Private Interaction Between Firm Management and Sell-Side Analysts

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Eugene Soltes

Harvard Business School

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Abstract:

Although sell-side analysts often privately interact with managers of publicly traded firms, the private nature of this contact has historically obscured direction examination. By examining a set of proprietary records compiled by a large-cap NYSE-traded firm, I offer insights into which analysts privately meet with management, when analysts privately interact with management, and why these interactions occur. I also compare private interaction to public interaction between analysts and managers on conference calls. The evidence suggests that private interaction with management is an important communication channel for analysts for reasons other than firm-specific forecasting news.

1. Introduction

Sell-side analysts seek to collect information about the firms they cover from a variety of sources, including regulatory filings, press releases, and conference calls (Bradshaw [2011]). Analysts also supplement these public sources of information with private conversations with management. These discussions give analysts privileged insights into firms and offer analysts the opportunity to develop closer relationships with management (Brown et al. [2013], Groysberg and Healy [2013], Mayo [2011]).

The accounting literature has historically recognized the significance of this off-line, nonpublic interaction. For instance, Chen and Matsumoto [2006, p. 658] write that "it has long been recognized that the firm's management represents one of the most important sources of information." However, given the private nature of this interaction, this phenomenon has proved difficult for researchers to directly investigate. Many firms do not maintain complete records of these interactions because conversations often occur informally over the phone. In addition, liability considerations tend to limit managers' desire to share records of private interactions with researchers. Given these limitations, researchers normally proxy for private interaction (e.g., Chen and Matsumoto [2006], Bushee, Jung, and Miller [2012]), while others acknowledge that it may be a source of bias (e.g., Mikhail, Walther, and Willis [1997]).

In an attempt to shed light on the interaction that occurs privately between sell-side analysts and managers, executives at a large-cap NYSE-traded firm agreed to maintain and share comprehensive records of all their interactions with sell-side analysts for a period of one year. Although this data naturally has several limitations due to its scope and duration, it nonetheless offers the first detailed look into a publicly traded firm's private interaction with analysts.

Using these records, I examine three related questions around private interaction between sell-side analysts and firm management. First, who interacts with management? Second, when do they interact? And finally, why do they interact? Given constraints on the external validity of analysis generated from a single firm's data, the evidence offered here is

primarily descriptive in nature. Nevertheless, several patterns emerge from this data that offer some preliminary insights into the nature of this private interaction.

Over the sample period, executives at the firm interacted often with sell-side analysts. There were a total of 75 private interactions during the year. The majority (85%) of these private interactions occurred over the phone with the remaining interactions occurring at conferences and office meetings. With the exception of blackout periods prior to the release of earnings, interactions occurred throughout the year. Nearly half (43%) of these interactions occurred within 72 hours of some firm-initiated news.

I find that the characteristics of analysts who privately interact more often with managers are similar to the characteristics of analysts who question management publicly on quarterly conferences calls (e.g., Mayew [2008]). However, I also find a number of significant differences between public and private interaction. Analysts who interacted privately spoke not only with the CEO and CFO, but also with divisional level vice presidents of operating regions and product lines (e.g., executive vice president of Asia/Pacific, chief risk officer, etc.). Longer and less formal private interactions facilitated the creation of additional sell-side research reports. Analysts also gained opportunities to introduce their buy-side clients to management (i.e., "corporate access" events) by building closer relationships with management through private interaction. These differences suggest that, while the type of analysts who interact privately and publicly are similar, the nature and consequences of this interaction differ in several important respects.

One limitation of the analysis is that the specific practices of this firm may vary over time and practices of other firms may differ from this sample firm. To better understand the generalizability of the meeting practices of this firm, I also interviewed four research directors from sell-side institutions who collectively supervise over 800 sell-side analysts. Their responses offered a means to calibrate the evidence from the sample firm to better understand the extent that the results are more generalizable.[1] Overall, conversations with these research directors

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[1] Brown et al. [2013] survey 365 sell-side analysts to better understand the inputs they utilize to develop their output. Detailed comments by analysts in their survey offer additional support for the importance and ubiquity of private conversations between analysts and managers.

support much of the empirical analysis. Even with restrictions on managers' ability to convey material information to analysts, private interaction continues to thrive by offering analysts additional context to interpret firm news and the opportunity to better understand a firm's operations.

