Material information in Managers’ Private Disclosures: Evidence from Professional Investors’ Perceptions

ABSTRACT

Using both survey and experimental methods, we provide evidence on the materiality and the nature of information communicated in private meetings from the perspective of 308 professional investors. While benefits of private meetings for investors are well documented, the source of such benefits remains unclear due to unobservability of such events, challenging the enforcement of Regulation Fair Disclosure. We find that a significant portion of information in managers’ private disclosures can only be obtained through private interactions with senior management, and that the information is likely material, influencing investor judgments. In contrast to assumptions made by prior academics and regulators, we document that nonverbal and qualitative information are important sources of private meeting usefulness. Further, nonverbal information in private meetings is salient enough to affect the informativeness of meeting in different formats (i.e. in-person vs. virtual). Overall, our study documents whether and how material information is communicated through managers’ private disclosures.

JEL Codes: G23; M41; M48; M49

Keywords: private disclosures**;** professional investors; investor perception; information materiality; communication methods; information types; Regulation Fair Disclosure; nonverbal communication

Data Availability: Contact the authors.

1. Introduction

Despite evidence that investors benefit from privately meeting with managers (e.g., Green et al. 2014a; 2014b; Soltes 2014; Solomon and Soltes 2015; Kirk and Markov 2016; Bushee, Jung, and Miller 2017; Bushee, Gerakos, and Lee 2018; Allee et al. 2022), the sources of such benefits and its legality remain unclear. While these benefits can be due to disclosure of material information, some have argued that disclosure of immaterial information can also help investors complete a "mosaic" of material information, affecting trading decisions (e.g., *Dirk v. SEC*; SEC 2002; Fisch 2013; Solomon and Soltes 2015). The fundamental challenge to understanding the nature of private meetings and whether material information is disclosed in them is that they are, by nature, unobservable to the public. Accordingly, private meetings remain as a black box and the literature is inconclusive as to whether private meeting benefits result from disclosures noncompliant with Regulation Fair Disclosure (Reg FD).

In this paper, we overcome this challenge by utilizing survey and experimental methods to take the perspective of professional investors and investigate whether and how material information is disclosed in private meetings. Specifically, we ask professional investors whether they obtain exclusive non-public information that can only be obtained by interacting with senior managers in private meetings, what the nature of such information is, and whether investors perceive the information to be material. Our investigation of professional investors' perceptions of private meetings can help us better understand the extent to which private meeting benefits are due to private disclosures that may violate Reg FD.

More importantly, professional investors' perceptions on the materiality of managers' private disclosures matters because there is no bright-line standard for determining the materiality of information (e.g., Soltes 2018; SEC 2000). As such, in legal disputes, the materiality of managers' private disclosures is often elucidated by observing actions taken by private meeting attendees, who are primarily professional investors (c.f., Fisch 2013)[1].

First, we ask 308 highly experienced professional investors about information types (e.g., management's explanation of past events and results, management's expectation about future events and results, firm strategy and vision, etc.) and communication methods (e.g., responses to investor questions, vocal cues, body language, etc.) that convey exclusive information which can only be obtained in private meetings. Then we ask investors to assess the materiality of each information type and communication method by using a separate set of questions asking how influential investors think each of these information types and communication methods are on the judgments of a reasonable investor.[2] Answers to these questions document whether investors are, in their eyes, obtaining non-public material information and also specify how such information is conveyed in private meetings.

Our main findings from these questions are that (1) professional investors obtain information from managers' private disclosures that is only available by meeting privately with senior management, (2) investors perceive this exclusive non-public information to be material, influencing the judgments of a reasonable investor, and (3) exclusive, non-public material information often comes in the form of qualitative and nonverbal communication.

More specifically, answers to our questions regarding exclusive information sharing suggest that managers' private disclosures of exclusive information more often come from responses to investors' questions and managers' nonverbal communications (e.g., vocal cues and body

[1] Reg FD final rule (SEC 2000) states that "Information is material if 'there is a substantial likelihood that a reasonable shareholder would consider it important' in making an investment decision."

[2] We are careful not to explicitly ask about "illegal" behavior and instead only ask participants about the extent to which information obtained in a private meeting is likely to influence a reasonable investor's investment decision, which is consistent with the legal definition of materiality adopted in Reg FD (SEC 2000).

language) than either managers' prepared statements or information obtained from private informal interactions (e.g., golfing, lunch, etc.), and that the exclusive non-public information more often relates to the qualitative subjects of firm strategy and explanation for past results than the quantitative subjects of earnings updates and investment models. Similarly, responses to our survey questions regarding materiality of information also highlight the significance of nonverbal and qualitative information. Investors indicate that managers' responses to investors' questions and managers' nonverbal communications convey the most material information, and that they perceive managers' private disclosures on qualitative subjects including firm strategy and management's explanations about past events and results to convey more material information than managers' private disclosures on quantitative subjects like earnings updates and comments on investment models. Importantly, we also find that the materiality ratings for nonverbal communication methods are not significantly different from the materiality ratings on product information or earnings updates, indicating that nonverbal communications in private meetings are a nontrivial part of the material information that investors receive in private. In sum, these findings are in contrast with SEC's focus on verbal information and quantitative topics as areas of potential Reg FD violations in a Compliance and Disclosure Interpretation issued about Reg FD (SEC 2010).

Complementing our survey results on the importance of nonverbal communication in private meetings, we also conduct an experiment to test whether the value of private meetings is impacted by the extent of nonverbal communication. In our experiment, participants are asked about the effect of replacing in-person attendance at a private meeting with either a video (e.g., zoom) or phone call on the usefulness of private meetings in obtaining relevant information. Our manipulation is based on the idea that different formats of meetings will allow different levels of material information to be shared in managers' private disclosures. We also investigate the reasons for the reduction in the usefulness of managers' private disclosures by asking what type of information is likely to be impacted under different formats of meetings.

We find that in both the *Phone Call* and the *Video Call* conditions, professional investors rate that a switch from in-person meetings reduces the usefulness of managers' private disclosures in obtaining information. Further, as predicted, the reduction is more pronounced for the *Phone Call* than the *Video Call* condition. The lack of 'body language' in both conditions is the most selected reason for difference in the usefulness, and the proportion of investors selecting 'body language' is greater in the *Phone Call* than the *Video Call* condition, highlighting the influence of nonverbal communication methods in the usefulness of private disclosures. Our findings which emphasize the differential informational value attributable to communication medium are timely and practically meaningful, as many private meetings continue to occur virtually since the COVID-19 pandemic, despite the easement of social distancing restrictions (Cain 2022).

Our study makes the following contributions. First, our study is the first to provide direct evidence on the materiality of managers' private disclosures by taking a survey and experimental approach to reflect professional investors' perspectives on the issue. Our evidence extends prior research on the informativeness of private meetings (e.g., Bushee et al., 2017, 2018; Green et al., 2014a, 2014b.; Soltes, 2014; Solomon and Soltes 2015) that has primarily focused on the stock market reaction around private meetings to assess the materiality of information communicated privately. Our evidence sheds light on the materiality of managers' private disclosures that to date remains inconclusive.

