information asymmetry. We further show more negative abnormal stock returns where informative analyst questions and informative manager answers coincide. These results tend to be driven by calls with higher strategic information revelation behavior. Overall, we conclude from these equity market tests that analysts’ strategic information revelation in conference calls exacerbates information asymmetries among investors and dampens information seeking that can induce managers to reveal critical information.

This study contributes to two strands of research. First, we add to the literature that studies how analysts’ incentives affect their behavior. Prior literature collectively concludes that analysts’ *relative* forecast accuracy is among their top priorities (Brown et al. 2015; Groysberg et al. 2011). Specifically, Hong and Kubik (2003) find that relatively more accurate analysts are more likely to

experience career advancements. Prior literature further suggests that these incentives influence analysts' behavior. For example, Bloomfield and Hales (2009) conclude that analysts' incentives determine the degree to which they substitute or complement their individual effort by learning from peers. Our study contributes to this literature by providing evidence on whether and how analysts' incentives also affect their information revelation in conference calls. Connectedly, we also indicate that there might be information spillovers between peer analysts in conference calls. This evidence would further contribute to the analyst learning literature that already documents information spillovers within brokerage houses (e.g., Hwang et al., 2019, Huang et al., 2022) and observed peer actions (e.g., Kumar et al., 2022).

Second, we contribute to the literature that investigates the informativeness of conference calls. Brown et al. (2004) find that conference calls are informative to the equity market. More specifically, Matsumoto et al. (2011) provide evidence that Q&A sections of conference calls are more informative than presentation sections, and Cicon (2017) shows that the informativeness of Q&A sections increases where managers discuss topics not addressed in the presentation section. We add to this literature by showing that the way in which analysts ask questions in conference calls affects the informativeness of this important setting, and ultimately contributes to shaping the firm's overall information environment and equity market outcomes.⁴

2. PRIOR RESEARCH AND HYPOTHESIS DEVELOPMENT

2.1 The setting: Earnings conference calls

Conference calls are organized as a two-staged disclosure process where in the first part, the management gives a brief, scripted presentation that includes the management's notion of the firms'

⁴ In a recent paper, Brightbill, Small and Song (2022) also study analysts' conference call questions. Whereas our study analyzes strategic interactions among analysts, these authors focus on analyst-manager dynamics. Both papers complement prior studies and each other by highlighting different channels and interactions through which analysts' question phrasing in conference calls shapes firms' information environments. We discuss prior literature in section 2.

past and future performance. The second part comprises the question-and-answer section in which the participants, mainly sell-side analysts, have the opportunity to directly address a question to the management (Matsumoto et al., 2011). Matsumoto et al. (2011) provide evidence that the Q&A section is more informative than the management presentation. They argue that their findings can be explained by the spontaneous character of the Q&A session driven by the active involvement of analysts. Consistently, literature documents that the incremental informativeness of the Q&A section can be attributed to topics that are not covered in the management presentation (Cicon, 2017) and the degree to which the management prepared answer scripts (Lee, 2016).

Conference calls constitute a strategic information exchange between the management and a group of analysts. Prior literature suggests that the management seeks to interact with analysts and other participants in the Q&A session for various reasons. *First*, it is a very convenient medium to avoid selective disclosure issues and redundant costs as the management can simultaneously talk to a large group of analysts, which would otherwise contact the management and/or investor relations department individually, potentially asking the same questions (Frankel et al., 1999). *Second*, even though the management has only limited discretion in influencing analysts' questions, the management tries to respond in a way that displays itself and the firm in a very favorable light (e.g., Brockman et al., 2015). In some cases, this may even imply that the management is not responding at all (Gow et al., 2021). *Third*, management uses the Q&A as feedback and learning channel for future disclosure decisions (Chapman and Green, 2018).

2.2 Analysts' incentives

Sell-side analysts actively participate in conference calls to acquire information (Haag et al., 2022), to curry favor with management (Mayew, 2008; Milian et al. 2017), or to signal competence and visibility (Abraham and Bamber 2017; Christensen and Associates 1992), which ultimately results in a higher forecast accuracy and positive career prospects.

Forecast accuracy is one of the most important determinants of analysts' compensation and reputation and is of even higher importance than the amount of investment banking business or trading volume analysts can generate (Brown et al., 2015). Accurate earnings forecasts represent essential inputs to the valuation models analysts use to derive stock recommendations (Loh and Mian 2006), and inaccurate forecasts yield ineffective recommendations (Ertimur et al. 2007). Literature provides ample evidence suggesting that analysts have strong incentives to outperform their peers with respect to their *relative* forecast accuracy. Mikhail et al. (1999) find that analysts with lower relative forecast accuracy are more likely to be made redundant by their employers. In a similar vein, Hong and Kubik (2003) as well as Wu and Zhang (2009) show that higher relative forecast accuracy is associated with more positive career outcomes. Furthermore, relative forecast accuracy is also an important criterion in established “*star analyst*” rankings (e.g., *Institutional Investors – All American Research Team*) (Stickel 1992; Emery and Li 2009), where a higher rank is typically associated with increased compensation and career advancements (e.g., Groysberg et al. 2011).

Information endowment varies across analysts and over time, reflecting analysts' access to proprietary data, special industry expertise, or information processing capabilities (Huang et al. 2018). Typically, analysts are arguably well informed about macroeconomic and industry factors, whereas managers tend to be better informed about firm-specific drivers of performance. Consistently, Hutton et al. (2012) document that analysts' forecasts are more accurate than management's forecasts when firm's earnings more strongly move with the broad economy. In contrast, management's information advantage resides at the firm level.

Analysts acquire information in conference calls by actively participating, i.e., asking questions to the management (e.g., Brown et al., 2015). Against the backdrop of Regulation Fair Disclosure (Reg FD), the Q&A section of a conference call is an analyst's only opportunity to directly

approach managers for material information. Literature documents the influence of analysts' questions on management's information provision. For instance, Haag et al. (2022) find that phrasing questions negatively encourages managers to provide more (accurate) information. This finding is consistent with evidence from the negotiation context, which indicates that questioners can increase the information content of answers by asking negative assumption questions, which signal knowledgeability and assertiveness (Minson et al. 2018). Moreover, Gow et al. (2021) documents that the likelihood of managers not answering a question increases if analysts ask questions about critical topics.

Moreover, analysts may benefit from actively participating in conference calls since it may enhance their relationship with management, which is ultimately associated with more accurate forecasts and more positive career prospects. For instance, Mayew (2008) documents that the management discriminates among analysts based on the favorableness of their outstanding stock recommendation in terms of granting them access to conference calls. Milian et al. (2017) find that addressing favorable topics is associated with more accurate analysts' forecasts, suggesting that it facilitates access to the management. Cen et al. (2021) suggest that favorable analysts are more successful in the labor market. For example, headhunters, competing brokerage houses, and investment banks may determine whether they offer the analyst an employment contract based on the analyst's access to managers (Abraham & Bamber 2017). Finally, by actively participating in conference calls analysts may signal competence and visibility (Abraham and Bamber 2017; Christensen and Associates 1992).

However, actively participating in conference calls is also costly to analysts since listening analysts can acquire and process information contained in peers' questions and the associated management's answers at low cost (Frankel et al. 1999). This is possible as conference calls are freely accessible and questions are publicly raised by analysts. Since analysts typically issue earnings

forecasts under time pressure acquiring information from other analysts' interactions with the management is arguably an important source of information.

We study how the extent to which analysts reveal information in their questions by addressing topics, that are not addressed by in the management presentation, depends on their current performance as compared to peer analysts.

2.3 Analysts' questioning strategies and payoffs

In the following, we describe the set of analysts' questioning strategies. We then determine the analysts' payoffs of each strategy. Finally, in section 2.4, we derive the optimal strategy depending on the analysts' relative performance ex-ante, which results in Hypothesis H1.

We assume that in every conference call, there is a certain number of topics that can be addressed by the management or analysts (Z). Some of them are relevant to the analysts to derive accurate forecasts (Y) others are irrelevant ($Z-Y$). A certain number of the relevant topics (Y) is either addressed in the management presentation (X) or not ($Y-X$). Thus, analysts' set of questioning strategies comprises three strategies: (1) Asking questions regarding topics that are of relevance but not addressed in the management presentation (X), (2) asking questions regarding topics that are of relevance and addressed by the management ($Y-X$), and (3) asking questions regarding topics that are irrelevant ($Z-Y$). In the following, we elaborate on the payoffs associated with each questioning strategy in terms of information acquisition, relationship building with the management, and reputation building regarding peers and investors.

If an analyst addresses a topic that is of relevance but not addressed by the management ($Y-X$), the analyst is revealing information in the question. On the one hand, this leads to a more informative (and less biased) management's answer (Minson et al. 2018; Haag et al. 2022), which may help the analyst to increase her information endowment in *absolute* terms. On the other hand,

it also enables her peers to freeride on the disclosed information in the question (in line with Verrecchia, 1982; Diamond, 1985), reducing her information endowment in *relative* terms. Moreover, addressing a topic that is of relevance but not addressed by the management is costly to the analyst in terms of her relationship with the management. Since the management did not discuss the topic voluntarily, it is plausible to assume that the topic is rather critical as the management is reluctant to talk about it beforehand. Thus, we argue that asking these types of questions deteriorates the relationship with the management. Finally, we argue that addressing a topic that is of relevance but not addressed by the management ($Y-X$) signals competence, again highlighting its benefits.

If an analyst addresses a topic that was already discussed by the management (X), the analyst is revealing less information in the question compared to addressing a topic that is of relevance but not addressed by the management (X). Anecdotal evidence from conference call transcripts suggests that these questions rather constitute clarification or follow-up questions. For example, if an analyst needs additional information to fully process and integrate publicly available information in her valuation model, she likely touches on topics that the management discussed in the management presentation. Thus, even though we expect an increase in both, analysts' *absolute* and *relative* information endowment, with this type of questions, the magnitude of the increase is smaller as compared to analysts' addressing a topic that was not addressed by management. As questions that address topics from the management presentation are easy to answer for management, we argue that reputation with the management increases whereas the perceived competence by other listeners slightly decreases.

Finally, if an analyst addresses a topic that is irrelevant, she reveals no information. Consequently, we argue that this type of questions does not affect analysts' information endowment. Furthermore, we argue that there is no effect on the relationship with management but there is a

negative effect on analysts' reputation. Thus, we directly conclude that this questioning strategy is suboptimal.⁵

2.4 The role of analysts' ex-ante information endowment

We now vary analysts' ex-ante information endowment and derive analysts' dominant questioning strategy. Compared to less-informed analysts, better-informed analysts have lower marginal benefits of revealing information in their questions as their information endowment is already relatively high. In addition, better-informed analysts face higher cost of revealing information in their questions compared to less-informed analysts as peer analysts can free-ride on that information, *ceteris paribus* diminishing the better-informed analysts' relative ex-post information endowment. Thus, we predict that better-informed analysts (operationalized as analysts with higher relative ex-ante forecast accuracy) on average reveal less information in their conference call questions than less-informed analysts – for example, by asking fewer questions about issues that managers chose not to discuss in the presentation section. This argument is consistent with Kumar et al.'s (2022) suggestion that analysts can learn from peers' observed actions. Moreover, it is consistent with anecdotal evidence from an expert interview that we conducted with an analyst who indicates that analysts diligently consider the questions of their peers.

If analysts act strategically, we further expect that information revelation is even lower where competition among peer analysts is more intense (i.e., where better-informed analysts have “*more to lose*” from enhancing their peers' relative information endowment by revealing information, which encourages peers' free-riding) and higher where analysts face higher forecasting uncertainty (i.e., where they benefit more strongly from teasing out informative management answers via informative questions). We summarize these expectations in alternative form as follows:

⁵ We do not consider that analysts may also decide to not participate in the call.