Our understanding of how decisions made within firms shape external financial reporting and disclosure choices is still quite limited. The collection and analysis of the data utilized in this study is an attempt to foster a greater understanding of how these internal choices affect the creation of external information signals. In this spirit, I describe numerous opportunities for future research arising from this evidence in the final section of the paper.

Several recent papers investigate both investors' and analysts' ability to interact with management in the context of conference events (e.g., Subasi [2011], Bushee, Jung, and Miller [2012], Green et al. [2012a,b], Kirk and Markov [2012], Bushee, Gerakos, and Lee [2013]). The detailed evidence around private interactions offered in this paper suggests that there is an important caveat in inferring private interaction from publicly observable information events, like conferences. Specifically, conducting an exhaustive search of all publicly available databases and press releases, a researcher would find only 21% of the "private" interactions that occurred between analysts and managers for this sample firm.[2] Thus, conference interactions represent only a fraction of the total amount of off-line interaction between managers and analysts. Although there may be greater statistical power from relying on public data, which facilitates larger sample sizes, focusing analyses on a subset of interactions without characterizing what data might be "missing" can potentially lead to biased interpretations (e.g., overlooking certain characteristics of interactions, overemphasizing other attributes).

The evidence in this paper also suggests that the benefits of private interaction (e.g., citing private interaction in research reports, facilitating access for buy-side clients, depth of management access) are much more nuanced than the specific information benefits that

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[2] The estimate that 21% of the interactions would be available via the public record also includes an "analyst day." While information on the "analyst day" is available from the public record, it is not easily accessible (i.e., record of this event would not be found without some knowledge of the specific event). Moreover, the "analyst day" is not an investor conference that is the focus of most prior research on analyst–manager interaction. If only investor conferences are analyzed (as in most prior research), less than 5% of the analyst–manager interactions would be publicly accessible for the sample firm.

researchers have historically used as support for why analysts would want to privately interact with management (e.g., forecast accuracy). Notably, this observation is not necessarily at the exclusion of analysts gaining better information that could better inform informational outputs like forecasts (e.g., Green et al. [2012a], Brown et al. [2013]). However, the analysis does suggest that private interaction can occur for reasons aside from access to additional firm news.

The remaining sections of the paper proceed as follows. Section 2 describes the institutional and regulatory background behind private interaction between analysts and managers. Section 3 describes the private interaction data and other public data sources used. Section 4 provides the empirical analysis of who, when, and why analysts meet privately with management. Section 5 concludes and offers several ideas for future research.

2. Institutional and Regulatory Background for Private Interaction with Management

Delegation of control gives rise to information asymmetry between insiders (i.e., management) and outsiders (i.e., investors) in publicly traded firms. To reduce this asymmetry, managers provide information about a firm's operations and performance. Firms disclose this information directly to investors through a variety of means, including press releases, conference calls, and Securities and Exchange Commission (SEC) filings. These sources of information are public and readily available to all investors. In addition, firms disclose information to information intermediaries (e.g., auditors, analysts, and media), who process this information and facilitate its communication with investors (Healy and Palepu [2003]).

In an attempt to collect additional information and develop deeper insights about a firm, sell-side analysts seek to spend more time with the senior management of the firms they cover. Historically, this private interaction between analysts and managers has been an important means for analysts to develop a more intimate relationship with management and gain unique insights into the firm's operations and strategy (Valentine [2010]).

However, this "off-line" access to senior management raised concerns that some market participants were gaining privileged access to information. In response, the SEC passed Regulation Fair Disclosure (i.e., Reg FD) in October 2000. The regulation described a specific

concern that analysts, through their special relationships with management, gain access to private information and then distribute this information to institutional investors.

> *"Many issuers are disclosing important nonpublic information, such as advance warnings of earnings results, to securities analysts or selected institutional investors or both, before making full disclosure of the same information to the general public. Where this has happened, those who were privy to the information beforehand were able to make a profit or avoid a loss at the expense of those kept in the dark"* (RIN 3235-AH82).