Second, our evidence on the communication methods and information types in private meetings extends prior research on the nature of information communicated in private meetings (e.g., Brown et al. 2015; Park and Soltes 2018). Our evidence on the exclusivity and materiality of information conveyed through nonverbal communications and qualitative information also speaks to the SEC's Reg FD enforcement actions that primarily focus on a specific subset of information types, such as private earnings guidance, largely ignoring the role of nonverbal communications and qualitative information in private meetings which can be difficult to substantiate (see, e.g., Allee et al. 2022; Ali et al. 2022; Bengtzen 2017; Fisch 2013). While stronger rules against private information sharing, such as publicly disclosing private discussions in detailed minutes or transcripts (Soltes 2018)[3], have been suggested as a potential solution to private disclosure, our findings suggest that even such stronger restrictions may have inherent limitations to leveling the playing field as long as private meetings exist.

Third, our evidence also extends recent research that shows the informativeness of nonverbal communication, such as managers' vocal tone (Mayew and Venkatachalam 2012) or gestures and facial expressions (Blankespoor, Hendricks, Miller 2017). Ng and Troianovski (2015) quote a hedge fund manager as saying, "you can pick up clues if you are looking people in the eye," explaining about the role of body language, facial expressions, and vocal cues in conveying information to investors in private meetings. Our study adds to the research by providing more direct evidence on the materiality of information conveyed through nonverbal communication.

Finally, our study is relevant in understanding the COVID-19 pandemic effect on the informational role of private meetings. Prior research has documented private meetings (e.g., investor conferences, analyst and investor days) as an important corporate information disclosure medium (e.g., Green et al., 2014a, 2014b; Kirk and Markov 2016). Our experimental evidence suggests that the pandemic-induced shift from in-person to virtual private meetings may have affected the informational role of private meetings.

[3] A real-world example of this is the Shenzhen Stock Exchange requirement in China where all listed companies are required to publicly disclose summary reports of private meetings through the exchange's web portal within two days.

2. Background and Research Questions

2.1. Background - Regulation Fair Disclosure and Private Meeting Informativeness

Effective October 2000, Regulation Fair Disclosure (Reg FD) prohibits private disclosure of material non-public information by publicly traded U.S. companies. Specifically, motivated by evidence that companies were privately disclosing material information such as earnings updates, Reg FD stipulates that disclosure of material non-public information must be made publicly to all capital market participants simultaneously (SEC 2000).[4] Koch et al. (2013)'s review of early evidence indicates Reg FD initially resulted in a more level playing field by eliminating the information advantage of investors who privately meet with managers.

However, more recent studies document the persistence of private meetings and accompanying informational advantages of private meeting attendees even in the post-Reg FD period. Survey evidence indicates that investor relations departments hold over 200 private meetings per year, on average (Durney 2022). Additionally, various studies document superior information in the hands of private meeting attendees using either rich proprietary data from one or two firms (e.g., Soltes, 2014; Solomon and Soltes, 2015) or larger datasets with various proxies for the existence of private meetings, including investor conferences and corporate jet flight schedules (e.g., Green et al., 2014a, 2014b; Kirk and Markov, 2016; Bushee et al., 2017, 2018). The return of private meeting benefits may be partly due to the SEC's loss in 2005 to Siebel Systems in the only Reg FD court case to date (Allee et al. 2022; Ali et al. 2022). The Siebel Systems court decision highlighted the SEC's difficulty in enforcing Reg FD, especially in relation to managers' use of nonverbal communication methods, such as body language and vocal cues (Ali et al. 2022). However, despite

[4] Except if the disclosure is unintentionally made in private and then public disclosure must follow within 24 hours (SEC 2000).

this extensive research on private meeting informativeness, we still lack a clear understanding of the source of investors' advantages from private meetings.

2.2. Research Questions

In this study, we explore two main research questions. First, do managers' private disclosures convey non-public material information, potentially in violation of Reg FD? Second, what is the nature of managers' private disclosures that convey useful information in private meetings? Critical to the first question is the materiality threshold and the concept of mosaic theory, which we discuss below in Section 2.2.1. Answering this first question is important as the literature is inconclusive on the materiality of information communicated in private meetings and thus adheres to a legal standard enacted to protect "investor confidence in integrity of the capital markets" (SEC 2000). The second question highlights an important distinction in communication methods and information types that convey material information, which can deepen our understanding about the nature of information transfers in private meetings. We discuss this second question in more detail below in Section 2.2.2.

2.2.1 Materiality of Privately Disclosed Information

While prior studies have documented significant investors' and analysts' reactions following private meetings (e.g, Bushee et al., 2017, 2018; Green et al., 2014a, 2014b.; Soltes, 2014; Solomon and Soltes 2015), the literature is inconclusive whether these private meetings convey material information violating Reg FD rules. This inconclusiveness arises from the notion that even immaterial information can induce a significant market reaction. Specifically, mosaic theory stipulates that private disclosure can result in a material impact on investor decision making without violating Reg FD because investors can receive private information that is immaterial in isolation and that only becomes material in conjunction with the "mosaic" of information previously gathered and analyzed by the investor (SEC 2000). As such, simply observing investor reactions following instances of private meetings cannot provide conclusive evidence of materiality of information and Reg FD violations.[5]

Several recent studies provide evidence supporting that material non-public information is disclosed in private meetings. Campbell et al. (2021) find abnormal trading volume before the issuance of Reg FD 8-Ks, which are used to disclose material information in compliance with Reg FD. Allee et al. (2022) show evidence of trading advantages following private meetings after, but not before, the Siebel ruling and they argue this is inconsistent with mosaic theory. However, these studies also acknowledge they cannot conclusively attribute their results to Reg FD violations versus mosaic theory due to the inherent unobservability of private disclosures, and to date no direct evidence exists in the literature to conclusively address whether private disclosures are material violating Reg FD.

In order to provide direct evidence on the materiality of information in private meeting, it is important to take an approach that incorporates the *investors' proception about the decision usefulness* of the disclosed information. That is because Reg FD relies on existing legal definitions of materiality, which do not provide precise quantitative cutoffs and instead rely on investor perception. Specifically, the SEC relies on the materiality definition from U.S. case laws, TSC Industries v. Northway Inc. (1976) and Basic, Inc. v. Levinson (1988), defining information as material if "there is a substantial likelihood that the information would have been viewed by a reasonable investor as having significantly altered the total mix of information made available."[6]

[5] Green et al. (2014) state that "informational advantage [from private meetings] could arise from combining public information with nonmaterial nonpublic information, and this mosaic theory of information gathering is specifically sanctioned by Regulation FD."

[6] Note also that other materiality definitions and guidelines also rely on investor perceptions. In SAB 99, the SEC defines a piece of information as material if "the judgment of a reasonable person … would have been changed or influenced," which is based on the concept of materiality per the Financial Accounting Standards Board, which states, "information is material if omitting it or misstating it could influence decisions that users make." (SEC 1999; FASB

To this end, we survey investment professionals to address the unresolved question in the literature, "Do investors obtain material information from private meetings?"

2.2.2 Nature of Private Communication

While a few existing studies have made attempts to better understand the nature of information sought in private meetings (e.g., Brown et al. 2015; Park and Soltes 2018), the source of private meetings informativeness remains a black box. To understand where private meeting benefits come from, we investigate the specific communication methods and information types that convey exclusive non-public information only available by interacting with senior managers in private meetings.