H₁: *Better-informed financial analysts strategically reveal less information in their questions during earnings conference calls than less-informed analysts.*

2.5 Capital market implications

In the next step, we explore how strategic information revelation, to the extent it occurs, affects informativeness of conference calls and thereby generates externalities that shape the firm's information environment. Again, more informative analyst questions arguably induce managers to provide more informative answers (in line with Minson et al. 2018; Haag et al. 2022), likely increasing the information endowment of all analysts in a given call. Conversely, to the extent that better-informed analysts strategically withhold information, the informativeness of the call should diminish, *ceteris paribus*. We further expect that these dynamics are reflected in equity market outcomes. Specifically, to the extent that useful information is withheld, trading volume should increase around a conference call; where this strategic behavior exacerbates information asymmetry among investors, it should increase bid-ask spreads; and if it reflects a directional information signal, it should trigger abnormal stock returns.⁶ These considerations lead to our second expectation:

H₂: *Strategic information revelation by analysts is negatively associated with the informativeness of earnings conference calls.*

Hence, we advance this literature by exploring how the way in which analysts (strategically) ask questions affects the informativeness of conference calls, and ultimately contributes to shaping the firm's overall information environment. The recent study by Brightbill, Small and Song (2022) also focuses on analysts' question phrasing in conference calls. Whereas our study analyzes strategic interactions among analysts, Brightbill et al. (2022) study analyst-manager dynamics. Specifically, we consider the incremental information content (cosine modification) of managers' answers

⁶ Positive abnormal returns would indicate that investors perceive analysts' information revelation as a positive signal, whereas negative abnormal returns would suggest it is linked to their monitoring role (e.g., Bradley et al. 2017).

over and above the presentation section, while Brightbill et al.'s (2022) analysis of managers' answer attributes focuses on quantity and precision. This is consistent with their interest in the implications of 'linguistic mirroring' in analysts' conference call questions, whereas our main concern is with analysts' strategic information revelation. The two papers usefully complement each other by highlighting different channels and interactions through which analysts' question phrasing in conference calls shapes firms' information environments.

3. SAMPLE AND RESEARCH DESIGN

3.1 Data sources and sample

Our sample contains the transcripts of all quarterly earnings conference calls held by US-listed companies between January 2008 and September 2020, downloaded from Thomson Reuters EIKON.⁷ Quarterly firm fundamentals are from Compustat, and individual analyst data is from the I/B/E/S detail and recommendation files.⁸ In line with prior literature, we apply a fuzzy-name matching approach to match each analyst's speech portions to the I/B/E/S detail file using the I/B/E/S recommendation file (Mayew et al. 2020; Call et al. 2020).⁹ The sample selection process is summarized in Table 1.

[Please insert Table 1 here]

⁷ We use only conference calls held in conjunction with earnings announcements. Hence, we do not consider any extraordinary conference calls that are held due to, for example, a merger or an acquisition.

⁸ In October 2018, I/B/E/S announced that a significant portion of analyst IDs (*AMASKCD*) "have been and will continue to be subject to reshuffle without warning" (see <https://wrds-www.wharton.upenn.edu/pages/about/data-vendors/vendor-partner-ibes/>). However, Law (2021) provides evidence stating that only 0.57% of all quarterly earnings forecasts were reshuffled from 2015 to 2021. Consistently, we also find no variation in the underlying analyst ID conditional on a combination of firm identifier and analyst name in the recommendation file (described further below). Given Law's (2021) evidence in combination with our findings, we are reasonably assured that our analyses are not substantially affected by this change in the I/B/E/S database.

⁹ According to Ljungqvist et al. (2009), analysts and their brokerage houses have the opportunity to initiate anonymization of their forecasts. I/B/E/S contains the full names of analysts who did not do so.

Since we perform some of our analyses at the level of the individual analyst and others at the firm level, our final sample contains observations at both levels. Our analyst-level sample contains 260,576 analyst speech portions representing 3,252 different analysts.¹⁰ At the firm level, our sample consists of 69,866 transcripts; this yields on average 3.73 speech portions per conference call.

3.2 Regression models and variable measurement

3.2.1 *Analysts' information endowment and information revelation (H₁)*

To test H₁ regarding the association between analysts' information endowment (*AccuracyPre*) and their information revelation (*InfoQuestion*), we estimate the OLS regression in equation (1):

$$InfoQuestion_{a,i,t} = \gamma_1 AccuracyPre_{a,i,t} + \mathbf{X}_{a,i,t}\boldsymbol{\beta} + \mathbf{Y}_{i,t}\boldsymbol{\delta} + \mu_i + \pi_k + \sigma_t + \varepsilon_{a,i,t} \quad (1)$$

where a indexes the analyst, i the firm, t the quarter, and k the year. μ_i , π_k , and σ_t capture firm, year, and quarter fixed effects, respectively. We estimate equation (1) with robust standard errors clustered at the analyst-firm level. Following prior literature (e.g., Mayew 2008; Call et al. 2020), we control for attributes of analysts and their firm-specific questions ($\mathbf{X}_{a,i,t}$) as well as the characteristics of firms' information environments ($\mathbf{Y}_{i,t}$). Under H₁, we expect γ_1 to be negative, indicating that better-informed analysts, on average, reveal less information in their conference call questions than less-informed analysts. All variables are defined in Appendix A.

Information revelation. Our measure of information revelation is conceptually motivated by Lee (2016) and Cicon (2017), who investigate the incremental informativeness of management statements made in the Q&A session over those in the presentation session.¹¹ We expand on Lee (2016) and Cicon (2017) by focusing on *analysts' questions* as the natural triggers of managers'

¹⁰ In relative terms, our sample captures 32.61 % of the total number of 799,105 analyst speech portions. This ratio is comparable to prior literature (e.g., Call et al. 2020).

¹¹ Lee (2016) provides evidence that managers' adherence to predetermined scripts is associated with higher bid-ask spreads and negative stock market reactions, suggesting that scripted answers increase uncertainty in the capital market. Cicon (2017) finds that new information in managers' Q&A session answers, i.e., answers exhibiting thematic differences to the presentation section, is informative to the market.

answers. Hence, we measure the extent to which analysts reveal information in their conference call questions (*InfoQuestion*) by the incremental information they add in the Q&A session, operationalized as the degree of thematic difference between the presentation section and each respective analyst question. In line with Lee's (2016) and Cicon's (2017) findings, we assume that thematically different (similar) questions and answers reveal more (less) incremental information.¹² Importantly, since managers have full discretion about what they choose to address in the presentation section, thematically different questions likely highlight issues that managers prefer not to discuss voluntarily.¹³ Following Cicon (2017), we apply the concept of cosine modification to approximate the degree of thematic difference across texts (Brown and Tucker 2011), our measure of information revelation. Thus, instead of specifying a word list (e.g., as in Loughran and McDonald 2011), we consider every word or phrase in each conference call. Appendix B contains a detailed description of our method and illustrates the calculation of *InfoQuestion*.

Information endowment. Measuring analysts' information endowment is challenging, as private information by definition is not observable. Moreover, information endowment is associated with diverse factors such as experience, skills, and resource allocation. We approximate an analyst a 's information endowment for a given firm i in a given quarter t by the relative forecast accuracy of their most recent forecast issued before the conference call regarding firm i 's earnings

¹² Consistent with Cicon (2017), *InfoQuestion* captures any information that is lexically different from the presentation section, irrespective of whether the question relates to topics of common knowledge.

¹³ In later analyses, we study the association of information revelation in analysts' questions and that in managements' answers to shed light on whether analysts successfully prompt managers to divulge information they chose not to reveal in the presentation section.

in quarter $t+1$ (*AccuracyPre*).¹⁴ This measure of information endowment seeks to capture the quality of the analyst's current information advantage relative to peers.¹⁵ We assume that better-informed analysts provide more accurate forecasts than less-informed analysts for next quarter earnings. In line with Mayew (2008), *AccuracyPre* captures analysts' *relative* forecast accuracy as their abnormal forecast accuracy. Appendix C contains a detailed description of our method and illustrates the calculation of *AccuracyPre*.

Controls. In line with Mayew (2008), $X_{a,i,t}$ represents a vector of control variables related analyst and question characteristics. Among the analyst characteristics, *Recomm* is the analyst's abnormal level of stock recommendation.¹⁶ *ForcFreq* approximates analyst's abnormal forecast frequency for any firm within the last year. *FirmCoverage* (*IndCoverage*) measures the number of different companies (industries) an analyst covered in the last year. *FirmExperience* (*GeneralExperience*) refers to an analyst's firm-specific (general) experience. *RecHorizon* captures the horizon of the outstanding stock recommendation. *SizeBrokerage* approximates the analyst's brokerage house size. We control for these variables, as they influence analysts' questions. *PastParticipate* captures whether the analyst participated in the last conference call. *PositionQuestion* indicates the sequential number of analyst's questions to control for any management favorability.

Following Hope and Wang (2018), Y_{it} represents a vector of variables related to the firm's information environment. *Size* captures size-induced information asymmetries (Glosten and Harris 1988; Leuz 2003). *BTM* is a proxy for growth opportunities or risk, which are positively associated

¹⁴ We ignore analysts' forecasts for quarter t , as this information endowment is arguably obsolete and may not be subject to the same information revelation incentives.

¹⁵ We do not consider all-star rankings as they are survey-based and thus contain individual (subjective) judgements about analysts. This implies that the dichotomous all-star listing provides a limited indication about the heterogenous quality of each respective analyst's underlying information. Additionally, we do not consider all-star rankings as we are interested in short-term information advantages, whereas ratings capture analysts' ability, which is rather long-term, as well as analysts' reputation.

¹⁶ Contrary to the calculation of *AccuracyPre* but in line with Mayew (2008), the remaining analyst characteristics are calculated as the difference between the characteristic of the focal analyst less the smallest value of any analyst following the firm scaled by the range of values of the respective characteristic for all analysts following the firm.

with information asymmetries (Smith and Watts 1992). *Leverage* relates to the intensity of monitoring, as firms with higher leverage are monitored more closely. *Coverage* controls for variation in the competitiveness of analysts' information environment (Hong and Kacperczyk 2010). *Beat* captures the decrease in information asymmetries resulting from the firm beating the consensus forecast (Brown et al. 2009). *Surprise* controls for 'new' information provided to the market by announced earnings (Bushee et al. 2010). ΔROA measures the quarter-over-quarter performance change, which is positively associated with firm-investor information asymmetries (Brown and Hillegeist 2007). *Loss* controls for managers' tendency to provide more insights and supplemental disclosures when disclosing bad news (Baginski et al. 2004) as well as for loss-induced changes in analysts' information revelation behavior. All variables are defined in Appendix A.

3.2.2 Analysts and the informativeness of earnings conference calls (H_2)

Information revelation in managers' answers. To test H_2 , we first focus on the association between analysts' information revelation in questions (*InfoQuestion*) and managers' information revelation in answers (*InfoAnswer*). The following OLS regression (equation 2) is estimated at the analyst speech-portion level:

$$InfoAnswer_{a,i,t} = \gamma_2 InfoQuestion_{a,i,t} + \mathbf{X}_{a,i,t}\boldsymbol{\beta} + \mathbf{Y}_{i,t}\boldsymbol{\delta} + \mu_i + \pi_k + \sigma_t + \varepsilon_{a,i,t} \quad (2)$$

where a indexes the analyst, i the firm, t the quarter, and k the year. μ_i , π_k , and σ_t capture firm, year, and quarter fixed effects, respectively. We estimate equation (2) with robust standard errors clustered at the analyst-firm level. We control for analyst attributes and their firm-specific questions ($\mathbf{X}_{a,i,t}$) as well as the characteristics of firms' information environments ($\mathbf{Y}_{i,t}$). According to our expectations raised in H_2 , we expect γ_2 to be positive, suggesting that more informative questions are associated with more informative answers.

Adapting our measure of analysts' information revelation, we examine the association between the thematic difference between managers' answers and managers' presentation (*InfoAnswer*) on the one hand, and the thematic difference between analysts' questions and managers' presentation (*InfoQuestion*) on the other hand. Intuitively, this analysis reveals the extent to which analysts, by asking questions about issues not discussed in the presentation section, induce managers to address these issues in their answers.

Equity market outcomes. We also test the association between analysts' information revelation (*AvgInfoQuestion*) and equity market outcomes. We estimate the following firm-level OLS regression (3):

$$MktOutcomes_{i,t} = \gamma_3 AvgInfoQuestion_{i,t} + \theta AvgInfoAnswer_{i,t} + \vartheta AvgInfoQuestion_{i,t} \times AvgInfoAnswer_{i,t} + \mathbf{Y}_{i,t} \boldsymbol{\delta} + \tau_s + \pi_k + \sigma_t + \varepsilon_{i,t} \quad (3)$$

where i indexes the firm, t the quarter, and k the year. τ_s , π_k , and σ_t capture industry, year, and quarter fixed effects, respectively. *MktOutcomes* _{i,t} is a set of equity market outcome variables comprising of abnormal trading volume, change in bid-ask spread, and abnormal returns. We estimate equation (3) with robust standard errors clustered at the firm level. We control for conference call characteristics as well as the characteristics of firms' information environments ($\mathbf{Y}_{i,t}$).

Conceptually, trading volume indicates whether the arrival of new information leads to investor disagreement (e.g., Karpoff 1986). If information revelation in conference calls generates new information that increases (decreases) investor disagreement, short-window trading volume should increase (decrease) around calls. As suggested by Bhagwat et al. (2021), we approximate abnormal trading volume by the ratio of trading volume of the day of the conference call and the average trading volume over a 20-day window prior to the conference call ([-2,-21]).