Reg FD requires that firms provide "full and fair disclosure" to all market participants. Prior case law, which the regulation relied on, defined material information as information "that a reasonable shareholder would consider . . . important in making an investment decision" (Staff Accounting Bulletin No. 99, 64 FR 45150). Private interaction with analysts carries a risk for both firms and managers. However, the legal burden of complying with the regulation falls to firm management. The consequences for violating such regulation, if caught, can be significant. For example, in October 2011, Avon Products disclosed that the SEC had begun an investigation into its private interaction with sell-side analysts. In response to this and related news, the stock declined by 18%.

Despite restrictions created by Reg FD on management's ability to selectively convey material information, sell-side analysts continue to covet private interaction with management and this "off-line" access continues to flourish. Thomson Reuters noted that the average investor relations officer spends 38% of his or her time meeting with sell-side analysts (Thomson Best Investor Relations Practices, 2009). Analysis of survey data collected from over 650 firms by the Bank of New York indicates that CFOs spend, on average, 30% of their time with the investment community with sell-side analysts.[3] Thus, according to this survey evidence, "off-line" interaction with analysts continues to consume a significant amount of senior management's time.

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[3] Calculations are based on the author's analysis of data collected by the Bank of New York Mellon for their 2011 annual investor relations survey (Bank of New York Mellon [2011]).

3. Data

For the analysis of the interactions in section 4, I utilize two sources of data. The first is the set of private meeting records from the sample firm. The second is data from public databases. This section describes both sources of data.

3.1 Private Interaction Data Description

From November 2010 to October 2011, executives at a large capitalization (>$10 billion in market capitalization), NYSE-traded firm agreed to maintain records of their private interactions with sell-side analysts. The firm agreed to provide these records under a nondisclosure agreement that the firm's name would remain confidential. An executive assistant complied and maintained the records to minimize the burden on executives.[4]

The sample firm has had publicly traded equity for more than 25 years. Over the sample period of analysis, senior management conducted 75 private interactions with analysts with 85% of this interaction occurring over the phone. The firm had 27 unique sell-side analysts issue quarterly and/or annual earnings estimates from November 2010 until October 2011. Sixteen analysts covered the firm (i.e. issue estimates) and met with management over the period. Eleven analysts covered the firm, but did not meet with management. In addition, 5 analysts met with management, but did not cover the firm (at the present or any time in the past). For analysts that met with the firm but did not cover the sample firm, these analysts all covered competing firms in the same industry.

3.2 Additional Public Data Sources

Analyst estimates are acquired from Thomson One/First Call. The data include revisions and changes to quarterly/annual earnings estimates. In addition, Thomson One includes the analyst's recommendation (e.g., Buy, Hold, Sell) and the consensus estimate. Data on the number of firms covered by an analyst are acquired from the I/B/E/S database. I define an analyst's start date as the date that an analyst's estimate is first available on I/B/E/S. Similarly,

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[4] The executive assistant was the only individual involved with the day-to-day collection and maintenance of the meeting logs. This design choice helped to alleviate concern that the executives' behavior would be significantly influenced by the recording of these data.

the date an analyst begins covering the firm is defined as the first estimate date for the sample firm by the analyst. When any of these items are unavailable or missing, I contacted the particular analyst (by phone and/or e-mail) to collect the relevant information.

Analysts' reports were collected from Investext for all analysts that cover the firm. For analysts' reports that are not available on Investext (e.g., Goldman Sachs), I acquired the reports from the sample firm or analyst him/herself. The firm/broker influence variable provides a measure of how well known and publicly influential the firm is that each analyst works for. It is measured as the logged number of Google hits associated with each firm (as of October 2012).[5] Firms that assisted underwriting the sample firm's equity offerings and debt financing were provided by management.

Tables 1 and 2 provide descriptive statistics and correlation matrixes, respectively. Analysts cover an average of 17.5 firms each with 11 years of experience. Table 1 shows that nearly 50% of the recommendations are and an additional 30% are strong buys. The remaining 20% are neutral and there are no negative recommendations placed on the firm.