Communication methods. We explore whether investors can obtain material information via different communication methods. In addition to verbal communication, we explore two different types of nonverbal communication — vocal cues and body language. A growing body of literature documents how managers' nonverbal communication influences investors' decisions (see, e.g., Blankespooer et al. 2017; Cade et al. 2020; Davila and Guasch 2022; Flam et al. 2020; Mayew and Ventaktachalam 2012). Mayew and Venkatachalam (2012) find that sell-side analysts update stock recommendations based on information from managers' vocal cues in public conference calls. In the IPO roadshow setting, Blankespoor et al. (2017) provide evidence that perceptions of managers' nonverbal communication, as measured in 30-second silent video clips, correlate with investors' assessments of firm value.

On the other hand, most of the regulatory discussion on private meeting advantages centers on managers' verbal communication, which is the words that managers say, and assumes the

2018). Speaking about materiality in 1998, former SEC Chairman Arthur Levitt said, "materiality is not a bright line cutoff of three or five percent. It requires consideration of all relevant factors that could impact an investor's decision" (SEC 1998).

immateriality of managers' nonverbal communication, such as body language, facial expressions, and vocal cues (Archer and Akert 1977; Jones and LeBaron 2002). Further, more recent academic research even explicitly argues that managers' nonverbal communication in private meetings is immaterial. For example, following Liberti and Petersen (2019), Bradshaw et al. (2021) define "soft" information as qualitative and "hard" information as quantitative, implicitly categorizing nonverbal communication as soft, which matters because Bradshaw et al. (2021, p. 119) then assume the following about soft information in private meetings:

> "In addition, soft information stands to be a primary element in the mosaic of information discussed in Reg FD."

Allee et al. (2022, p. 1,238) make similar assumptions when they discuss mosaic theory as an alternative explanation for their findings by noting the following:

> "Another possible explanation for the results is that they reflect the mosaic theory, under which private communications of qualitative information were permitted [because it is immaterial]"

Taken together, these examples show that both regulators and researchers assume that managers' nonverbal communication is not material and, therefore, is permissible under Reg FD per the mosaic theory.

Motivated by this seemingly contradictory evidence on the materiality of nonverbal communication, we survey professional investors addressing the decision usefulness of information conveyed via nonverbal cues. Further, to better assess the relative informativeness of nonverbal communication in sprit of prior studies that document informativeness of manager provided information under different circumstances and venues (e.g., Lee 2016; Matsumoto, Pronk, and Roelofsen 2011; Mayew, Sethuraman, and Venkatachalam 2020; Rennekamp, Sethuraman, and Steenhoven 2022), we compare the usefulness of nonverbal communication with other communication methods (e.g., prepared statements, Q&A, and informal interactions). Lastly, to corroborate our survey evidence on the informative of nonverbal communication, we conduct an experiment by using virtual shifts of private meetings as our manipulation of the level of nonverbal communication and examine changes in private meeting usefulness.

Information types. To further our understanding about the types of information conveyed in private meetings and the corresponding materiality, we explore the specific topics of information that investors obtain in private meetings and whether investors perceive it to be useful in making investment decisions. While our survey approach resembles the attempt made by Park and Soltes (2018) in their field study, the two approaches have a nuanced difference. We focus on the types of information privately *obtained* by investors whereas Park and Soltes (2018) reports the types of information *sought* by investors and records questions posed by investors during private meetings. Importantly, due to concerns about managers' legal liability, responses provided by managers are not recorded in Park and Soltes (2018), and it is thus difficult to assess whether managers actually provided answers in responses to the questions and how informative the responses were to investors. As such, to unveil the types of information actually obtained by investors in private meetings, we ask professional investors whether specific topics of information can only be obtained by interacting with senior managers in private meetings.

3. Research Method

We conduct our investigation using survey and experimental methods. As we are interested in the ongoings of inherently unobservable private meetings, we are methodologically constrained, like prior research in this area. The existing literature trades off generalizability with rich insight into actual private meetings. For example, some studies provide rich insight into the private meetings of one or two firms with limited generalizability (e.g., Soltes, 2014; Solomon and Soltes, 2015; Park and Soltes 2018) while other studies provide more generalizable data but with limited insight into private meetings (e.g., Green et al., 2014a, 2014b; Kirk and Markov, 2016; Bushee et al., 2017, 2018). We contribute by providing rich insight into the ongoings of private meetings with data that is still generalizable by asking a large sample of professional investors who frequently participate in private meetings. Our investigation involves combining a survey and a 1x2 between-participants experiment into one instrument administered at the same time to professional investors.

3.1 Participants

We focus on professional investors as most of the existing literature on private meetings focuses on private meetings between companies and investment professionals, rather than retail investors. Additionally, prior studies specifically document the importance placed on private meetings by professional investors and the value of such meetings to companies (Brown et al. 2016; 2019). Finally, professional investors are more likely to meet with management than retail investors.

We solicit participation from professional investors with contact information listed in the IHS Markit BD Advanced database. We randomly select 6,000 potential participants from the database based on an end goal of at least 100 participants per experimental condition, following recommendations from Simmons et al. (2018), and a prior response rate from this population of 4.9% (Anderson et al. 2022). We send a personalized email with a Qualtrics survey link to all 6,000 potential participants and encourage participation by compensating participants with a $10 Amazon gift card upon survey completion. A total of 308 participants answer at least one question and 276 participants finished the entire survey.[7] After adjusting for 502 undeliverable emails, this yields a response rate of 5.6 percent, which is in line other surveys emailed to professional investors (Brown et al. 2016; Drake et al. 2019; Anderson et al. 2022). Following recommendations from Simmons et al. (2011), we limit researcher degrees of freedom by including all available data for each question we ask. The number of responses varies by question because (1) some questions were asked on the first screen before we screen out ineligible participants and (2) some participants drop out of the survey before answering all questions. Thus, for clarity, each table includes the corresponding sample size.

3.2 Survey and Experimental Instrument

We developed the instrument for this study in consultation with four experienced investors who have an average of 20 years of experience as professional investors. We drafted and re-drafted the instrument as we conducted individual zoom interviews with the four investors where they engaged in verbal protocol while working through early drafts of the instrument as they screen-shared. Our goals in developing the instrument included keeping the instrument short enough to hold the attention of busy professionals while also asking questions to gather data on the exclusivity and materiality of information conveyed through managers' private disclosures. The final instrument included survey questions asked to all participants and experimental questions with a 1x2 between-participants manipulation.

Following the statement of consent, the instrument begins with four survey questions in addition to six demographic questions. The survey questions and the demographic questions are asked together because one of the survey questions is used to screen out participants from

[7] Note that the total participants who finished the survey is greater than the number of participants for which we have data for certain questions because some participants were excluded from a portion of the survey if they reported that they do not participate in private meetings.

participating in the entire study and the other questions are included to prevent participants from guessing the screening criteria. The screening question asks, "How many private meetings do you typically participate in per quarter with senior management of companies in which you invest (or are considering investing)?" The purpose of the screening question is to limit the rest of our study to investors who actually participate in private meetings. Participants who respond with any number greater than zero are allowed to proceed with the entire study.