Following Stoll (1978), bid-ask spreads capture information asymmetry across investors, and thus directly measure the impact of conference calls on firms' information environment. To the extent that information revelation in conference calls affects information asymmetry among investors, short-window bid-ask spreads should change around calls. In line with Lee (2016) and Druz et al. (2015), among others, we measure the change in the bid ask spread ($\Delta Spread$) as the difference between the average bid-ask spreads in the [+3,+1] and [-1,-3] trading windows around the conference call date.

Finally, we study abnormal stock returns around conference calls to infer the extent to which analysts' information revelation produces information signals that are useful to investors. We examine abnormal stock returns in response to information revelation in analysts' questions, managers' answers, and their interaction, as well as the sentiment of questions and answers. In terms of the expected sign of abnormal returns, the implications of information revelation are potentially twofold: On the one hand, informative questions may be interpreted as positive signals, as they reduce investors' information processing costs (e.g., Chen et al. 2016). On the other hand, analysts' information seeking activity may send a negative signal, as it indicates that managers sought to hide relevant (bad) news in the presentation section (in line with Kothari et al. 2009). We approximate the equity market response as the size-decile adjusted stock return during the [0,+1] trading window around the conference call date ($CAR[0,+1]$).

In addition to the call- and firm-controls, we include the average tone of analysts' questions ($AvgToneQuestion$) and managers' answers ($AvgToneAnswer$), respectively. Prior literature suggests that the sentiment of the discussed topic affects capital market outcomes (e.g., Chen et al. 2018). Furthermore, we add the variables *Competition* and *UncertaintyPre*. *Competition* captures the intensity of competition among peer analysts in a given call whereas *UncertaintyPre* approximates the information uncertainty before the call.

3.3 Descriptive statistics

Table 2 reports summary statistics. Panel A provides an overview of analyst variables measured at the analyst-speech portion level, whereas Panels B and C present the variables measured at the conference call and firm levels.

[Please insert Table 2 here]

Information revelation (*InfoQuestion*, bounded between 0 and 1) has a mean of 0.52, indicating that the analysts in our sample tend to reveal slightly more information than all analysts participating in a given call. The relative forecast accuracy (*AccuracyPre*) of 0.56 implies that the participating analysts provide relatively more accurate forecasts compared to all analysts who follow the firm. The standard deviation of 0.34 indicates considerable variation in information endowment (*AccuracyPre*). Participating analysts are 61% likely to have attended a firm's most recent conference call (*PastParticipate*). After a conference call, analysts' mean *absolute* forecast accuracy increases by 0.03 ($\Delta/Accuracy$), whereas mean *relative* forecast accuracy does not change ($\Delta Accuracy$).

Moving to the call- and firm-level variables (Panels B and C), 7.77 analysts participate per call (*Participants*), on average. Information uncertainty decreases from 0.08 to 0.07 around the conference call (means of *UncertaintyPre*, *UncertaintyPost*), in line with the general assumption that conference calls are an important disclosure setting that provides useful information to analysts. On average, each firm is covered by 11 analysts (*Coverage*) and beats the analysts' consensus forecast in 63 out of 100 times (*Beat*), with a mean surprise of \$0.03 in EPS (*Surprise*).

Table 3 reports Pearson correlations among the variables used in the main analyses. We find no significant association between the levels and changes of analyst's relative forecast accuracy (*AccuracyPre*) and their intra-conference call information revelation (*InfoQuestion*). However, these univariate results do not consider any correlations with our control variables.

[Please insert Table 3 here]

In terms of the attributes of informative questions, Chen et al. (2018) provide evidence that negative tone is more informative to investors. Consistently, our analysis shows a statistically significant negative association (coefficient = 0.02; p -value < 0.01) between information revelation (*InfoQuestion*) and tone (*ToneQuestion*). We also find a negative and statistically significant association (coefficient = -0.01; p -value < 0.01) between the interaction of *InfoQuestion*×*AccuracyPre* and *ToneQuestion*, suggesting that, when the information is revealed by better-informed analysts, tone is even more negative.

4. RESULTS

4.1 Analysts' information endowment and information revelation (H_1)

We begin by testing H_1 . Recall from section 2.3 our expectation that better-informed analysts reveal less information in their questions than less-informed analysts, and that they do so strategically.

4.1.1 *Information endowment and information revelation*

First, strategic information revelation should induce a negative association between analysts' ex-ante information endowment and their information revelation in conference call questions. Table 4 reports the related test results. For analysts' relative forecast accuracy before the conference call, we find a positive and statistically significant coefficient (column 1; *AccuracyPre*, -0,005; p -value < 0.05), suggesting that analysts with higher relative ex-ante forecast accuracy tend to reveal less information in their questions, which supports H_1 . Furthermore, firm-specific experience (*FirmExperience*) and past participation in a conference call (*PastParticipate*) also exhibit consistent coefficients (-0.015; p -value < 0.01 and -0.029; p -value < 0.01, respectively), indicating that both variables may also reflect analysts' information endowment.

[Please insert Table 4 here]

To assess the robustness of our results, we recalculate our model with alternative specifications of *InfoQuestion* (Table 4 columns 2-4). According to Salton and Buckley (1988), term-weighting significantly impacts automated information retrieval from text and may therefore also affect our measurement of analysts' information revelation. In our main analysis, the underlying cosine modification score is based on counts of monograms and bigrams (e.g., Manela and Moreira 2017). To investigate whether the main results in column 1 are driven by this research design choice, we include alternative specifications of *InfoQuestion* based on (a) monograms with count weighting, (b) mono- and bigrams with *tf-idf* weighting, and (c) monograms with *tf-idf* weighting (see Appendix B). In line with our main results, we find negative and statistically significant associations between analysts' relative information endowment and our alternative specifications of information revelation (columns 2-4). These results support H₁ that analysts with greater information endowment reveal less information in their conference call questions, consistent with better-informed analysts strategically withholding information to protect their information advantage.¹⁷

4.1.2 Strategic incentives

Second, if this information revelation behavior is strategic, we would expect a negative (positive) association between analysts' information revelation in their conference call questions and the in-

¹⁷ In untabulated analyses, we investigate an alternative notion of strategic behavior, namely whether better-informed analysts safeguard their information advantages by *not participating* in a conference call. To do so, we focus on a subsample of conference calls where every analyst has the opportunity to ask a question, i.e., where there is no analyst in the queue when the conference call ends. We identify these calls by checking whether the operator indicates, after the last question, that there are no further questions in the queue. This subsample consists of 28,179 calls (40.32% of main sample). We perform our analysis at the analyst-call level and therefore include all analysts that follow the firm at the date of the conference call, irrespectively of whether they participate or not ($N = 171,023$ analyst-call observations). Using the indicator variable to denote whether an analyst participates, we find that better-informed analysts are *more*, not less, likely to participate in a conference call (*AccuracyPre*; coefficient = 0.042; p -value < 0.05). Consistent with reputation and credibility costs associated with non-participation in conference calls, this finding suggests that participation is net beneficial even for analysts with high information endowment, alleviating the concern that better-informed analysts seek to safeguard their information advantage by simply 'staying away.'

tensity of competition among peer analysts in a given call (analysts' ex-ante forecasting uncertainty). Our measure of analyst competition (*Competition*) reflects the notion that increased group consistency leads to more competitive environments. If analysts consistently compete against the same group of analysts over multiple periods, they arguably have stronger incentives to reduce peers' free-riding to maintain their information endowment. This may be important to acquire and keep their firm-specific client business. *Competition* is measured as the average prior-quarter ($t-1$) firm-specific conference participation of all analysts participating in the conference call in period t . Moreover, we expect that analysts are more willing to reveal information where they need more information to generate accurate earnings forecasts – that is, where the information uncertainty before the conference call is higher. In line with prior literature, we define information uncertainty (*UncertaintyPre*) as the dispersion (standard deviation) of analysts' forecasts before the conference call in quarter t for earnings in quarter $t+1$ (e.g., Diether et al. 2002). We perform these analyses at the conference call level, since the independent variables are also measured at that level.

[Please insert Table 5 here]

The results are presented in Table 5. In line with strategic information revelation (H_1), we find a negative and statistically significant coefficient on *Competition* (column 1; -0.002; p -value < 0.01) and a positive and statistically significant coefficient on *UncertaintyPre* (column 2; 0.012; p -value < 0.01). The results are similar for the full regression model, which includes both variables jointly (column 3; p -values < 0.01). This result indicates that analysts reveal less (more) information in conference calls when competition among participating analysts (their ex-ante information uncertainty) is higher.

4.2 Mechanism analysis: Costs and benefits of information revelation

To shed more light on the trade-off underlying these findings, we next explore analysts' individual benefits and costs of revealing information via their conference call questions.

4.2.1 *Benefits*

In terms of benefits, where revealing (part of) their private information arguably triggers more informative management answers (in line with Minson et al. 2018; Haag et al. 2022), we expect analysts' *absolute* ex-post forecast accuracy to increase and their ex-post information uncertainty to decrease when analysts reveal more information. Moreover, we expect that analysts who reveal more information (and thus share the information with other analysts) are more likely to be herded by their peer analysts. In terms of costs, we expect that greater information revelation is associated with a decrease in analysts' own *relative* ex-post forecast accuracy compared to all peers.

We measure the change in absolute forecast accuracy from before to after the conference call ($\Delta/Accuracy$) as the difference between the absolute forecast errors after (*ErrorPost*) and before (*ErrorPre*) the conference call, multiplied by (-1).¹⁸ Hence, a positive value of $\Delta/Accuracy$ represents improved absolute forecast accuracy. We measure information uncertainty after the conference call (*UncertaintyPost*) as the change in the standard deviation of all EPS forecasts issued after the conference call. Finally, in line with Hong et al. (2000), we approximate peer analysts' herding around the conference call (*Herding*) by using the change in absolute distance between the questioning analyst's EPS forecast and the mean consensus forecast before versus after.

[Please insert Table 6 here]

The findings, presented in Table 6, reveal that neither informative questions (*InfoQuestion*) nor informative answers (*InfoAnswer*) alone are associated with a change in analysts' absolute

¹⁸ Appendix C illustrates the calculation of $\Delta/Accuracy$.

forecast accuracy. However, their three-way interaction yields a positive and statistically significant coefficient ($InfoQuestion \times InfoAnswer \times AccuracyPre$; 0.017; p -value < 0.01), suggesting that better-informed analysts (higher $AccuracyPre$) asking informative questions (higher $InfoQuestion$) and receiving informative answers (high $InfoAnswer$) exhibit higher absolute ex-post forecast accuracy ($\Delta|Accuracy|$), underscoring that information revelation can benefit better-informed analysts in terms of absolute forecast accuracy. We find qualitatively similar results for ex-post information uncertainty (column 2; coefficient on $InfoQuestion \times InfoAnswer \times AccuracyPre = -0.006$; p -value < 0.05) and peer herding (column 3; coefficient = 0.009; p -value < 0.1). These findings are consistent with benefits accruing to better-informed analysts (in terms of their own ex post absolute forecast accuracy, information uncertainty, and peer herding, respectively) when, despite incentives to the contrary (refer to H_1), they do choose to reveal information in their questions.

4.2.2 Costs

We now turn to the other side of the trade-off, namely the potential costs faced by better-informed analysts when revealing information in conference calls. More specifically, we test whether analysts experience a decrease in *relative* forecast accuracy ($\Delta Accuracy$) when revealing information by asking questions related to issues that managers chose not to discuss in the presentation section. Appendix C illustrates the calculation of $\Delta Accuracy$.

[Please insert Table 7 here]

Column 1 of Table 7 presents the results for our main specification of analysts' information revelation. We find a negative and statistically significant association between information revelation ($InfoQuestion$) and the change in analysts' relative forecast accuracy from before to after the conference call (coefficient = -0.006; p -value < 0.01). As in Table 4, we repeat these tests for

alternative specifications of *InfoQuestion* to demonstrate that our results are not driven by this research design choice (Table 7 columns 2-4). All specifications yield virtually identical results.

Collectively, these results shed light on the mechanism underlying better-informed analysts' trade-off related to revealing information in conference calls. While we provide evidence of benefits as well as costs, our results under H₁ indicate that better-informed analysts, on average, seem to perceive net costs of information revelation, leading them to withhold some of their private information so as not to backslide in terms of forecast accuracy relative to their peers.

4.3 Analysts and the informativeness of earnings conference calls (H₂)

Next, we seek to understand whether and how analysts' information revelation triggers managers' information revelation and ultimately produces information spillovers that affect equity market outcomes (H₂). As described in the hypothesis section, we focus on how information revelation in analysts' questions relates to the information revelation in managers' answers, as well as three equity market outcomes typically associated with information arrival: abnormal trading volume, bid-ask spread, and abnormal returns.