The correlations matrix in table 2 provides insight into the relationship between meeting (i.e., a private interaction) and the various explanatory variables. Analysts who cover fewer firms, have spent less time as an analyst, exert more effort (proxied by frequency of forecasts), and have met in the prior month are more likely to meet in the current month. Analysts working for more influential firms and whose firms have helped raise debt or equity for the firm are also statistically more correlated to meet in the current month.

4. Who, When, and Why Analysts Privately Meet with Management

Using the set of private interaction records, I examine three related questions. First, who seeks to meet privately with management? Second, when are analysts seeking to meet privately with management? And, third, why are analysts seeking to meet privately with management?

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[5] Google hits, as a broad measure of media coverage, capture the degree of public attention associated with an investment bank. In untabulated analysis, this measure is correlated with banking market share from Thomson (0.47) and the number of analysts (0.54). However, Google hits measure the amount of public visibility, rather than economic influence as would market share or number of analysts.

Where appropriate, I utilize past academic research to motivate specific analyses. I also develop additional analyses from my discussions with research directors that have not been previously explored in the academic literature.

4.1 Who Seeks to Interact Privately with Management?

Mayew [2008] investigates which analysts interact publicly with management via conference calls.[6] To facilitate an analysis of who seeks to meet privately, as well as a comparison between private and public interaction, I utilize a set of analyst and firm factors drawn from Mayew's research on public interaction.

These variables are explored in table 3, which examines which analysts interact privately with management. In the probit model, I regress whether an analyst interacts privately with management in a given month on individual characteristics—the number of firms they cover, the number of years of experience they have as an analyst, the number of years covering the firm, all-star status, frequency of forecasts, whether they met the prior month, and the analyst's recommendation. Explanatory variables are measured on the first of each month. All standard errors are double clustered by both analyst and month.

I expect that analysts covering more firms will be less likely to meet privately with management due to constraints on their time. Consistent with this, the results in regression (1) indicate that analysts covering more firms are less likely to interact privately with management. A one-standard deviation increase in the number of firms covered by an analyst (i.e., from 16 to 23) is associated with a 12% decline in the likelihood that an analyst will interact privately with management in a given month (i.e., from a 22% likelihood of interacting to a 10% likelihood of interacting).

In contrast to the number of firms covered by an analyst, I do not find compelling evidence that the number of industries an analyst covers is related to the likelihood of interaction. One potential explanation for this is that the notion of industry varies significantly among analysts. Discussions with analysts in the sample suggest that common empirical

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[6] Transcripts or recordings of these calls are available to all investors following the passage of Reg FD, thus making these interactions public (Bushee, Matsumoto, and Miller [2004]).

measures for industry, like SIC code or Fama-French industry code, differ from their interpretation of "industry."[7] For example, common proxies may make "banks" one industry, but many analysts subdivide this into different types of banking institutions (e.g., lending, brokerage, investment, conglomerate, etc.). Moreover, how this subdivision is done varies considerably and is difficult to capture empirically.

Experience will enhance an analyst's efficiency as well as the quality of his or her research (Mikhail, Walther, and Willis [1997]). Less experienced analysts are unlikely to have the same familiarity with the economics and institutional features of the industries and firms they cover. Interaction with management can help overcome this deficiency in experience by creating the opportunity to gain additional information about these topics from informed managers. In regression (1), moving from the 25th to 75th percentile of analyst tenure is associated with a 22% decline in the likelihood of private interaction (i.e., from a 34% likelihood of interacting to a 12% likelihood of interacting).