The other three initial survey questions ask participants about the information obtained in private meetings. First, we ask participants to assess the proportion of private meeting information that is "only available by meeting privately with senior management (as opposed to being available through public sources)." Responses to this question provide investors' perceptions of the amount of private meeting information that is truly "non-public." To shed light on the materiality of managers' private disclosures, we ask participants on a subsequent screen to rate how much each communication method and information type are perceived to be influential on the judgements of a reasonable investor. The next two survey questions ask participants to describe the private information they receive based on how the information is communicated and to what the information pertains. All four initial survey questions are reproduced in Appendix A.

Responses to our demographic questions on this first screen are shown in Table 1. The average respondent works on the buy-side and has a CFA, roughly 20 years of work experience as an investment professional, and an investment horizon of more than three years. Because we ask the demographic questions on the first screen, we can measure the demographics of those who finished the entire survey versus those that dropped out to provide assurance that participants who dropped out are not systematically different than participants that completed the entire instrument. Tests for such differences between the 276 participants that finish the entire survey and the 32 participants who drop out sometime during the survey yield no differences (all p-values > 0.114, untabulated).[8]

Participants who pass the screening question advance to the next screen, which includes two questions that ask participants to provide perceptions of materiality of the private information they receive based on how the information is communicated and to what the information pertains. The questions are reproduced in Appendix B. We specifically choose to ask the materiality questions on a separate screen from the previous screen's questions that ask about the information's privateness. This design choice allows us to decrease any concerns about legal liability perceived by participants because selective disclosure of both private and material information constitutes a violation of Reg FD. As such, asking about both privateness and materiality on the same screen may cause investors to shy away from answering honestly if they are worried about implicating themselves or others in potentially illegal behavior.[9]

We also carefully word our questions to *not* refer to the information as "private/non-public" or "material" to further decrease the chance that participants bias their responses because they are worried about responding to a sensitive topic. Instead, we refer to private information as information "only available by meeting privately with senior management." We refer to materiality by leveraging the definitions of materiality from the US Supreme Court, the SEC, and the FASB as we ask about the *influence* of information on a *reasonable investor's* judgments (TSC Industries v. Northway Inc. 1976; Basic v. Levinson 1988; SEC 1999; FASB 2018).

[8] Specifically, we use z-tests to test for differences in proportions of participants with a job title of 'Portfolio Manager' (p-value = 0.368), a CFA (p-value = 0.289), and an MBA (p-value = 0.114). We also use a two-sample t-test to test for differences in full-time work experience in the investment profession (p-value = 0.290).
[9] In untabulated responses, 99% of our participants responded that "Trading by investors on material nonpublic information obtained in private meetings" is illegal.

The next screen includes the experimental manipulation. All participants are asked a question about the usefulness of a private meeting in providing material information that is changing from an in-person format to a virtual format. This scenario is familiar to professional investors as nearly all private meetings shifted to a virtual format with the onset of the COVID-19 pandemic (Cain 2022). Half of all participants are told that the virtual format is a 'phone call' and the other half are told that the virtual format is a 'video call.' Any shift away from an in-person format necessarily limits nonverbal communication, and in particular, a 'phone call' eliminates all nonverbal communication beyond vocal cues. Thus, this manipulation allows us to gather data on how investors' compare the three meeting formats (i.e. in-person, video, and phone), with varying level of nonverbal communication, in their usefulness of providing material information. We predict that if investors value nonverbal communication, they will consider the in-person meetings as more useful than video call meetings, which in turn should be considered more useful than phone call meetings. The specific question we ask, which is our experimental dependent variable, is reproduced in Appendix C.

The following screen includes two questions that allow participants to provide reasons for their previous answer to the experimental manipulation. The first question is a multiple-choice question asking participants to explain their answer by choosing from types of information that might change in availability or influence with the change in meeting format. The second question is a free-response question that allows participants to enter in other reasons, if any. Both questions are reproduced in Appendix D.

The survey ends with two questions that gauge participants knowledge of materiality and Reg FD and an opportunity to input their email address to be compensated with a $10 Amazon gift card.

4. Results

Before providing evidence directly related to our two research questions, our instrument first provides broad descriptive evidence on private meeting attendance and perceptions of the extent of private information in private meetings. Table 2 provides this data. Panel A documents that the mean (median) number of private meetings responding investors attend per quarter is 22.7 (8) meetings. Interestingly, there is significant heterogeneity in private meeting attendance - a nontrivial portion of respondents, nearly 16 percent, do not participant in any private meetings while more than 24 percent attend more than 20 meetings per quarter. Panel B documents that investors who attend private meetings perceive nearly 26 percent of the information in private meetings can only be obtained in private meetings. Perhaps unsurprisingly, the nearly 16 percent of respondents who do not attend private meetings (see Table 2 Panel A) perceive that much less, only 1 percent (untabulated), of the information in private meetings is actually private information. Overall, responses tabulated in Table 2 reveal significant private meeting attendance and significant amounts of private information being revealed in these private meetings.

4.1. Source of Private Meeting Benefits

Turing first to our research question on the nature of managers' private disclosures, Tables 3 and 4 document the extent to which private information in private meetings relates to information communicated with various methods (Table 3) and about different topics (Table 4). Per Table 3, private information more often comes from responses to investors' questions (average rating = 3.43) than other communication methods. Further, nonverbal communication methods of vocal cues (average rating = 2.98) and body language (average rating = 2.89) are both considered to be more significant sources of private information than managers' prepared statements (average rating = 2.06) or informal interactions (average rating = 2.42) at, for example, lunch and golf outings. These differences are all statistically significant at the 5% level.

Table 4 displays how often private information pertains to different topics. Interestingly, private information is perceived to pertain less often to the SEC's often-cited quantitative topics of earnings updates (average rating = 2.63) and comments on investment models (average rating = 2.27) compared to qualitative subjects like firm strategy, (average rating = 3.43), management's explanation of past event and results, (average rating = 3.41) and products and the product market (average rating = 2.93). These differences are all statistically significant at the 5% level. Additionally, in untabulated analyses, private information is rated as pertaining more often to nonverbal communication methods (Table 3) than earnings updates (Table 4) and comments on investment models (Table 4).

To provide evidence on the materiality of managers' private disclosures, we need to combine perceptions of privateness with perceptions of materiality. Tables 5 and 6 report investors' perceptions of the materiality of information across the same communication methods and topics as in Table 3 and 4 respectively. The ordering of items in the two sets of tables is remarkably similar as Q&A (average rating = 4.46), vocal cues (average rating = 3.13), and body language (average rating = 3.11), are perceived as the three most material communication methods in Table 5. These three items are all rated statistically more material, at the 5% level, than managers' prepared statements (average rating = 2.42) and informal interactions (average rating = 2.68).

Similarly, in Table 6, qualitative topics including firm strategy and vision (average rating = 4.19) and management's explanations about past and future events and results (average ratings = 3.94 and 3.88, respectively) are perceived as significantly more material than quantitative topics including earnings updates (average rating = 3.53) and comments on investment models (average rating = 2.37).When combining items from Tables 5 and 6 in untabulated analyses, we find that nonverbal communication methods are a nontrivial part of the material information that investors receive in private. In fact, the materiality ratings for nonverbal communication methods in Table 5 are not significantly different than the materiality ratings for earnings updates in Table 6 and are significantly greater than the materiality ratings for comments on investment models in Table 6.