4.3.1 *Information revelation in managers' answers*

We first investigate whether greater information revelation in analysts' questions is linked to greater information revelation in managers' answers, expecting a positive association. We present the findings in Table 8.

[Please insert Table 8 here]

The key finding from this analysis is that information revelation in questions (*InfoQuestion*) is positively and significantly associated with information revelation in answers (column 1; coefficient = 0.352; p -value < 0.01). This result is consistent with informative analyst questions successfully ferreting out information that managers had chosen to withhold in their presentations.

To further increase our understanding of this relation, we investigate the moderating roles of two language attributes of analysts' questions: sentiment (*ToneQuestion*), measured by the Loughran and McDonald (2011) word list, and specificity (*NumbersQuestion*), approximated by the prevalence of monetary or percentage numbers (Gow et al. 2021). First, the sentiment analysis (column 2) reveals a negative and statistically significant coefficient on *ToneQuestion* (-0.008; p -value < 0.01) as well as on its interaction with *InfoQuestion* (-0.023; p -value < 0.01). Consistent with Haag et al. (2022), this finding suggests that managers' information revelation increases with the negativity of analyst questions, and that this association intensifies when analysts address topics not discussed in the presentation section. Second, column (3) shows a negative and statistically significant coefficient on specificity (*NumbersQuestion*; -0.047; p -value < 0.01) and its interaction with analysts' information revelation (-0.043; p -value < 0.01). This result implies that managers are more reluctant to reveal additional information when analysts' questions are highly specific. These inferences hold for the combined model in column (4).

4.3.1 Equity market outcomes

We now turn to the analysis of equity market implications of the strategic information-revelation interactions among analysts and managers. First, we investigate the short-window effects of information revelation on abnormal trading volume. In Panel A of Table 9, column (1) shows a negative and statistically significant association for information revelation in analysts' questions (*AvgInfoQuestion*; coefficient = -1.274; p -value < 0.01) as well as in managers' answers (*AvgInfoQuestion*; coefficient = -1.903; p -value < 0.01). However, the interaction term indicates no statistically significant association. These results suggest that lower revelation of new information in either questions or answers is associated with greater disagreement among investors.

[Please insert Table 9 here]

Second, we analyze the short-window effects of information revelation on information asymmetry among investors. Column (2) documents a statistically significant negative association between analysts' average information revelation and the change in bid-ask spreads (*AvgInfoQuestion*; coefficient = -0.049; p -value < 0.05). This result complements Lee's (2016) finding of reduced bid-ask spreads where managers' (non-scripted) answers deviate from their scripted language used in the presentation section, by indicating that these more-informative answers tend to be triggered by more-informative analyst questions (i.e., higher (*AvgInfoQuestion*)). This finding suggests that better-informed analysts' strategically low information revelation (H_1) is associated with higher information asymmetry among investors.

Finally, we consider the short-window effects of information revelation on stock prices. In column (3), we find a positive and statistically significant market response to the average level of information revelation in managers' answers (*AvgInfoAnswer*; coefficient = 0.080; p -value < 0.01). This finding is in line with the evidence provided by Cicon (2017), suggesting that the equity market, on average, interprets information revelation ('new' information) in managers' answers as a positive signal. In contrast, we find a negative and statistically significant market response to the average information revelation in analysts' questions (*AvgInfoQuestion*; coefficient = -0.038; p -value < 0.01), supporting our expectation that information revelation in questions is interpreted as indicating unfavorable information withheld by managers in the presentation section. Consistent with this interpretation, the interaction of information revelation in questions *and* answers (*AvgInfoQuestion* × *AvgInfoAnswer*) is associated with a statistically significant negative market reaction (coefficient = -0.223; p -value < 0.1). This finding suggests that investors' interpretation of information revelation in answers is context dependent. Given our prior finding that information revelation in analysts' questions is associated with information revelation in managers' answers, the co-occurrence of informative questions and informative answers seems to also send a negative

signal to investors, namely that better-informed analysts' questions tease out bad news withheld in the presentation section.¹⁹

The previous findings suggest that conference calls are more informative when analysts reveal more information in their questions, irrespective of analysts' information endowment. To provide evidence that these findings are driven by analysts' *strategically* revealing information, we now partition the sample based on the extent of analysts' strategic behavior, *StratBehavior*, an indicator variable reflecting a median split based on the difference between analysts' information endowment (*AccuracyPre*) and their information revelation (*InfoQuestion*).²⁰ We argue that a higher difference (*StratBehavior*) indicates more strategic behavior, i.e., analysts strategically revealing less information than their information endowment implies they could. As Panel B of Table 9 reveals, changes in bid-ask spread are mainly driven by the conference call subsample with high strategic analyst behavior (column 3; *AvgInfoQuestion*; coefficient = -0.097; *p*-value < 0.01). This result suggests that, if analysts strategically reveal less information, information asymmetry decreases. No such association is found for the subsample of analysts with less strategic behavior (Panel B column 4; *AvgInfoQuestion*). Similarly, we only observe a negative and statistically significant association between information revelation in the question as well as answer and abnormal returns for conference calls with a high degree of strategic behavior (column 5; *AvgInfoQuestion* × *AvgInfoAnswer*; coefficient = -0.344; *p*-value < 0.05).²¹

¹⁹ In (untabulated) analysis, we replicate these tests using 3-day and 5-day event windows. The results are qualitatively similar but arguably induce noise due to the longer window length. These inferences also hold for the use of market-adjusted returns with a [0,+1] trading window around the conference call (untabulated).

²⁰ This difference between *AccuracyPre* and *InfoQuestion* captures the degree of strategic behavior, namely analysts having relatively higher information endowment but revealing relatively less information in their questions than their peers.

²¹ We find no substantial difference in terms of direction or significance level between the two subsamples regarding the association between analysts' information revelation and abnormal trading volume (columns 1 and 2).

Overall, we conclude that analysts' strategic information revelation and withholding behavior in conference calls is significantly associated with the informativeness of conference calls and, hence, the firm's information environment as perceived by investors, supporting H₂.

5. CONCLUSION

We study information revelation via analysts' questions in earnings conference calls, as well as their implications for firms' information environments. Prior literature suggests that analysts have an incentive to reveal information in their questions, since as doing so is typically associated with more informative managers' responses, likely increasing the accuracy of their earnings forecasts (in line with Minson et al. 2018; Haag et al. 2022). However, as we expect conference calls to also represent a strategic information exchange *among analysts*, better-informed analysts face a trade-off since information revelation may also benefit their peer analysts, jeopardizing their own relative information advantage. Consequently, in line with Verrecchia (1982) and Diamond (1985), we expect better-informed analysts to be reluctant to reveal information in their questions. In further analyses, we shed light on better-informed analysts' underlying trade-off between their individual benefits and costs of information revealing, as well as externalities of this behavior for the overall informativeness of conference calls and equity market outcomes.

Using 260,589 analysts' speech portions of quarterly conference calls of all listed U.S. firms in the time-period 2008 to 2020, we first document that better-informed analysts reveal less information in their questions. Consistent with a strategic motive, we further find that analysts' behavior is exacerbated by the intensity of competition among peer analysts in a given call and dampened by analysts' forecasting uncertainty prior to the conference call. In further analyses investigating analysts' cost-benefit trade-off underlying this strategic behavior, we find that even though better informed analysts benefit from information revelation as they experience an increase in *absolute*

forecast accuracy, a reduction in information uncertainty, and an increase in herding by peer analysts, they also face costs in terms of a decrease in *relative* forecast accuracy.

Second, we explore whether and how analysts' information revelation triggers managers' information revelation and ultimately produces information spillovers that affect equity market outcomes. In line with prior literature, we find that more informative questions induce more informative managers' responses, especially when the questions are phrased relatively more negatively and less specifically. In terms of equity market outcomes, lower information revelation is associated with higher abnormal trading volume, higher bid-ask spreads, and abnormal returns around the conference call date. When we split our sample by the degree of analysts' strategic behavior (i.e., the difference between analysts' information revelation and their information endowment), we find that conference calls with a higher degrees of strategic behavior drive equity market outcomes. Hence, our findings suggest that analysts' strategic information revelation trade-off may diminish firms' information environments as perceived by equity market participants.

Our study is subject to the following limitations. First, our measurement of information revelation in analysts' questions (managers' answers) contains only the lexical and not the semantic difference between analysts' question (managers' answers) and the respective presentation section. Thus, if analysts (managers) use lexically different words in the question (answer) than managers did in the presentation section, we would categorize that question (answer) as incrementally informative. We alleviate this concern by including bigrams in the calculation of the cosine modification score underlying our information revelation measure. Moreover, we argue that this limitation should not systematically distort our measure of information revelation, as conference call semantics seem somewhat standardized, and analysts have little incentive to deviate.

Second, better-informed analysts may reveal less information during conference calls because they talk with managers privately and are therefore less dependent on using conference calls

to acquire information. However, this argument does not affect better-informed analysts' incentives to withhold information in conference calls to mitigate peers' freeriding opportunities, which is at the core of our study. Accordingly, we would expect better-informed analysts' information revelation to decrease further the more private access they have to the firm's management, reducing the need to reveal information during conference calls to acquire information.

By studying information revelation via analysts' questions in earnings conference calls, as well as their implications for the firm's information environment, we contribute to the literature on analysts' strategic incentives as well as the informativeness of earnings conference calls.

APPENDIX A: Variable definitions

Notes: This table lists the variables used in the empirical analysis and their description. Note that all continuous variables are winsorized at 1 and 99 percent level. **Bold-face formatting** indicates main variables of interest.

Label	Definitions
<i>Panel A: Analyst variables</i>	
<i>InfoQuestion</i>	Abnormal information revelation by analyst <i>a</i> , measured the as abnormal cosine modification (= 1 - cosine similarity) between the presentation section and the question. For a detailed description and illustrative calculation, refer to Appendix B.
<i>InfoAnswer</i>	Abnormal information revelation in managers' answers, measured as the abnormal cosine modification (= 1 - cosine similarity) between the presentation section and the answer.
<i>ErrorPre</i> (<i>ErrorPost</i>)	Analyst <i>a</i> 's absolute forecast error before (after) the conference call regarding EPS in quarter <i>t</i> +1, calculated as the absolute difference between the analyst's forecast for EPS in quarter <i>t</i> +1 and the actual EPS in quarter <i>t</i> +1.
<i>AccuracyPre</i> (<i>AccuracyPost</i>)	Analyst <i>a</i> 's abnormal (i.e., relative to other analysts) absolute forecast accuracy before (after) the conference call regarding EPS in quarter <i>t</i> +1. For a detailed description and illustrative calculation, refer to Appendix C.
Δ<i>Accuracy</i>	Analyst <i>a</i> 's change in abnormal (i.e., relative) absolute forecast accuracy around the conference call regarding EPS in quarter <i>t</i> +1, calculated as <i>AccuracyPost</i> - <i>AccuracyPre</i> .
Δ <i>Accuracy</i> 	Analyst <i>a</i> 's change in absolute forecast error around the conference call regarding EPS in quarter <i>t</i> +1, calculated as (<i>ErrorPost</i> - <i>ErrorPre</i>) \times (-1).
<i>Herding</i>	Change in absolute distance of analyst <i>a</i> 's outstanding EPS forecast to the mean EPS forecast of all analysts, corrected by analyst <i>a</i> 's EPS forecast, around the conference call regarding EPS in quarter <i>t</i> +1.
<i>Recomm</i>	Abnormal stock recommendation of analyst <i>a</i> , calculated as the abnormal recommendation level where 1 indicates strong sell and 5 indicates strong buy.
<i>ForcFreq</i>	Abnormal forecast frequency of analyst <i>a</i> , calculated as the abnormal overall number of EPS forecasts by the analyst for any firm in the 12 months prior to the conference call.
<i>FirmCoverage</i>	Abnormal number of firms covered by analyst <i>a</i> , measured as the abnormal number of firms covered by the analyst in the 12 months prior to the conference call.
<i>IndCoverage</i>	Abnormal number of two-digit SIC industries covered by analyst <i>a</i> , measured as the abnormal number of two-digit SIC industries covered by the analyst in the 12 months prior to the conference call.
<i>FirmExperience</i>	Abnormal firm experience of analyst <i>a</i> , measured as the abnormal difference between the conference call date and the date of the first forecast issued by the analyst, divided by 365.
<i>GeneralExperience</i>	Abnormal general experience of analyst <i>a</i> , measured as the abnormal difference between the conference call date and the date of the first forecast issued by the analyst for any firm, divided by 365.
<i>RecHorizon</i>	Abnormal outstanding stock recommendation horizon of analyst <i>a</i> , measured as the abnormal difference between the conference call date and the date of the outstanding recommendation, divided by 365.
<i>SizeBrokerage</i>	Abnormal brokerage house size of analyst <i>a</i> , measured as the abnormal total number of analysts employed by the brokerage house in the 12 months prior to the conference call.
<i>LengthQuestion</i>	Abnormal length of question, measured as the abnormal number of words of the question.
<i>ToneQuestion</i>	Abnormal tone of the question, measured as the abnormal difference between positive and negative word counts of all words contained in the word list of Loughran and McDonald (2011) scaled by the number of words of the question.
<i>NumbersQuestion</i>	Abnormal number of percentage and currency number references in the question, measured as the abnormal count of all percentage and currency numbers in the question.