Developing a relationship with the senior management team at a specific firm takes time. These relationships can facilitate nondeal road shows (i.e. when management visits investors in their offices) and the ability to host senior management at firm events (e.g., investor conferences). This would suggest that analysts covering the firm for longer periods of time will be more likely to interact. Consistent with this, moving from the 25th to 75th percentile of time covering the firm is associated with a 14% increase in the likelihood of private interaction (i.e., from a 11% likelihood of interacting to a 25% likelihood of interacting).[8]

Meeting privately requires more effort on the part of the analyst. This not only includes the time associated with the interaction, but also the preparation required prior to meeting (e.g., developing questions, etc.). As in prior research, the number of forecasts the analyst has made in the previous period is utilized as a proxy for an analyst's effort (Mayew [2008]). I find that a one-standard deviation increase in the amount of effort (i.e., from 4 to 10 forecasts over the

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[7] A variety of different measures of industry were tested. The industry variable on Thomson appeared to most accurately correspond with analysts' own view of the number of industries they covered. Hence, this was used in the analysis. Nonetheless, other definitions were also tested and results were consistent among the different definitions.
[8] Time covering firm and analyst experience are correlated in a statistically significant fashion with opposite signs as in prior research. When I run these variables separately, I find that analyst experience continues to be negative in a statistically significant fashion, but years covering firm does not.

quarter) is associated with a 9% increase in the likelihood of privately interacting in a given month with management (i.e., from a 17% likelihood of interacting to a 26% likelihood of interacting).

I also examine whether analysts' recommendations influence their likelihood of meeting. The average recommendation in the sample is a buy and there is little additional downward variation (i.e., sell) beyond a neutral recommendation. The sample firm has an internal policy that management will not travel with, go on nondeal road shows with, or engage in events with analysts who place unfavorable recommendations on the firm. Consequently, analysts fearing the negative ramifications of unfavorable recommendations may be potentially biasing their recommendations upwards (at least toward neutral) to avoid these adverse consequences. Nonetheless, I still find a relationship that analysts who have a buy rating are more likely to privately interact that month. In terms of economic magnitude, analysts with a buy recommendation are 27% more likely to meet in a given month. However, I do not find a similar relationship for a strong buy recommendation. This later result around strong buy may be a result of the limited number of strong buy recommendations in the sample, which reduces the power of the test.

Overall, the analyst characteristics that are associated with more private interaction with management (i.e., covering fewer firms, more time covering the firm, less time as an analyst, and exert more effort) are consistent with the factors that explain public interaction in the context of conference calls (Mayew [2008]).

Beyond individual characteristics of an analyst, properties of the institutions they work for have the opportunity to influence the likelihood of interacting privately. Analysts working at larger and more prestigious firms have access to more resources, which can facilitate interaction. At the same time, analysts at more prestigious firms may also have the ability to access more significant investors for the firm. Management can seek to speak with the analyst to gain access to these relationships. I examine how the reputation of an analyst's firm influences the likelihood of interaction. After I include the logged number of Google hits, I find that analysts from more influential firms are more likely to meet. A one-standard-deviation increase in the firms influence (i.e., from approximately 13 million to 60 million hits) is associated with a

12% increase in the likelihood of privately interacting with management in a given month (i.e., from a 19% likelihood of interacting to a 31% likelihood of interacting).

I also examine whether analysts who work at institutions that facilitate the firm in raising equity capital or debt funding have an incentive to develop a better understanding of the firm. Research produced by the sell-side analyst can be disseminated to potential investors as a means to improve their understanding of the firm. Access to senior management can provide the analyst with additional detail and insight to help distinguish their reports. In addition, by meeting with management, the analyst can potentially align his or her views more closely with management to facilitate a more uniform position. As a result, I expect analysts working at institutions that help the firm raise capital to privately interact more often with management. The magnitude of the coefficient offers support for this hypothesis and implies that an analyst at a firm with a capital-raising relationship is 28% more likely to privately interact (i.e., from a 13% probability of interacting for an analyst at a firm without an equity/debt relationship to 41% probability of interacting for an analyst at a firm with an equity/debt raising relationship).

Finally, recognition by Institutional Investor is a prestigious acknowledgement of success for sell-side analysts. I find that all-star analysts are associated with a higher tendency to meet with management in a given month. Such access to management is consistent with the attributes of sell-side analysts valued by investors from surveys (Bradshaw [2011]).