4.2. Effect of Virtual Shift on Private Meeting Informativeness

Table 7 summarizes our experimental results and continues to add to the evidence that nonverbal communication is important in conveying material information in private meetings. Participants in the both the *Phone Call* and the *Video Call* conditions indicate significant reductions in private meeting usefulness, at the 1% level, following the shift away from an in-person format (untabulated). Further, as predicted, participants perceive the phone call meeting as significantly less useful in conveying material information in comparison to the video call meeting (p = 0.007, Table 7 Panel A). To investigate the reasons why participants perceive the difference in usefulness, Table 7 Panel B analyzes the reasons selected by participants in explanation of their usefulness answer. Under both the *Phone Call* and the *Video Call* conditions, a lack of availability or influence of 'body language' is the most selected reason (63% in the *Phone Call* condition and 51% in the *Video Call* condition) and this reason is selected by a greater proportion of participants in the *Phone Call* condition than the *Video Call* condition (p=0.052, Table 7 Panel B). Thus, participants' selections of reasons indicate that a decrease in nonverbal communication explains the decrease in usefulness of virtual vs. in-person meetings in general and for lower usefulness of phone vs. video meetings.

These results coincide well with what several participants noted in their free-responses. For example, participants in the *Phone Call* condition noted the following:

> *Much of the value of any interaction is the informal cues one picks up as part of a dialogue. The confidence in which management responds to a question matters. Any hesitation or facial stress can be indicative of information.*
>
> *On phone you lose non verbal communication that is obtained in person.*
>
> *You cannot read people as well through phone calls*
>
> *Can't observe body language with a phone call*
>
> *Helpful to be able to see body language*

Similarly, some participants in the *Video Call* condition noted the difficulty in capturing nonverbal communication even with video:

> *It is harder to get body language and vocal cues over video conference*
>
> *Harder to read between the lines over video calls*

Others in the *Video Call* condition, however, maintained that there is not a significant difference in nonverbal communication:

> *Can still see and read management's response to questions so not really an issue*
>
> *Voice and gestures would still be observable.*
>
> *I still find video calls with management teams very useful. In person meetings are slightly more useful so you can more easily catch verbal ques and body language, but not enough to say it's a major difference.*
>
> *The key insights can still be gleaned via video i.e. hesitations, non-verbal cues etc.*
>
> *Zoom video calls are as useful as in person, as can still puck up visual clues as in person.*

5. Conclusion

Motivated by the paucity of evidence on the ongoings of private meetings, we provide survey and experimental evidence on the nature and materiality of managers' private disclosures from the perspective of 308 highly experienced professional investors. Contrary to assumptions from academics that the benefits of private meetings stem from mosaic theory, investors report that they obtain private, material information in private meetings with managers. Additionally, contrary to assumptions by regulators and academics, the material information that investors glean from these private meetings often is qualitative, rather than quantitative, and often comes through nonverbal communication.

Our study exhibits limitations that provide potential for future research. For example, we only ask professional investors about their private meeting experiences and do not directly observe the private meetings. While observing private meetings can potentially provide more direct evidence, other studies note that legal liability concerns limit obtaining and presenting this evidence (e.g., Park and Soltes 2018). Future research can come up with innovative ways to provide more direct evidence without triggering legal liability concerns. Additionally, while we ask investors questions based on the definitions of materiality that hinge on the judgments of a reasonable investor and the disclosure of nonpublic material information is prohibited under Reg FD, we can only surmise about whether these disclosures are Reg FD violations of which the final determination lies with the SEC and the courts. Future research could examine how judges and regulators determine the nature of actual Reg FD violations. Further, because our survey questions ask about the influence of communication method and information type separately, it is unlikely that survey responses reflect the aggregate usefulness of information obtained from managers' private disclosures, which may be material in aggregate but immaterial in isolation.[10]

[10] We acknowledge that each communication method and information type can be further broken into sub-categories. However, when designing the survey questionnaire, we tried to balance between the granularity of information and the reliability of survey responses assessing its influence within each communication method and information type.

REFERENCES

Allee, K. D., Bushee, B. J., Kleppe, T. J., & Pierce, A. T. (2022). Did the Siebel Systems Case Limit the SEC's Ability to Enforce Regulation Fair Disclosure?. *Journal of Accounting Research*.

Ali, A., Durney, M., Fisch, J., & Kyung, H. (2022). The Effect of Corporate Disclosure Regulation on Managers' Private Communications. Working paper.

Anderson, S. A., Durney, M.T., Garavaglia, S., & Gee, K.H. (2022). Professional investors' asset measurement preferences. Working paper.

Archer, D., & Akert, R. M. (1977). Words and everything else: Verbal and nonverbal cues in social interpretation. *Journal of Personality and Social Psychology*, *35*(6), 443.

Bengtzen, M. (2017). Private investor meetings in public firms: The case for increasing transparency. *Fordham Journal of Corporate and Financial Law*, 22, 33-132.

Blankespoor, E., Hendricks, B. E., & Miller, G. S. (2017). Perceptions and price: Evidence from CEO presentations at IPO roadshows. *Journal of Accounting Research*, *55*(2), 275-327.

Bradshaw, M. T., Lock, B., Wang, X., & Zhou, D. (2021). Soft information in the financial press and analyst revisions. *The Accounting Review*, *96*(5), 107-132.

Brown, L. D., Call, A. C., Clement, M. B., & Sharp, N. Y. (2016). The activities of buy-side analysts and the determinants of their stock recommendations. *Journal of Accounting and Economics*, *62*(1), 139-156.

Brown, L. D., Call, A. C., Clement, M. B., & Sharp, N. Y. (2019). Managing the narrative: Investor relations officers and corporate disclosure☆. *Journal of Accounting and Economics*, *67*(1), 58-79.

Cade, N. L., Koonce, L., & Mendoza, K. I. (2020). Using video to disclose forward-looking information: the effect of nonverbal cues on investors' judgments. *Review of Accounting Studies*, *25*(4), 1444-1474.

Cain, A. (2022). Summer 2022 cover story: Why the Great Recovery is an IR renaissance. *IR Magazine*, Jun 1. Available at https://www.irmagazine.com/corporate-access/summer-2022-cover-story-why-great-recovery-ir-renaissance

Campbell, J. L., Twedt, B. J., & Whipple, B. C. (2021). Trading Prior to the Disclosure of Material Information: Evidence from Regulation Fair Disclosure Form 8-Ks. *Contemporary Accounting Research*, *38*(1), 412-442.

Dávila, A., & Guasch, M. (2022). Managers' body expansiveness, investor perceptions, and firm forecast errors and valuation. *Journal of Accounting Research*, *60*(2), 517-563.

Financial Accounting Standards Board, 2018. Amendments to Statement of Financial Accounting Concepts No.8. https://www.fasb.org/jsp/FASB/Document_C/DocumentPage?cid=1176171111614&acceptedDisclaimer=true.