APPENDIX A: Variable definitions (cont'd)

<i>Participate</i>	Indicator variable equal to 1 if analyst <i>a</i> asked a question in the conference call (<i>t</i>), 0 otherwise.
<i>PastParticipate</i>	Indicator variable equal to 1 if analyst <i>a</i> asked a question in the past conference call (<i>t-1</i>), 0 otherwise.
<i>PositionQuestion</i>	Natural logarithm of the position of the question in the conference call.
Panel B: Conference call variables	
<i>Competition</i>	Share of participating analysts that have also participated in the last conference call. Measured as average of analysts' lagged participation (<i>LagPartic_{a,i,t}</i>) in firm <i>i</i> 's conference call in quarter <i>t</i> .
<i>UncertaintyPre (UncertaintyPost)</i>	Standard deviation in EPS forecasts for firm <i>i</i> for quarter <i>t+1</i> provided before (after) the conference call of firm <i>i</i> in quarter <i>t</i> .
<i>StratBehavior</i>	Average degree of strategic behavior during firm <i>i</i> 's conference call in quarter <i>t</i> , calculated as the average difference between <i>AccuracyPre</i> and <i>InfoQuestion</i> .
<i>AvgInfoQuestion</i>	Average information revealing of all analysts during firm <i>i</i> 's conference call in quarter <i>t</i> , calculated as the average degree of information revelation in all questions in firm <i>i</i> 's conference call in quarter <i>t</i> .
<i>AvgInfoAnswer</i>	Average information revealing of the management in their answers to all analysts' questions during firm <i>i</i> 's conference call in quarter <i>t</i> , calculated as the average degree of information revelation in all answers in firm <i>i</i> 's conference call in quarter <i>t</i> .
<i>AvgToneQuestion</i>	Average tone of all analysts' questions during firm <i>i</i> 's conference call in quarter <i>t</i> , calculated as the average of <i>ToneQuestion_{a,i,t}</i> of all analysts participating in firm <i>i</i> 's conference call in quarter <i>t</i> .
<i>AvgToneAnswer</i>	Average tone of the managements' answers during firm <i>i</i> 's conference call in quarter <i>t</i> , calculated as the average of tone of the answer of management answers in firm <i>i</i> 's conference call in quarter <i>t</i> .
<i>Participants</i>	Natural logarithm of the number of analysts asking a question during the conference call of firm <i>i</i> in quarter <i>t</i> .
Panel C: Firm-level variables	
<i>AbnVolume</i>	Abnormal trading volume of the day of the conference call in quarter <i>t</i> scaled by the average trading volume over a 20-day window prior to the conference call.
<i>ΔSpread</i>	Difference between the average bid-ask spread in the [+3,+1] and [-1,-3] trading window around the conference call date in quarter <i>t</i> .
<i>CAR[0,+1]</i>	Cumulative abnormal size-decile adjusted return for firm <i>i</i> during [0,+ <i>n</i>] trading window around the conference call date in quarter <i>t</i> .
<i>Size</i>	Natural logarithm of total assets in thousands of firm <i>i</i> in quarter <i>t</i> .
<i>BTM</i>	Book value of equity divided by market value of equity of firm <i>i</i> in quarter <i>t</i> .
<i>Leverage</i>	Leverage share of equity (long term debt + short term liabilities)/common equity of firm <i>i</i> in quarter <i>t</i> .
<i>Coverage</i>	Natural logarithm of the average number of forecasts provided for firm <i>i</i> regarding earnings in quarter <i>t+1</i> at the date of the conference call in quarter <i>t</i> .
<i>Beat</i>	Indicator variable equal to 1 if actual earnings exceed consensus analysts' earnings forecast (EPS>actual), 0 otherwise.
<i>Surprise</i>	Difference between quarterly EPS and analyst consensus forecast of firm <i>i</i> in quarter <i>t</i> .
<i>ΔROA</i>	Change in return on assets of firm <i>i</i> between quarter <i>t</i> and quarter <i>t-1</i> .
<i>Loss</i>	Indicator variable equal to 1 if firm <i>i</i> reports negative earnings in quarter <i>t</i> , 0 otherwise.

APPENDIX B: Measuring information revelation

This appendix provides a detailed description and illustration of our information revelation measure, *InfoQuestion*, which uses the concept of cosine modification to approximate the degree of thematic difference between the presentation section and each analyst question (Cicon (2017)).

In preparing the text corpus, we include only the speech portions of C-level executives, excluding, for example, we speech portions of operators.²² To reduce the dimensionality of the overall text corpus, we exclude highly frequent words (“stop words”; see Manela and Moreira 2017)²³, word categories that do not contain any information with regard to the underlying research question (e.g., Lee 2016)²⁴, and any word inflections by lemmatizing the words to their base form (e.g., Li et al. 2021). The respective term-document matrices contain the cleaned management presentation section and the analysts’ questions, aggregated at the analyst speech-portion level. Subsequent term-weighting is based on mono- and bigram counts (e.g., Manela and Moreira 2017) for each specific conference call. For the robustness tests reported in columns (2) through (4) of Tables 4 and 7, we alternatively use (a) monograms with count weighting, (b) mono- and bigrams with *tf-idf* weighting, and (c) monograms with *tf-idf* weighting. Contrary to count weighting, *tf-idf* (term frequency-inverse document frequency) weighting not only considers how often a given term appears in one document (the question), but also in the entire text corpus (the conference call).

²² C-level executives are the CEO, CFO, COO, CRO, CIO, and CRO. This design choice is based on the observation that statements made by lower-level managers and investor relations employees often relate to organizational matters, and hence have little information content.

²³ We use the stop word list included in the Python spaCy package (<https://spacy.io/>). Furthermore, we exclude words that appear in every question of the conference call.

²⁴ We use the spaCy part of speech tagger to derive word classes. The final term-document matrix only includes nouns (“NOUN”), adjectives (“ADJ”), verbs (“VERB”), and proper nouns (“PROPN”). This decision is in line with prior literature. For example, Lee (2016) argues that function words (articles, conjunctions, pronouns, prepositions, and auxiliary verbs) mainly have grammatical functions and therefore do not contain any firm-specific information. Since they mainly relate to *style*, whereas we are interested in measuring the *content* similarity between managers’ statements and analysts’ questions, those words may naturally differ and therefore would bias our results by overstating thematic difference.

Cosine similarity (*CosSim*) is defined as the dot product of the two resulting word count vectors of the management presentation section (*MP*) and all of the respective analyst's questions in that call (*Q&A*), scaled by a function of the word vectors' lengths (equation B.1), where the subscript *a* denotes the analyst, *i* the firm, and *t* the quarter.

$$CosSim_{a,i,t} = \frac{MP_{i,t} \times Q\&A_{a,i,t}}{\|MP_{i,t}\| \|Q\&A_{a,i,t}\|} \quad (B.1)$$

For ease of interpretation, we subtract cosine similarity from 1 to obtain cosine modification (*CosMod*; equation B.2). *CosMod* ranges from 0 to 1, with higher (lower) values indicating a higher (lower) degree of thematic difference between the presentation section and an analyst's questions.

$$CosMod_{a,i,t} = 1 - CosSim_{a,i,t} \quad (B.2)$$

To capture whether an analyst reveals *relatively* more or less information compared to peer analysts in the same conference call, we follow Mayew (2008), Call et al. (2020), and Do and Zhang (2020) and compute abnormal levels of information revelation by subtracting the smallest value of *CosMod* of any analyst participating in firm *i*'s conference call in quarter *t* from the focal analyst *a*'s *CosMod*, scaled by the range of *CosMod* for all analysts participating in firm *i*'s conference call in quarter *t* (equation B.3). Hence, our abnormal information revelation measure, *InfoQuestion*, compares the information revelation behavior of *all* participating analysts, including the unmatched ones.

$$InfoQuestion_{a,i,t} = \frac{CosMod_{a,i,t} - \min(CosMod_{i,t})}{\max(CosMod_{i,t}) - \min(CosMod_{i,t})} \quad (B.3)$$

To illustrate the calculation of *InfoQuestion*, we consider for a fictitious firm *i* in quarter *t*. Assume that the firm is covered by 10 different analysts, of which 6 participate in the conference call (YES in column 1 in the table below). Of the 6 participating analysts, a total of 4 can be

matched with I/B/E/S data by applying our fuzzy-name approach (YES in column 2 below). If analysts participate and can be matched, they are included in our sample (YES in column 3 below). However, as the example highlights, our approach overcomes this known data matching issue (Ljungqvist et al. 2009) by also incorporating the information revelation behavior of those analysts that participate but cannot be matched to I/B/E/S data. Hence, our calculation of *InfoQuestion* compares the information revelation behavior of *all* participating analysts. For analyst 1, *InfoQuestion* is calculated as follows (equation B.4):

$$InfoQuestion_{1,i,t} = \frac{CosMod_{1,i,t} - \min(CosMod_{i,t})}{\max(CosMod_{i,t}) - \min(CosMod_{i,t})} = \frac{0.8 - 0.73}{0.93 - 0.73} = 0.35 \quad (B.4)$$

Even though analyst 2 and 7 are not part of our final sample, their information revelation behavior is implicitly included in the calculation of analyst's 1 information revelation, as it serves as the minimum and maximum boundary to calculate the abnormal value.

<i>Analyst</i>	<i>Conference Call (1)</i>	<i>I/B/E/S Name (2)</i>	<i>Part of Sample (3)</i>	<i>CosMod (4)</i>	<i>InfoQuestion (5)</i>
1	YES	YES	YES	0.80	0.35
2	NO	YES	NO	-	-
3	YES	NO	NO	0.73	-
4	YES	YES	YES	0.79	0.30
5	YES	YES	YES	0.89	0.80
6	NO	NO	NO	-	-
7	YES	NO	NO	0.93	-
8	NO	YES	NO	-	-
9	NO	YES	YES	0.84	0.55
10	YES	NO	NO	0.91	-

APPENDIX C: Measuring information endowment

This appendix provides a detailed description and illustration of our information endowment measure, *AccuracyPre*, which uses analysts' relative forecast accuracy as applied in Mayew (2008). We calculate *AccuracyPre* as the largest absolute forecast error (*ErrorPre*) of any analyst providing a forecast for quarter $t+1$ for firm i in quarter t , less analyst a 's absolute forecast error, scaled by the range of *ErrorPre* for all analysts providing a forecast $t+1$ for firm i in t (equation C.1)²⁵

$$AccuracyPre_{a,i,t} = \frac{\max(ErrorPre_{i,t}) - ErrorPre_{a,i,t}}{\max(ErrorPre_{i,t}) - \min(ErrorPre_{i,t})} \quad (C.1)$$

Similar to Appendix B, we illustrate the calculation of *AccuracyPre* by assuming a fictitious firm covered by 10 analysts. All analysts issued forecast regarding EPS in quarter $t+1$ (column 2 below). The actual EPS in $t+1$ are 1.30. For analyst 5, *AccuracyPre* is 0.65 (equation C.2).

$$AccuracyPre_{5,i,t} = \frac{\max(ErrorPre_{i,t}) - ErrorPre_{5,i,t}}{\max(ErrorPre_{i,t}) - \min(ErrorPre_{i,t})} = \frac{0.26 - 0.09}{0.26 - 0.00} = 0.65 \quad (C.2)$$

Furthermore, we also illustrate the calculation of $\Delta Accuracy$ (column 8) and $\Delta|Accuracy|$ (column 9) below. Analyst 5 increased his *relative* performance by 0.02 ($\Delta Accuracy$) and his *absolute* performance by 0.05 ($\Delta|Accuracy|$).