Together, the evidence in table 3 suggests that both individual analyst characteristics and characteristics of the firms they work for influence the likelihood of whether they interact with management. Despite differences in private and public interaction with management (see section 4.3), there are significant similarities between the types of analysts that interact publicly (via conference call as in Mayew [2008]) and privately with management.

4.2 When Do Analysts Privately Interact with Management?

In an effort to better understand when private interactions occur, figure 1 displays a graph showing the frequency and timing of analyst interactions with management. According to the figure, interactions occur throughout the year. However, there are several specific periods

without private interaction and several periods with increased interaction. Prior to the release of earnings, figure 1 indicates there is no private interaction. This is consistent with the common practice of imposing a blackout period in the period immediately before the release of earnings (Solomon and Soltes [2013]). In the case of this sample firm, management imposes a blackout period beginning two weeks prior to the earnings release. Figure 1 also depicts several significant peaks in private interaction. Four of these peaks occur immediately after the release of earnings. This suggests that some private interaction with management is conducted to help interpret earnings release news.

To further explore the timing of analysts' private interaction around information events, I examine the proportion of meetings that take place soon after firm-initiated news. Note that 33% of the private interactions occur within 72 hours of nonearnings press releases and 27% of the private interactions occur within 72 hours of earnings releases. Together, 43% of the interactions occur within 72 hours of a public release (earnings or nonearnings). These statistics suggest that nearly half the meetings are follow-up in nature, whereas the other half seems to occur more independently of information releases.[9] While some analysts may meet with managers at later points to discuss prior news releases, the timing of meetings suggests that this interaction is not exclusively used to simply digest firm-generated news in the immediate aftermath of its release.

Several of the research directors noted that analysts seek to interact with management prior to publishing reports. This interaction is often to get additional clarification or substantiation from management. Two research directors said that this was important in providing an opportunity for "differentiation." In addition, one research director noted that reports could facilitate meetings by providing a "talking point."

To further investigate how analysts utilize their interaction in conjunction with the output they seek to create, I examine whether reports tend to be written prior to meeting or after meeting. Figure 2 depicts the time between interacting and writing a report within a

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[9] Some meetings that may have been requested prior to the information release may have coincidentally occurred immediately after the release. While I do not specify details on the times specific meetings were requested, to the extent that this occurred, it would increase the number of interactions immediately after information releases. Consequently, this would suggest that even more meetings were not held as immediate follow-ups to information events.

seven-day window. Time less than zero indicates that the analyst interacted and then wrote a report and time greater than zero indicates that a report was written and then an interaction occurred. To distinguish between reports and interaction that occurred on the same day, "−1/0" indicates that the analyst interacted with management either the day before or on the day the report was written (i.e., before publishing). Conversely, "0/1" includes interactions that occurred on the day or the day after writing a report (i.e., after publishing).

Figure 2 indicates that more reports tend to be created in the immediate period *after* meeting with management. Specifically, of the analyst reports created within seven days of privately interacting with management, 63% of reports are written after meeting with management. Of these reports written after interacting with management, 68% are created within 24 hours of privately interacting with management. Thus, the majority of reports created around privately interacting with management are created after meeting, but, in some cases, analysts write reports immediately before interacting with management.

Overall, the descriptive evidence on the timing shows that analysts privately interact with managers throughout the year with the exception of certain blackout periods prior to the release of earnings. After the release of earnings, there is increased interest in privately speaking with managers. However, less than half of the private interactions occur soon after the firm publicly discloses information, consistent with the analyst's role that is in part information processor and part developer of new insights and relationships.

4.3 Why do Analysts Meet Privately with Management?

As an information intermediary, analysts "collect information from public and private sources, evaluate the current performance of firms that they follow, make forecasts about their future prospects, and recommend that investors buy, hold, or sell the stock" (Healy and Palepu [2001]). These private sources of information utilized by analysts include conversations with suppliers, customers, and firm management.

Despite the passage of Reg FD, analysts can still become more informed by speaking with management. While Reg FD restricts managers' ability to convey material information, analysts are legally permitted to acquire pieces of nonmaterial information from management.