Fisch, F. (2013). Chapter 7: Regulation FD: An alterantive apporach to addressing information asymmetry. *Research Handhook on Insider Trading*, 112-129.

Flam, R. W., Green, J., & Sharp, N. Y. (2020). Do Investors Respond to CEO Facial Expressions of Anger During Television Interviews?. Available at https://ssrn.com/abstract=3740755

Jones, S. E., & LeBaron, C. D. (2002). Research on the relationship between verbal and nonverbal communication: Emerging integrations. *Journal of Communication*, *52*(3), 499-521.

Kappas, N. (2001). A Question of Materiality: Why the Securities and Exchange Commission's Regulation Fair Disclosure is Unconstitutionally Vague. *NYL Sch. L. Rev.*, *45*, 651.

Liberti, J. M., & Petersen, M. A. (2019). Information: Hard and soft. *Review of Corporate Finance Studies*, 8 (1), 1-41.

Madden, T. M. (2015). Significance and the materiality tautology. *J. Bus. & Tech. L.*, *10*, 217.

Mayew, W. J., & Venkatachalam, M. (2012). The power of voice: Managerial affective states and future firm performance. *The Journal of Finance*, *67*(1), 1-43.

Schulzke, K. S., and G. Berger-Walliser. "Toward a Unified Theory of Materiality in Securities Law." *Columbia Journal of Transactional Law* 56 (2017): 6-70.

Securities and Exchange Commission (SEC). 1998. *Remarks by Arthur Levitt: The Numbers Game*. https://www.sec.gov/news/speech/speecharchive/1998/spch220.txt

Securities and Exchange Commission (SEC). 1999. *SEC Staff Accounting Bulletin: No. 99 – Materiality*. https://www.sec.gov/interps/account/sab99.htm

Securities and Exchange Commission (SEC). 2000. Selective disclosure and insider trading. Release Nos. 33-7881, 34-43154, IC-24599. *SEC, Washington, DC*. https://www.sec.gov/rules/final/33-7881.htm#P118_45883

Securities and Exchange Commission (SEC). 2010. *Compliance and Disclosure Interpretation: Regulation Fair Disclosure*. https://www.sec.gov/divisions/corpfin/guidance/regfd-interp.htm

Simmons, J. P., Nelson, L. D., & Simonsohn, U. (2011). False-positive psychology: Undisclosed flexibility in data collection and analysis allows presenting anything as significant. *Psychological Science*, 22(11), 1359-1366.

Simmons, J. P., Nelson, L. D., & Simonsohn, U. (2018). False-positive citations. *Perspectives on Psychological Science*, *13*(2), 255-259.

Soltes, E., What can managers privately disclose to investors? (2018). *Yale Journal of Regulation*, 36, 148-169.

Appendix A
First four survey questions

How many private meetings do you typically participate in per quarter with senior management of companies in which you invest (or are considering investing)?

Such private meetings include private telephone or zoom calls, 1x1 breakout meetings at investor conferences, analyst/investor days, non-IPO roadshows, and any other settings closed to the public where you interact with managers from US companies in which you have an investment or are considering/researching an investment.

Please enter the number of meetings below.

Of all the information that you obtain in private meetings with senior management, what percent of the information is <u>only</u> available by meeting privately with senior management (as opposed to being available through public sources)? Enter a number below from 0 to 100.

When you obtain information that can <u>only</u> be obtained by meeting privately with senior management, how often is this information communicated via:

	Never	Rarely	Sometimes	Often	Always
Informal interactions (e.g., at lunch/the bar, while golfing, etc.)					
Vocal cues (e.g., voice pitch, inflection, hesitations, etc.)					
Responses to investor/analyst questions					
Prepared statements					
Body language (e.g., posture, gestures, facial expressions, etc.)					
Other method(s):					

When you obtain information that can <u>only</u> be obtained by meeting privately with senior management, how often does the information pertain to:

	Never	Rarely	Sometimes	Often	Always
Comments on your investment models					
Management's explanation of past events and results					
Updates on financial performance and stability (e.g., earnings, leverage)					
Management's expectation about future events and results					
Products and product market information					
Firm strategy and vision					
ESG (environmental, social, and governance) activities					
Other type(s) of information:					

Appendix B
Survey questions about materiality

Thank you - you are eligible to complete the study!

In this study we are interested in your experiences meeting privately with senior management from US companies in which you invest or are researching/considering investing. These private meetings include private phone/zoom calls, 1x1 breakout meetings at investor conferences, analyst/investor days, non-IPO roadshows, and any other settings closed to the public where you interact with managers from US companies.

How influential on the judgments of a reasonable investor is information obtained in private meetings communicated via:

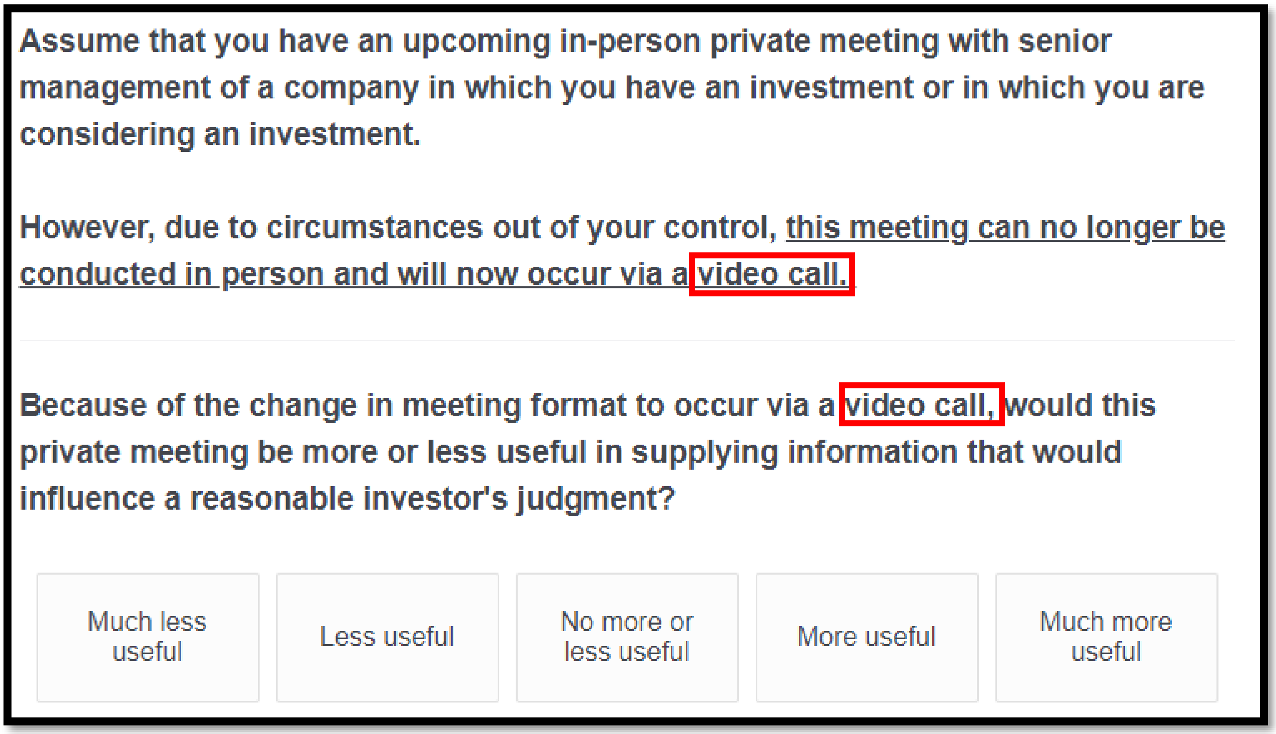
	0 - Not influential at all	1	2	3	4	5	6 - Very influential
Vocal cues (e.g., vocal pitch, inflection, hesitations)							
Prepared statements							
Responses to investor/analyst questions							
Informal interactions (e.g., at lunch/the bar, while golfing, etc.)							
Body language (e.g., posture, gestures, facial expressions, etc.)							