Analyst	Forecast Pre (1)	Forecast Post (2)	Actual EPS (3)	ErrorPre (4)	ErrorPost (5)	Accuracy-Pre (6)	Accuracy-Post (7)	$\Delta Accuracy$ (8)	$\Delta Accuracy $ (9)
1	1.20	1.35	1.30	0.10	0.05	0.62	0.58	-0.04	0.05
2	1.19	1.21	1.30	0.11	0.09	0.58	0.25	-0.33	0.02
3	1.04	1.20	1.30	0.26	0.10	0.00	0.17	0.17	0.16
4	1.45	1.36	1.30	0.15	0.06	0.42	0.50	0.08	0.09
5	1.39	1.34	1.30	0.09	0.04	0.65	0.67	0.02	0.05
6	1.29	1.26	1.30	0.01	0.04	0.96	0.67	-0.29	-0.03
7	1.30	1.30	1.30	0.00	0.00	1.00	1.00	0.00	0.00
8	1.34	1.39	1.30	0.04	0.09	0.85	0.25	-0.60	-0.05
9	1.32	1.42	1.30	0.02	0.12	0.92	0.00	-0.92	-0.10
10	1.55	1.40	1.30	0.25	0.10	0.04	0.17	0.13	0.15

²⁵ Again, we consider all analysts who issue a forecast for the respective firm; doing so provides a more accurate evaluation of analysts' relative information endowment. The most (least) accurate analyst is ranked 1 (0).

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Table 1: Sample selection

This table describes the sample selection process and presents the final sample. The sample includes all U.S. conference calls held from 01/01/2008 to 09/11/2020. All transcripts are downloaded from Thompson Reuters EIKON.

Sample	Observations
Number of total conference call transcripts	156,468
- Conference calls without Q&A sessions	5,116
- Transcripts with missing/incorrect firm/time identifier	8,646
- Firm-quarters with missing fundamentals (Compustat)	33,197
Number of conference call transcripts	109,509
<i>Thereof: Number of unique firms</i>	<i>4,448</i>
Total number of analyst speech portions	799,105
- No name match with I/B/E/S Recommendation	367,635
- No match with I/B/E/S Detail/missing abnormal measures	170,894
Number of matched analyst speech portions	260,576
<i>Thereof: Number of conference call transcripts</i>	<i>69,866</i>
<i>Thereof: Number of unique firms</i>	<i>3,344</i>
<i>Thereof: Number of unique analysts</i>	<i>3,252</i>
<i>Thereof: Number of unique brokerage houses</i>	<i>265</i>
<i>Average number of matched analyst speech portions per conference call</i>	<i>3.73</i>

Table 2: Summary statistics

This table provides summary statistics for the variables used in the empirical analyses. All variables are winsorized at the 1 and 99 percent level and defined in Appendix A. **Bold-face formatting** indicates the main variables of interest.

Variables	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>1st</i>	<i>25th</i>	<i>Median</i>	<i>75th</i>	<i>99th</i>
Panel A: Analyst variables								
<i>InfoQuestion</i>	260,576	0.52	0.33	0.00	0.25	0.54	0.80	1.00
<i>InfoAnswer</i>	260,576	0.50	0.33	0.00	0.22	0.50	0.77	1.00
<i>AccuracyPre</i>	260,576	0.56	0.34	0.00	0.29	0.60	0.86	1.00
<i>AccuracyPost</i>	260,576	0.56	0.34	0.00	0.29	0.60	0.88	1.00
Δ <i>Accuracy</i>	260,576	0.00	0.42	-1.00	-0.25	0.00	0.25	1.00
$\Delta $ <i>Accuracy</i> $ $	260,576	0.03	0.13	-0.32	-0.02	0.01	0.06	0.76
<i>Herding</i>	260,576	0.01	0.09	-0.33	-0.01	0.00	0.03	0.47
<i>Recomm</i>	260,576	0.51	0.38	0.00	0.00	0.50	1.00	1.00
<i>ForcFreq</i>	260,576	0.48	0.33	0.00	0.22	0.45	0.74	1.00
<i>FirmCoverage</i>	260,576	0.47	0.32	0.00	0.20	0.45	0.71	1.00
<i>IndCoverage</i>	260,576	0.41	0.35	0.00	0.00	0.33	0.67	1.00
<i>FirmExperience</i>	260,576	0.47	0.37	0.00	0.12	0.40	0.85	1.00
<i>GeneralExperience</i>	260,576	0.43	0.34	0.00	0.13	0.37	0.70	1.00
<i>RecHorizon</i>	260,576	0.34	0.34	0.00	0.05	0.22	0.56	1.00
<i>SizeBrokerage</i>	260,576	0.49	0.35	0.00	0.16	0.50	0.81	1.00
<i>PastParticipate</i>	260,576	0.61	0.49	0.00	0.00	1.00	1.00	1.00
<i>LengthQuestion</i>	260,576	0.46	0.33	0.00	0.19	0.42	0.73	1.00
<i>ToneQuestion</i>	260,576	0.48	0.33	0.00	0.22	0.47	0.74	1.00
<i>NumbersQuestion</i>	260,576	0.23	0.36	0.00	0.00	0.00	0.38	1.00
<i>PositionQuestion</i>	260,576	1.41	0.77	0.00	0.69	1.61	1.95	2.77
Panel B: Conference call variables								
<i>AvgInfoQuestion</i>	69,866	0.84	0.04	0.74	0.81	0.84	0.86	0.92
<i>AvgInfoAnswer</i>	69,866	0.77	0.06	0.62	0.73	0.77	0.81	0.89
<i>AvgToneQuestion</i>	69,866	0.00	0.01	-0.01	0.00	0.00	0.01	0.02
<i>AvgToneAnswer</i>	69,866	0.01	0.01	-0.01	0.00	0.01	0.01	0.02
<i>Participants</i>	69,866	2.05	0.44	1.10	1.79	2.08	2.40	2.94
<i>Competition</i>	69,866	0.61	0.34	0.00	0.40	0.67	1.00	1.00
<i>UncertaintyPre</i>	69,866	0.08	0.14	0.01	0.02	0.04	0.08	0.99
<i>UncertaintyPost</i>	69,866	0.07	0.12	0.00	0.02	0.03	0.07	0.85
<i>StratBehavior</i>	69,866	0.04	0.33	-0.95	-0.14	0.03	0.23	1.00
Panel C: Firm-level variables								
<i>Size</i>	69,866	7.90	1.78	4.25	6.64	7.81	9.05	12.46
<i>BTM</i>	69,866	0.49	0.42	-0.32	0.22	0.41	0.68	2.04
<i>Leverage</i>	69,866	0.59	0.27	0.09	0.41	0.58	0.76	1.41
<i>Coverage</i>	69,866	2.38	0.55	1.10	1.95	2.40	2.77	3.43
<i>Beat</i>	69,866	0.63	0.48	0.00	0.00	1.00	1.00	1.00
<i>Surprise</i>	69,866	0.03	0.18	-0.76	-0.01	0.02	0.07	0.77
Δ <i>ROA</i>	69,866	0.01	0.04	-0.15	0.01	0.02	0.03	0.11
<i>Loss</i>	69,866	0.23	0.42	0.00	0.00	0.00	0.00	1.00
<i>AbnVolume</i>	69,866	2.43	1.68	0.51	1.36	1.95	2.93	9.92
Δ <i>Spread</i>	69,866	-0.02	0.17	-0.86	-0.04	0.00	0.02	0.66
<i>CAR</i> [0,+1]	69,866	0.00	0.08	-0.25	-0.04	0.00	0.04	0.23

Table 3: Pearson correlations

This table displays the Pearson correlation coefficients for the variables used in the empirical analyses. Coefficients that are significant at the 10% level are bolded. *InfoQuestion* captures an analyst's information revelation in the question. *InfoAnswer* captures manager's information revelation in the answer. *AccuracyPre* captures an analyst's relative forecast accuracy before the conference call in quarter t, regarding earnings in quarter t+1. $\Delta Accuracy$ captures the change in analyst's relative forecast accuracy around the conference call, regarding earnings in t+1. $\Delta|Accuracy|$ captures an analyst's improvement in absolute forecast accuracy around the conference call, regarding earnings in t+1. *Recomm* measures an analyst's stock recommendation. *ForcFreq* measures an analyst's number of quarterly EPS forecasts. *FirmCoverage* measures an analyst's number of covered firms. *IndCoverage* measures the coverage of an analyst within the two-digit SIC industry. *FirmExperience* measures an analyst's firm experience. *GeneralExperience* measures an analyst's general experience. *RecHorizon* measures an analyst's stock recommendation horizon. *SizeBrokerage* measures an analyst's size of the brokerage house, identified by the number of employed analysts. *PastParticipate* is an indicator variable equal to 1 if the analyst participated in the conference call in t-1. *ToneQuestion* measures the tone an analyst's question. *LengthQuestion* measures the length of an analyst's question. All variables are defined in Appendix A.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
(1) <i>InfoQuestion</i>	1.00																	
(2) <i>InfoAnswer</i>	0.38	1.00																
(3) <i>AccuracyPre</i>	0.00	0.00	1.00															
(4) $\Delta Accuracy$	0.00	0.00	-0.61	1.00														
(5) $\Delta Accuracy $	0.00	0.00	-0.29	0.39	1.00													
(6) <i>Herding</i>	0.00	0.00	0.06	-0.11	-0.24	1.00												
(7) <i>Recomm</i>	0.00	-0.01	0.01	-0.01	0.01	-0.01	1.00											
(8) <i>ForcFreq</i>	-0.02	-0.04	0.01	0.00	-0.01	0.01	-0.07	1.00										
(9) <i>FirmCoverage</i>	0.00	-0.03	-0.01	0.00	0.00	0.00	-0.04	0.75	1.00									
(10) <i>IndCoverage</i>	0.01	-0.01	-0.01	0.00	0.00	0.00	0.01	0.30	0.42	1.00								
(11) <i>FirmExperience</i>	-0.02	-0.02	-0.01	0.01	0.00	-0.01	0.04	0.13	0.16	0.07	1.00							
(12) <i>GeneralExperience</i>	0.01	0.00	-0.01	0.00	0.00	0.00	0.02	0.15	0.21	0.12	0.40	1.00						
(13) <i>RecHorizon</i>	-0.01	-0.03	-0.02	0.01	0.00	0.00	0.12	0.08	0.09	0.06	0.30	0.12	1.00					
(14) <i>SizeBrokerage</i>	-0.03	-0.05	0.00	-0.01	-0.01	0.00	-0.09	0.24	0.16	0.00	-0.02	-0.05	0.01	1.00				
(15) <i>PastParticipate</i>	-0.05	-0.05	0.00	0.00	0.00	0.00	0.05	0.04	0.01	0.00	0.08	0.01	0.13	0.04	1.00			
(16) <i>ToneQuestion</i>	-0.02	-0.02	0.00	0.00	0.01	0.00	0.01	-0.01	0.00	0.00	-0.01	-0.02	0.00	-0.01	0.00	1.00		
(17) <i>LengthQuestion</i>	-0.37	-0.30	0.00	0.01	0.00	0.00	-0.01	0.06	0.05	0.00	0.07	0.04	0.03	0.05	0.07	-0.01	1.00	
(18) <i>InfoQuestion</i> \times <i>AccuracyPre</i>	0.65	0.25	0.63	-0.39	-0.19	0.04	0.01	-0.01	0.00	0.00	-0.02	0.00	-0.02	-0.02	-0.03	-0.01	-0.24	1.00

Table 4: Analysts' information endowment and information revelation (main tests of H₁)

This table reports results of estimating equation (1) using OLS regressions, with standard errors clustered at the analyst-firm level. *InfoQuestion* captures analysts' information revelation in the question with varying specifications: Column 1 uses mono- and bigrams and count weighting (main specification). Column 2 uses monograms and count weighting. Column 3 uses mono- and bigrams and *tf-idf* weighting. Column 4 uses monograms and *tf-idf* weighting. *AccuracyPre* measures analysts' relative forecast accuracy before the conference call in quarter t , regarding earnings in quarter $t+1$. All variables are defined in Appendix A. *, **, *** indicates two-tailed significance at the 10 percent, 5 percent, and 1 percent levels, respectively. t -values are reported in parentheses.