When used in conjunction with an analyst's other sources of information, this information may become material in an information "mosaic" (Solomon and Soltes [2013]).[10] Firms are offered considerable latitude on the nonmaterial information they are able to provide to analysts. For example, management can review an analyst's model and suggest changes as long as these corrections are matters of historical fact (Compliance and Disclosure Interpretations, August 14, 2009).[11] The research directors echo these informational opportunities. Specifically, they seek private interaction as an opportunity for analysts to "triangulate their hypotheses," "bounce ideas," and "calibrate expectations of future performance and strategy."

4.3.1 Analyst's Output

In their role as information disseminators, analysts create numerous types of output (Valentine [2010]). I examine how private interaction with managers influences two forms of output—analyst reports and earnings forecasts. I also examine the association between private interaction and offering corporate access events.

4.3.1.1. Report Creation

Analyst reports describe an analyst's interpretation of a firm, its management, and the valuation of its shares (De Franco and Hope [2011]). While much of the information presented is the dissemination of publicly available information from earnings releases and other disclosures, analysts also include their unique perspective on how they interpret this information. This includes both quantitative analysis of recent and estimated performance and qualitative interpretation of information signals. In doing so, sell-side analysts can facilitate investors' decisions about a firm.

Private interaction with management can permit analysts to gain additional insight and clarification about a firm and its operations. Writing about insights gained during these

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[10] "Off-line" meetings are, by definition, private in nature. Consequently, it is difficult for the SEC to monitor that such dialogue is, in fact, nonmaterial. As the firm carries the burden of not violating the statue, analysts who acquire information perceived as material would neither violate the regulation, nor is there an obvious incentive to report the firm. Consequently, analysts could, in theory, acquire material information in spite of regulations.

[11] An additional explanation is that analysts meet with managers prior to important announcements to receive the information under an "embargo" as is common in the practice of journalism. However, neither the academic literature nor conversations with research directors provide support that this is a common practice.

interactions offers a way for analysts to capture the value associated with gaining private access to management. Even if the private interaction has no immediate informational value, writing about his or her personal access to management can make an analyst appear relatively more connected.

Following the analysis in section 4.2 that indicates that some reports follow private interactions and comments from research directors about the interaction with management, I investigate the primary motivation behind an analyst's decision to write each research report. The summary and/or first paragraph of each report contains the analyst's reason for creating the report. For example, one report begins "[Firm Name] reported 4Q10 and FY10 earnings yesterday." Another begins, "[Firm Name] announced after market close the [new program]." Thus, using the analyst's thesis, I group each report into one of nine categories based on the motivation for writing the research report. These categories include: earnings release, press/8-K release, analyst day, earnings release preview, macro/industry update, meeting with management, initiating/terminating coverage, activist investor presentation, or no reason noted. Although a report may be created in response to multiple events, I utilize the first bolded or headlined reason as a conservative approach in assigning the primary motivation for the report.

Figure 3 provides a histogram tabulating the number of reports that fall into each category. I find that the majority (70%) of reports are released immediately after earnings and press/8-K releases and cite this as the reason for writing a report. Five percent of the reports cite responding to changes occurring in the industry as the reason the analyst updated all of his or her reports for firms in the industry.

In regards to private interaction, I also find analyst reports that cite recent private interaction with management as the primary reason for the report. For example, one report begins "we hosted a meeting with [firm name]'s CEO and CFO." Internal records show that this report was created the day after meeting with management.

Six reports cite private interaction with management and are not around any other discernible information event about the firm (e.g., earnings, press release, Form 8-K, conference presentation, etc.). Although other reports cite comments by management, these six reports provide unambiguous evidence that some reports are specifically created as a result of private

interaction with managers at the firm. Other reports may have also been written as a result of a private management interaction, but the report date is confounded with other correlated information events (e.g., earnings, press release). Thus, this calculation is likely an underestimate of the amount of reports created and influenced following private interaction. Nonetheless, it provides some unambiguous evidence that at least some reports are created as a response to private interaction with management.