How influential on the judgments of a reasonable investor is information obtained in private meetings that pertains to:

	0 - Not influential at all	1	2	3	4	5	6 - Very influential
Products and product market information							
Comments on your investment models							
Updates on financial performance and stability (e.g., earnings, leverage)							
Management's expectation about future events and results							
Firm strategy and vision							
ESG (environmental, social, and governance) activities							
Management's explanation of past events and results							

Appendix C
Experimental manipulation

The screenshot below shows the 'Video' condition. The 'Phone' condition is the same except the words outlined in red are replaced with 'phone call'


Assume that you have an upcoming in-person private meeting with senior management of a company in which you have an investment or in which you are considering an investment.

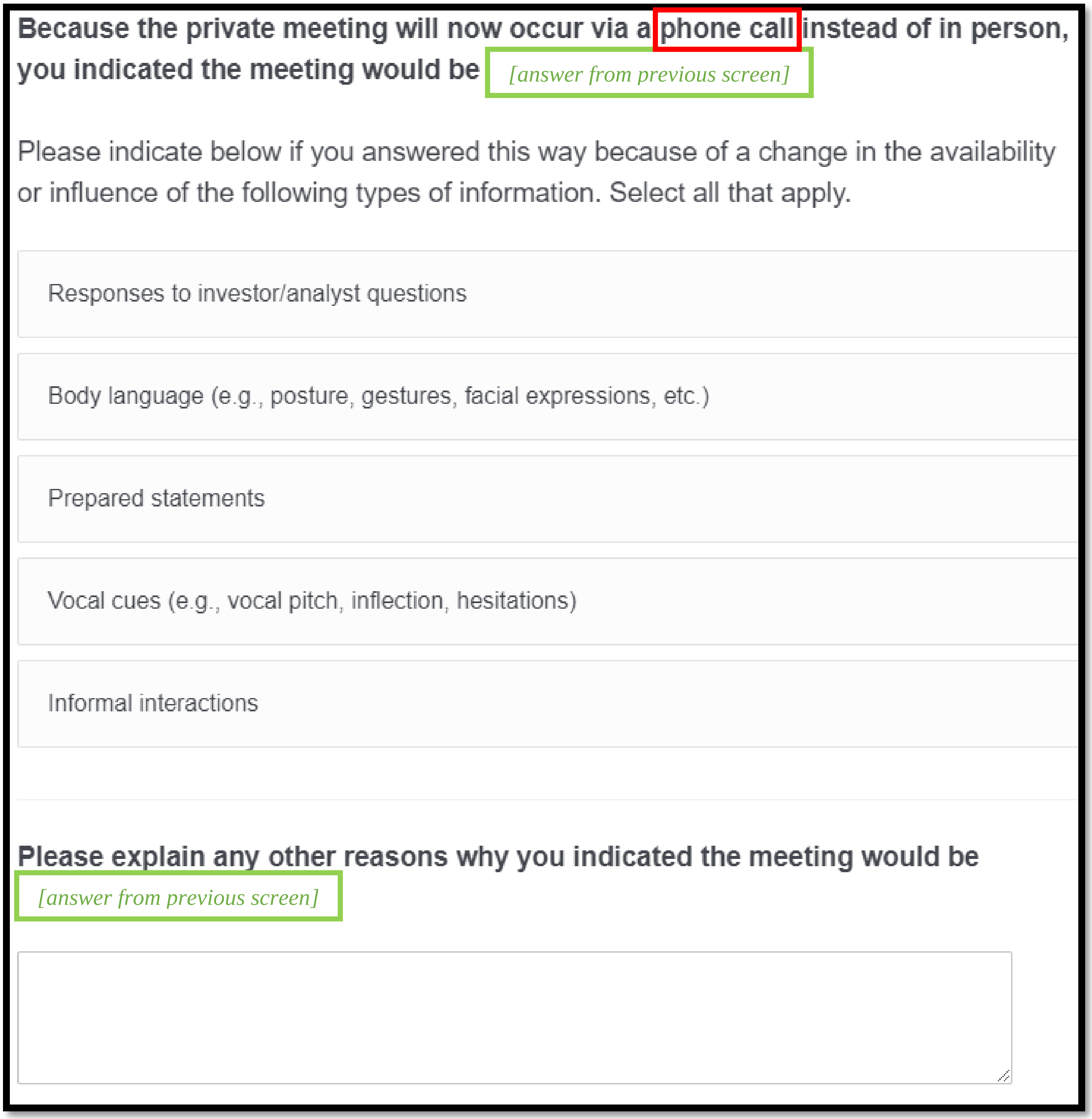
However, due to circumstances out of your control, this meeting can no longer be conducted in person and will now occur via a video call.

Because of the change in meeting format to occur via a video call, would this private meeting be more or less useful in supplying information that would influence a reasonable investor's judgment?

Much less useful	Less useful	No more or less useful	More useful	Much more useful

Appendix D
Questions explaining response to experimental manipulation

The screenshot below shows the 'Phone' condition. The 'Video' condition is the same except the words outlined in red are replaced with 'video call' The words outlined in green mark where the selected answer from the previous screen will appear.



Because the private meeting will now occur via a phone call instead of in person, you indicated the meeting would be *[answer from previous screen]*

Please indicate below if you answered this way because of a change in the availability or influence of the following types of information. Select all that apply.

Responses to investor/analyst questions

Body language (e.g., posture, gestures, facial expressions, etc.)