Variables	(1)	(2)	(3)	(4)
	<i>InfoQuestion</i> mono- & bigrams, count	<i>InfoQuestion</i> monograms, count	<i>InfoQuestion</i> mono- & bigrams, tf-idf	<i>InfoQuestion</i> monograms, tf-idf
<i>AccuracyPre</i>	-0.005** (-2.40)	-0.005** (-2.45)	-0.004* (-1.95)	-0.004** (-2.10)
<i>Recomm</i>	0.011*** (5.02)	0.010*** (4.77)	0.010*** (4.83)	0.010*** (4.58)
<i>ForcFreq</i>	-0.027*** (-6.59)	-0.026*** (-6.60)	-0.026*** (-6.49)	-0.025*** (-6.30)
<i>FirmCoverage</i>	0.033*** (7.82)	0.033*** (7.91)	0.035*** (8.35)	0.035*** (8.30)
<i>IndCoverage</i>	0.015*** (5.46)	0.014*** (5.14)	0.012*** (4.34)	0.011*** (4.17)
<i>FirmExperience</i>	-0.015*** (-5.16)	-0.013*** (-4.74)	-0.016*** (-5.54)	-0.015*** (-5.14)
<i>GeneralExperience</i>	0.016*** (5.24)	0.016*** (5.38)	0.016*** (5.37)	0.018*** (5.84)
<i>RecHorizon</i>	0.009*** (3.43)	0.009*** (3.37)	0.008*** (3.15)	0.008*** (3.02)
<i>SizeBrokerage</i>	-0.016*** (-5.78)	-0.015*** (-5.40)	-0.017*** (-6.13)	-0.017*** (-6.09)
<i>PastParticipate</i>	-0.029*** (-20.36)	-0.029*** (-20.23)	-0.029*** (-20.24)	-0.028*** (-20.08)
<i>PositionQuestion</i>	0.064*** (56.90)	0.064*** (57.18)	0.064*** (56.40)	0.065*** (58.28)
<i>Participants</i>	-0.026*** (-8.02)	-0.032*** (-9.83)	-0.023*** (-7.27)	-0.033*** (-10.15)
<i>Size</i>	0.002 (0.74)	0.002 (0.69)	-0.000 (-0.04)	-0.000 (-0.03)
<i>BTM</i>	0.001 (0.30)	0.002 (0.59)	-0.002 (-0.69)	-0.002 (-0.55)
<i>Leverage</i>	-0.001 (-0.12)	0.001 (0.25)	-0.002 (-0.43)	-0.002 (-0.27)
<i>Coverage</i>	0.007* (1.79)	0.007* (1.76)	0.008** (1.96)	0.008* (1.94)
<i>Beat</i>	-0.001 (-0.53)	-0.001 (-0.78)	-0.001 (-0.68)	-0.002 (-1.01)
<i>Surprise</i>	0.004 (0.92)	0.005 (1.07)	0.006 (1.31)	0.008 (1.64)
ΔROA	-0.009 (-0.24)	0.009 (0.24)	-0.026 (-0.71)	-0.004 (-0.13)
<i>Loss</i>	-0.000 (-0.02)	0.000 (0.20)	0.000 (0.12)	-0.000 (-0.04)
<i>Constant</i>	0.453*** (20.92)	0.458*** (21.22)	0.476*** (21.97)	0.485*** (22.45)
N	260,576	260,576	260,576	260,576
R ²	0.046	0.045	0.047	0.046
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Quarter FE	YES	YES	YES	YES
Cluster	ANALYST-FIRM	ANALYST-FIRM	ANALYST-FIRM	ANALYST-FIRM

Table 5: Competition and information uncertainty as determinants of information revelation
(additional tests of H₁)

This table analyzes determinants of information revelation, estimated with OLS regressions and standard errors clustered at the firm level. Columns 1 and 2 display the association between competition (*Competition*) and information uncertainty before the conference call (*UncertaintyPre*), respectively, and information revelation (*AvgInfoQuestion*). Column 3 reports results for the combined model. *AvgInfoQuestion* measures the average level of information revealed during the conference call. *Competition* measures the share of participants that has participated in the last quarter as well. *UncertaintyPre* measures the standard deviation in earnings per share forecasts before the conference call. All variables are defined in Appendix A. *, **, *** indicates two-tailed significance at the 10 percent, 5 percent, and 1 percent levels, respectively. *t*-values are reported in parentheses.

Variables	(1) <i>AvgInfoQuestion</i>	(2) <i>AvgInfoQuestion</i>	(3) <i>AvgInfoQuestion</i>
<i>Competition</i>	-0.002*** (-4.81)		-0.002*** (-4.79)
<i>UncertaintyPre</i>		0.012*** (6.56)	0.012*** (6.55)
<i>Participants</i>	0.019*** (28.93)	0.019*** (29.52)	0.019*** (28.94)
<i>Size</i>	0.001 (1.06)	0.000 (0.46)	0.000 (0.49)
<i>BTM</i>	-0.001 (-0.80)	-0.000 (-0.69)	-0.001 (-0.76)
<i>Leverage</i>	-0.003* (-1.85)	-0.003** (-2.14)	-0.003** (-2.16)
<i>Coverage</i>	-0.001 (-1.35)	-0.001 (-1.38)	-0.001 (-1.20)
<i>Beat</i>	0.000 (0.95)	0.000 (1.22)	0.000 (1.20)
<i>Surprise</i>	0.001 (1.06)	0.001 (1.07)	0.001 (1.14)
ΔROA	-0.004 (-0.50)	-0.003 (-0.35)	-0.002 (-0.31)
<i>Loss</i>	0.002*** (3.50)	0.002*** (3.19)	0.002*** (3.19)
<i>Constant</i>	0.795*** (138.07)	0.796*** (138.72)	0.797*** (138.83)
N	69,866	69,866	69,866
R ²	0.412	0.412	0.412
Firm FE	YES	YES	YES
Year FE	YES	YES	YES
Quarter FE	YES	YES	YES
Cluster	FIRM	FIRM	FIRM

Table 6: Benefits of information revelation (mechanism analysis)

This table analyzes the relation between information revelation by analysts (*InfoQuestion*) as well as managers (*InfoAnswer*) and analysts' absolute forecast accuracy, firm-level information uncertainty, and herding, estimated with OLS regressions and standard errors clustered at the analyst-firm level. $\Delta|Accuracy|$ measures analyst's improvement in absolute forecast accuracy around the call. *UncertaintyPost* (*UncertaintyPre*) measures analysts' uncertainty after (before) the call, measured as the standard deviation in EPS forecasts after (before) the call. *Herding* measures the change in the absolute distance between an analyst's EPS forecast and the consensus EPS forecast, corrected by the EPS forecast of the questioning analyst. *InfoQuestion* (*InfoAnswer*) measures analysts' (managers') information revelation in the question (answer). *AccuracyPre* measures analysts' relative information endowment before the call. All interacted variables are mean-centered. All variables are defined in Appendix A. *, **, *** indicates two-tailed significance at the 10 percent, 5 percent, and 1 percent level, respectively. *t*-values are reported in parentheses.

Variables	(1) $\Delta Accuracy $	(2) <i>UncertaintyPost</i>	(3) <i>Herding</i>
<i>InfoQuestion</i>	-0.001 (-1.17)	0.001 (1.40)	-0.000 (-0.31)
<i>InfoAnswer</i>	-0.000 (-0.64)	-0.001 (-1.33)	-0.000 (-0.03)
<i>AccuracyPre</i>	-0.116*** (-110.99)	-0.004*** (-9.59)	-0.018*** (-29.42)
<i>InfoQuestion</i> × <i>InfoAnswer</i>	0.002 (0.93)	-0.001 (-0.57)	-0.002 (-1.01)
<i>InfoQuestion</i> × <i>AccuracyPre</i>	-0.005** (-2.10)	-0.000 (-0.35)	-0.002 (-1.07)
<i>InfoAnswer</i> × <i>AccuracyPre</i>	-0.001 (-0.41)	-0.000 (-0.28)	0.001 (0.58)
<i>InfoQuestion</i> × <i>InfoAnswer</i> × <i>AccuracyPre</i>	0.017*** (2.65)	-0.006** (-1.99)	0.009* (1.95)
<i>UncertaintyPre</i>		0.504*** (93.77)	
<i>Recomm</i>	-0.001 (-1.20)	-0.000 (-1.33)	0.000 (1.01)
<i>ForcFreq</i>	-0.005*** (-3.71)	0.000 (0.21)	-0.001 (-0.78)
<i>FirmCoverage</i>	0.004*** (2.74)	-0.001* (-1.82)	0.002 (1.56)
<i>IndCoverage</i>	-0.000 (-0.59)	0.000 (0.86)	-0.001** (-2.00)
<i>FirmExperience</i>	0.001 (0.87)	0.000 (0.96)	0.001** (2.20)
<i>GeneralExperience</i>	0.000 (0.05)	0.000 (0.09)	-0.000 (-0.43)
<i>RecHorizon</i>	0.002* (1.95)	0.001* (1.94)	0.001* (1.75)
<i>SizeBrokerage</i>	-0.003*** (-4.14)	0.000 (0.55)	-0.000 (-0.34)
<i>PastParticipate</i>	0.001 (1.10)	-0.000** (-2.04)	0.000 (0.73)
<i>PositionQuestion</i>	-0.000 (-0.64)	0.000 (0.16)	-0.000 (-1.56)
<i>Participants</i>	0.002 (1.39)	0.002*** (3.55)	0.001 (1.17)
<i>Firm controls</i>	YES	YES	YES
<i>Constant</i>	-0.127*** (-15.29)	-0.070*** (-14.89)	-0.023*** (-3.92)
N	260,576	260,576	260,576
R ²	0.227	0.748	0.085
Firm FE	YES	YES	YES
Year FE	YES	YES	YES
Quarter FE	YES	YES	YES
Cluster	ANALYST-FIRM	ANALYST-FIRM	ANALYST-FIRM

Table 7: Costs of information revelation (mechanism analysis)

This table analyzes the relation between information revelation by analysts (*InfoQuestion*) and their change in relative forecast accuracy ($\Delta Accuracy$), estimated with OLS regressions and standard errors clustered at the analyst-firm level. $\Delta Accuracy$ captures the change in analysts' relative information endowment around the conference call. *AccuracyPre* captures an analyst's information endowment before the conference call. *InfoQuestion* captures analysts' information revelation in the question with varying specifications. Column 1 uses mono- and bigrams and count weighting (main specification). Column 2 uses monograms and count weighting. Column 3 uses mono- and bigrams and *tf-idf* weighting. Column 4 uses monograms and *tf-idf* weighting. All variables are defined in Appendix A. *, **, *** indicates two-tailed significance at the 10 percent, 5 percent, and 1 percent level, respectively. *t*-values are reported in parentheses.

Variables	(1) <i>ΔAccuracy</i> <i>(InfoQuestion</i> specification: mono- & bigrams, count)	(2) <i>ΔAccuracy</i> <i>(InfoQuestion</i> specification: monograms, count)	(3) <i>ΔAccuracy</i> <i>(InfoQuestion</i> specification: mono- & bigrams, tf-idf)	(4) <i>ΔAccuracy</i> <i>(InfoQuestion</i> specification: monograms, tf-idf)
<i>InfoQuestion</i>	-0.006*** (-2.83)	-0.006*** (-2.90)	-0.005** (-2.56)	-0.005** (-2.55)
<i>AccuracyPre</i>	-0.763*** (-321.73)	-0.763*** (-321.73)	-0.763*** (-321.73)	-0.763*** (-321.73)
<i>Recomm</i>	-0.009*** (-4.42)	-0.009*** (-4.43)	-0.009*** (-4.43)	-0.009*** (-4.43)
<i>ForcFreq</i>	0.007** (2.01)	0.007** (2.01)	0.007** (2.02)	0.007** (2.02)
<i>FirmCoverage</i>	-0.007* (-1.74)	-0.007* (-1.74)	-0.007* (-1.74)	-0.007* (-1.74)
<i>IndCoverage</i>	-0.004* (-1.76)	-0.004* (-1.76)	-0.005* (-1.77)	-0.005* (-1.77)
<i>FirmExperience</i>	0.006** (2.46)	0.006** (2.46)	0.006** (2.46)	0.006** (2.46)
<i>GeneralExperience</i>	-0.002 (-0.69)	-0.002 (-0.69)	-0.002 (-0.69)	-0.002 (-0.69)
<i>RecHorizon</i>	0.003 (1.03)	0.003 (1.03)	0.003 (1.03)	0.003 (1.03)
<i>SizeBrokerage</i>	-0.012*** (-5.01)	-0.012*** (-5.01)	-0.012*** (-5.01)	-0.012*** (-5.01)
<i>PastParticipate</i>	0.004*** (2.75)	0.004*** (2.75)	0.004*** (2.76)	0.004*** (2.76)
<i>PositionQuestion</i>	-0.002** (-2.56)	-0.002** (-2.56)	-0.003*** (-2.60)	-0.002*** (-2.59)
<i>Participants</i>	0.003 (1.02)	0.003 (1.01)	0.003 (1.03)	0.003 (1.01)
<i>Firm controls</i>	YES	YES	YES	YES
<i>Constant</i>	0.332*** (15.24)	0.332*** (15.24)	0.332*** (15.23)	0.332*** (15.23)
N	260,576	260,576	260,576	260,576
R ²	0.396	0.396	0.396	0.396
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Quarter FE	YES	YES	YES	YES
Cluster	ANALYST-FIRM	ANALYST-FIRM	ANALYST-FIRM	ANALYST-FIRM

Table 8: Information revelation in analysts' questions and managers' answers (tests of H₂)

This table reports results of estimating equation (2) on the association between information revelation by analysts (*InfoQuestion*, column 1), the interaction of information revelation and tone (*ToneQuestion*, column 2) as well as with the use of numbers in the question (*NumbersQuestion*, column 3) and managers' information revelation in the answer (*InfoAnswer*), estimated with OLS regression and standard errors clustered at the analyst-firm level. All variables that are part of an interaction are mean-centered. All variables are defined in Appendix A. *, **, *** indicates two-tailed significance at the 10 percent, 5 percent, and 1 percent level, respectively. *t*-values are reported in parentheses.