Prepared statements

Vocal cues (e.g., vocal pitch, inflection, hesitations)

Informal interactions

Please explain any other reasons why you indicated the meeting would be *[answer from previous screen]*

Table 1
Demographic characteristics of survey respondents (n=308)

Investment Horizon		**Education**	
< 1 month	0.32%	Bachelor's degree in accounting	8.12%
1-6 months	5.84%	Bachelor's degree in finance	31.49%
7-12 months	10.39%	Bachelor's degree in economics	21.75%
1-3 years	29.22%	Other bachelor's degree	31.17%
3+ years	54.22%	MBA	43.18%
		Other master's degree	14.29%
Job Title		JD	2.60%
Analyst	31.82%	PhD	2.27%
Portfolio Manager	48.70%		
Other (e.g., CEO, CIO, Director of Research)	19.48%	**Certifications**	
		CPA	6.17%
Buy-Side vs. Sell-Side		CFA	52.60%
Buy-side	96.43%	CFP	4.55%
Sell-side	3.57%		
		Years in Investment Profession	
Type of Buy-Side Firm		< 1 year	0.97%
Hedge fund	20.00%	1-3 years	7.47%
Mutual fund	24.41%	4-6 years	4.87%
Defined-benefit pension fund	6.44%	7-9 years	7.14%
Insurance firm	7.80%	10+ years	79.55%
Endowment or foundation	1.02%	*Mean*	*20.2 years*
Investment advising/consulting	13.22%		
Other	27.12%		

Table 2

Panel A: How many private meetings do you typically participate in per quarter with senior management of companies in which you invest (or are considering investing)? (n=308)

0 meetings	15.58%
1-5 meetings	26.30%
6-10 meetings	17.53%
11-15 meetings	10.06%
16-20 meetings	6.49%
21+ meetings	24.03%
Mean: 22.69 meetings	
Median: 8.00 meetings	

Panel B: Of all the information that you obtain in private meetings with senior management, what percent of the information is only available by meeting privately with senior management (as opposed to being available through public sources)? (n=260)

0-10%	13.08%
11-20%	27.31%
21-30%	17.31%
31-40%	15.00%
41-50%	3.08%
51+%	10.00%
Mean: 26.43%	
Median: 20.00%	

This table reports responses reflecting the number of private meetings attended per quarter and perceptions about what proportion of information in private meetings is only available through meeting privately. Only participants that responded with a nonzero number to the question in Panel A are included in Panel B. These questions are reproduced in Appendix A.

Table 3

When you obtain information that can only be obtained by meeting privately with senior management, how often is this information communicated via: (n=256)

	Communication Method	Average Rating	Significantly greater than	Proportion Answering:				
				Never	Rarely	Sometimes	Often	Always
(1)	Responses to investor/analyst questions	3.43	2-5	19%	8%	22%	36%	15%
(2)	Vocal cues (e.g., voice pitch, inflection, hesitations, etc.)	2.98	4-5	19%	19%	34%	20%	8%
(3)	Body language (e.g., posture, gestures, facial expressions)	2.89	4-5	21%	21%	31%	21%	7%
(4)	Informal interactions (e.g., at lunch/the bar, while golfing)	2.42	5	37%	19%	28%	11%	6%
(5)	Prepared statements	2.06		47%	27%	11%	10%	4%

This table reports the ratings for each private information communication method where 5='Always' and 1='Never', the results of pairwise *t*-tests testing whether the average ratings of the rows differ from each other, and the proportion of respondents selecting each scale point. We indicate the rows that are significantly different from each other at the 5% level after adjusting for multiple comparisons using the Bonferroni-Holm method.

Table 4
When you obtain information that can only be obtained by meeting privately with senior management, how often does this information pertain to: (n=255)

	Information Type	Average Rating	Significantly greater than	Proportion Answering: Never	Rarely	Sometimes	Often	Always
(1)	Firm strategy and vision	3.43	3-7	17%	10%	22%	38%	12%
(2)	Management's explanation of past events and results	3.41	3-7	17%	8%	27%	39%	10%
(3)	Products and product market information	2.93	5-7	23%	16%	31%	23%	6%
(4)	Management's expectation about future events and results	2.85	6-7	26%	15%	33%	20%	7%
(5)	Updates on financial performance (e.g., earnings, leverage)	2.63	6-7	29%	23%	27%	14%	7%
(6)	ESG activities	2.31		37%	26%	23%	10%	4%
(7)	Comments on investment models	2.27		40%	24%	20%	10%	5%

This table reports the ratings for each private meeting information type where 5='Always' and 1='Never', the results of pairwise *t*-tests testing whether the average ratings of the rows differ from each other, and the proportion of respondents selecting each scale point. We indicate the rows that are significantly different from each other at the 5% level after adjusting for multiple comparisons using the Bonferroni-Holm method.

Table 5
How influential on the judgments of a reasonable investor is information obtained in private meetings communicated via: (n=243)

				Proportion Answering:	
	Communication Method	**Average Rating**	**Significantly greater than**	**"Not at all influential" - 0**	**"Very influential" - 6**
(1)	Responses to investor/analyst questions	4.46	2-5	1%	30%
(2)	Vocal cues (e.g., voice pitch, inflection, hesitations, etc.)	3.13	4-5	7%	10%
(3)	Body language (e.g., posture, gestures, facial expressions)	3.11	4-5	9%	11%
(4)	Informal interactions (e.g., at lunch/the bar, while golfing)	2.68		16%	8%
(5)	Prepared statements	2.42		14%	7%

This table reports the ratings for each private information communication method where 5='Always' and 1='Never', the results of pairwise *t*-tests testing whether the average ratings of the rows differ from each other, and the proportion of respondents selecting each scale point. We indicate the rows that are significantly different from each other at the 5% level after adjusting for multiple comparisons using the Bonferroni-Holm method.

Table 6

How influential on the judgments of a reasonable investor is information obtained in private meetings that pertains to: (n=243)

	Information Type	Average Rating	Significantly greater than	Proportion Answering: "Not at all influential" - 0	Proportion Answering: "Very influential" - 6
(1)	Firm strategy and vision	4.19	4-7	2%	23%
(2)	Management's explanation of past events and results	3.94	6-7	2%	15%
(3)	Management's expectation about future events and results	3.88	6-7	5%	16%
(4)	Products and product market information	3.70	6-7	5%	13%
(5)	Updates on financial performance (e.g., earnings, leverage)	3.53	6-7	7%	12%
(6)	Comments on investment models	2.37		26%	9%
(7)	ESG activities	2.09		27%	6%

This table reports the ratings for each private meeting information type where 5='Always' and 1='Never', the results of pairwise *t*-tests testing whether the average ratings of the rows differ from each other, and the proportion of respondents selecting each scale point. We indicate the rows that are significantly different from each other at the 5% level after adjusting for multiple comparisons using the Bonferroni-Holm method.

Table 7

Panel A: Because of a change in meeting format to occur via a phone call (video call), would a private meeting be more or less useful in supplying information that would influence a reasonable investors' judgment? (n=243)

			Proportion Answering				
Condition	**n**	**Average Rating**	**"Much less useful" (-2)**	**"Less useful" (-1)**	**"No more or less useful" (0)**	**"More useful" (1)**	**"Much more useful" (2)**
Phone Call	125	-0.61	7%	56%	31%	2%	3%
Video Call	118	-0.38	0%	47%	47%	3%	3%
Both conditions	243	-0.50	4%	51%	39%	3%	3%
Prediction: Phone Call < Video Call?		t = 2.476 p = 0.007					

Panel B: Indicate below if your answer is because of a change in the availability or influence of the following types of information. Select all that apply.

	Proportion Selecting				
Condition	**Body language**	**Informal interactions**	**Vocal cues**	**Responses to investor/ analyst questions**	**Prepared statements**
Phone Call	63%	49%	47%	36%	7%
Video Call	51%	50%	38%	29%	9%
Both conditions	57%	49%	43%	33%	8%
Difference between conditions	Chisq= 3.783 p = 0.052	Chisq= 0.035 p = 0.852	Chisq= 2.037 p = 0.153	Chisq= 1.537 p = 0.215	Chisq= 0.362 p = 0.547