Variables	(1) <i>InfoAnswer</i>	(2) <i>InfoAnswer</i>	(3) <i>InfoAnswer</i>	(4) <i>InfoAnswer</i>
<i>InfoQuestion</i>	0.352*** (183.02)	0.352*** (182.98)	0.342*** (174.23)	0.342*** (174.15)
<i>ToneQuestion</i>		-0.008*** (-4.58)		-0.010*** (-5.60)
<i>InfoQuestion</i> × <i>ToneQuestion</i>		-0.023*** (-4.11)		-0.023*** (-4.09)
<i>NumbersQuestion</i>			-0.047*** (-25.69)	-0.048*** (-25.89)
<i>InfoQuestion</i> × <i>NumbersQuestion</i>			-0.043*** (-8.27)	-0.043*** (-8.38)
<i>AccuracyPre</i>	-0.002 (-1.27)	-0.002 (-1.26)	-0.002 (-1.16)	-0.002 (-1.14)
<i>Recomm</i>	-0.001 (-0.70)	-0.001 (-0.66)	-0.002 (-0.93)	-0.002 (-0.89)
<i>ForcFreq</i>	-0.021*** (-6.72)	-0.021*** (-6.75)	-0.021*** (-6.61)	-0.021*** (-6.65)
<i>FirmCoverage</i>	0.002 (0.49)	0.002 (0.50)	0.001 (0.40)	0.001 (0.41)
<i>IndCoverage</i>	0.001 (0.58)	0.001 (0.60)	0.001 (0.35)	0.001 (0.38)
<i>FirmExperience</i>	0.008*** (3.67)	0.008*** (3.64)	0.009*** (4.09)	0.009*** (4.05)
<i>GeneralExperience</i>	-0.004* (-1.90)	-0.004* (-1.94)	-0.004* (-1.68)	-0.004* (-1.73)
<i>RecHorizon</i>	-0.003 (-1.47)	-0.003 (-1.47)	-0.003 (-1.56)	-0.003 (-1.56)
<i>SizeBrokerage</i>	-0.015*** (-7.38)	-0.015*** (-7.40)	-0.015*** (-7.31)	-0.015*** (-7.34)
<i>PastParticipate</i>	-0.013*** (-9.87)	-0.013*** (-9.85)	-0.012*** (-9.37)	-0.012*** (-9.34)
<i>PositionQuestion</i>	0.089*** (92.61)	0.089*** (92.48)	0.089*** (92.66)	0.089*** (92.51)
<i>Participants</i>	-0.072*** (-24.88)	-0.072*** (-24.85)	-0.075*** (-26.00)	-0.075*** (-25.97)
<i>Size</i>	-0.002 (-0.71)	-0.001 (-0.69)	-0.001 (-0.65)	-0.001 (-0.62)
<i>BTM</i>	-0.004 (-1.25)	-0.004 (-1.22)	-0.003 (-1.10)	-0.003 (-1.07)
<i>Leverage</i>	-0.006 (-1.29)	-0.006 (-1.26)	-0.006 (-1.14)	-0.005 (-1.10)
<i>Coverage</i>	0.005 (1.54)	0.005 (1.53)	0.005 (1.49)	0.005 (1.48)
<i>Beat</i>	-0.002 (-1.57)	-0.003 (-1.61)	-0.003 (-1.63)	-0.003* (-1.68)
<i>Surprise</i>	0.000 (0.04)	0.000 (0.01)	0.000 (0.10)	0.000 (0.07)
Δ ROA	0.045 (1.41)	0.044 (1.37)	0.046 (1.45)	0.045 (1.42)
<i>Loss</i>	-0.001 (-0.70)	-0.001 (-0.69)	-0.001 (-0.62)	-0.001 (-0.60)

Table 8: Information revelation in analysts' questions and managers' answers (tests of H₂)
(*cont'd*)

<i>Constant</i>	0.369*** (20.46)	0.552*** (30.62)	0.556*** (30.94)	0.556*** (30.91)
N	260,576	260,576	260,576	260,576
R ²	0.198	0.198	0.201	0.201
Firm FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Quarter FE	YES	YES	YES	YES
Cluster	ANALYST-FIRM	ANALYST-FIRM	ANALYST-FIRM	ANALYST-FIRM

Table 9: Equity market outcomes (tests of H₂)

This table reports results for equation (3) on the association between information revelation by analysts (*AvgInfoQuestion*) and managers (*AvgInfoAnswer*) on the one hand and equity market outcomes on the other hand. Whereas Panel A presents full-sample results, Panel B reports results for subsamples formed conditionally on the degree of strategic behavior in the conference call. All results are estimated using OLS regression with standard errors clustered at the firm level. *AbnVolume* measures the abnormal trading volume at the day of the conference call. $\Delta Spread$ measures the change in the bid-ask spread around the conference call date. *CAR*[0,+1] measures the cumulative abnormal size-adjusted return around the conference call. *AvgInfoQuestion* (*AvgInfoAnswer*) measures the average level of information revealed by analysts (managers). *AvgInfoQuestion* and *AvgInfoAnswer* are mean-centered. *StratBehavior* measures the average degree of strategic behavior in the conference call. All variables are defined in Appendix A. *, **, *** indicates two-tailed significance at the 10 percent, 5 percent, and 1 percent level, respectively. Standard errors are reported in parentheses.

<i>Panel A: Full-sample results</i>			
Variables	(1) <i>AbnVolume</i>	(2) $\Delta Spread$	(3) <i>CAR</i> [0,+1]
<i>AvgInfoQuestion</i>	-1.274*** (-4.06)	-0.049** (-1.99)	-0.038*** (-3.55)
<i>AvgInfoAnswer</i>	-1.903*** (-8.16)	0.026 (1.52)	0.080*** (11.58)
<i>AvgInfoQuestion</i> × <i>AvgInfoAnswer</i>	1.672 (0.48)	-0.206 (-0.71)	-0.223* (-1.93)
<i>AvgToneQuestion</i>	-4.729*** (-3.84)	-0.056 (-0.45)	2.113*** (32.86)
<i>AvgToneAnswer</i>	0.175 (0.12)	-0.023 (-0.17)	0.543*** (9.02)
<i>Competition</i>	0.059*** (2.99)	0.002 (0.69)	0.000 (0.11)
<i>UncertaintyPre</i>	0.188 (0.60)	0.140*** (2.73)	-0.023* (-1.71)
<i>Participants</i>	0.433*** (13.26)	0.003 (1.14)	-0.001 (-1.42)
<i>Size</i>	-0.079*** (-6.64)	0.006*** (8.11)	-0.001*** (-4.03)
<i>BTM</i>	0.161*** (4.89)	-0.007** (-2.27)	0.004*** (3.63)
<i>Leverage</i>	0.277*** (4.60)	-0.009** (-2.57)	0.006*** (4.09)
<i>Coverage</i>	-0.072** (-2.04)	0.009*** (3.97)	-0.003*** (-2.89)
<i>Beat</i>	-0.106*** (-6.33)	-0.002 (-0.97)	0.028*** (33.45)
<i>Surprise</i>	0.222*** (4.58)	-0.008 (-1.62)	0.030*** (11.38)
ΔROA	2.901*** (8.05)	0.020 (0.59)	0.053*** (4.40)
<i>Loss</i>	-0.053** (-1.98)	0.006** (2.49)	-0.005*** (-5.13)
<i>Constant</i>	1.609*** (16.79)	-0.111*** (-13.52)	-0.007** (-2.57)
N	69,866	69,866	69,866
R ²	0.130	0.013	0.098
Industry FE	YES	YES	YES
Year FE	YES	YES	YES
Quarter FE	YES	YES	YES
Cluster	FIRM	FIRM	FIRM

Table 9: Equity market outcomes (tests of H₂) (*cont'd*)

Panel B: Results for subsamples with high versus low strategic analyst information revelation (StratBehavior)						
Variables	(1)	(2)	(3)	(4)	(5)	(6)
	<i>AbnVolume</i>		Δ <i>Spread</i>		<i>CAR</i> [0,+1]	
	<i>StratBehavior</i>		<i>StratBehavior</i>		<i>StratBehavior</i>	
	= High	= Low	= High	= Low	= High	= Low
<i>AvgInfoQuestion</i>	-1.613*** (-4.27)	-0.944** (-2.47)	-0.097*** (-2.80)	-0.004 (-0.10)	-0.028* (-1.85)	-0.047*** (-3.16)
<i>AvgInfoAnswer</i>	-1.698*** (-6.12)	-2.081*** (-7.68)	0.034 (1.48)	0.015 (0.64)	0.073*** (7.41)	0.086*** (8.61)
<i>AvgInfoQuestion</i> × <i>AvgInfoAnswer</i>	5.886 (1.41)	-2.041 (-0.49)	-0.206 (-0.52)	-0.267 (-0.71)	-0.344** (-2.01)	-0.116 (-0.72)
<i>AvgToneQuestion</i>	-4.107** (-2.47)	-5.284*** (-3.24)	-0.058 (-0.33)	-0.053 (-0.30)	2.119*** (25.66)	2.102*** (23.40)
<i>AvgToneAnswer</i>	0.148 (0.08)	0.238 (0.15)	-0.192 (-1.09)	0.114 (0.56)	0.614*** (8.11)	0.480*** (5.54)
<i>Competition</i>	0.029 (1.07)	0.086*** (3.28)	-0.000 (-0.05)	0.003 (0.98)	0.001 (0.68)	-0.001 (-0.60)
<i>Uncertainty_PRE</i>	-0.174 (-0.49)	0.536 (1.25)	0.203*** (2.60)	0.082 (1.15)	-0.036* (-1.75)	-0.014 (-0.64)
<i>Participants</i>	0.412*** (10.58)	0.451*** (12.05)	0.006* (1.74)	0.001 (0.34)	-0.001 (-0.89)	-0.002 (-1.05)
<i>Size</i>	-0.082*** (-6.21)	-0.076*** (-5.84)	0.007*** (6.78)	0.005*** (5.34)	-0.001*** (-2.62)	-0.001*** (-3.40)
<i>BTM</i>	0.132*** (3.40)	0.189*** (5.02)	-0.008** (-2.04)	-0.005 (-1.28)	0.005*** (3.06)	0.003** (2.08)
<i>Leverage</i>	0.289*** (4.29)	0.259*** (4.01)	-0.011** (-2.13)	-0.008 (-1.62)	0.005** (2.34)	0.008*** (3.52)
<i>Coverage</i>	-0.083** (-2.15)	-0.064 (-1.58)	0.010*** (3.20)	0.008*** (2.73)	-0.003** (-2.14)	-0.002* (-1.73)
<i>Beat</i>	-0.100*** (-4.61)	-0.113*** (-4.96)	-0.000 (-0.17)	-0.003 (-1.29)	0.027*** (24.63)	0.029*** (25.48)
<i>Surprise</i>	0.283*** (4.72)	0.163** (2.49)	-0.013* (-1.92)	-0.003 (-0.46)	0.030*** (9.28)	0.030*** (8.42)
Δ <i>ROA</i>	2.945*** (6.88)	2.873*** (7.10)	0.079* (1.81)	-0.038 (-0.80)	0.041** (2.52)	0.065*** (3.64)
<i>Loss</i>	-0.037 (-1.11)	-0.073** (-2.24)	0.009*** (2.59)	0.003 (1.00)	-0.007*** (-4.67)	-0.004** (-2.40)
<i>Constant</i>	1.664*** (15.43)	1.560*** (14.82)	-0.123*** (-10.46)	-0.106*** (-9.09)	-0.010*** (-2.79)	-0.003 (-0.89)
N	34,933	34,933	34,933	34,933	34,933	34,933
R ²	0.131	0.137	0.019	0.015	0.102	0.101
Industry FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Quarter FE	YES	YES	YES	YES	YES	YES
Cluster	FIRM	FIRM	FIRM	FIRM	FIRM	FIRM