4.3.1.2. Earnings Forecasts

In addition to creating reports, analysts also seek to produce earnings forecasts for upcoming periods.[12] I investigate changes in analysts' forecasts after privately interacting with management. To maintain comparability of analysts' estimates, I compare estimates produced by an analyst for the same fiscal period and periodicity before and after interacting.[13] I calculate the forecast error at each period as the percentage difference between the estimated and the actual value for each estimate with available data. The preinteraction forecast is the analyst's forecast on the day of the interaction. The postinteraction forecast is the next available set of updated forecasts the analyst issues after interacting with management.

Panel A of table 4 provides the statistics for all pre-/postinteraction forecast errors. Although there is a small (0.2%) improvement after interacting with management, this difference is not statistically significant. Therefore, on average, the data do not support that analysts have improved forecasts after meeting.

To further investigate this finding, I examine the timeliness with which forecasts are updated by analysts after meeting with management. If private interaction was an important source of information for the analyst, I would expect that the analyst would soon incorporate this information into his or her estimate. However, if there is a significant lag between the private interaction and the forecast update, this would provide further support that this interaction is not offering significant information useful to enhance analysts' forecasts.

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[12] Academic work suggests that private interaction with management may improve earnings forecasts (e.g., Mikhail, Walther, and Willis [1997]). Most recently, Green et al. [2012a] find evidence of improved forecasting ability in the context of conference hosting.

[13] To maximize power, the test includes both quarterly and annual estimates. However, 97% of the sample is quarterly estimates. The results remain essentially identical if the annual estimates are excluded.

I find the average forecast is updated 26 days after interacting privately with management (table 4, panel A). Therefore, analysts are not, on average, immediately reacting to information provided by this interaction to improve their estimates. This provides evidence that these private interactions are not being used primarily for forecasting purposes since analysts are not updating their forecast in a timely manner after privately meeting.

Nonetheless, there could still be a subset of analysts that acquire information that is more relevant for forecast updating. Following this, I examine the estimates of analysts who update their forecasts within one week of meeting in panel B of table 4. I find that analysts who update their forecast in a timely manner have a statistically significant improvement in their forecast accuracy after meeting (at the 5% level in a one-sided test and at the 10% level in a two-sided test). In contrast to nearly waiting a month to update forecasts as in panel A, forecasts in panel B are updated within three days on average. The postmeeting accuracy of the more timely updated estimates (0.034) is also statistically better than the postmeeting estimates of the less timely sample (0.036). Despite this statistically significant improvement, the magnitude of the improvement is relatively weak. For updates that are made within a week of privately interacting with management, the improvement in forecast error is approximately 0.5%.

The average lack of timeliness of updating a forecast after meeting (i.e., 26 days) addresses one possible interpretation. If management provided analysts with information that allowed them to significantly improve their estimates, there is a reasonable expectation that they would respond to these signals and update their forecasts. The extent to which management is not doing so suggests that managers at the sample firm are unable to provide information that enhances the quality of the forecasts or the medium of interaction is not conducive to such an exchange. Hutton, Lee, and Shu [2012] show that management forecasts are "more accurate than analysts' forecasts only about 50% of the time" (p. 3). Consequently, even if management intends to enhance the accuracy of the forecast for analysts they meet with, they may functionally not be able to do so. Alternatively, management may possess information that is useful for improving forecasts, but does not convey that in a manner that is received over the phone. Unlike some recent research that examines primarily in-person interactions (e.g., Bushee, Jung, and Miller [2012], Green et al. [2012a], Solomon and Soltes [2013]), the majority of

private interaction for analysts occurs over the phone. To the extent that "softer" information can be interpreted from in-person dialogue, which contributes to the informativeness of this interaction, this would not be found in the current analysis.[14] Within the sample, these results suggest that, on average, private interaction does not compellingly improve the accuracy of forecasts.[15]

Corporate Access

Interactions that contribute to report writing or to forecasting improvements are both informational reasons why an analyst may seek to meet with management. In addition, there is a non-informational reason to meet with management, which was echoed by all four research directors—corporate access. According to one research director, "the research and report writing has become commoditized and is fairly uniform since it's sent to everyone. The main thing we can now do to really distinguish ourselves is to provide corporate access. . . .This is not only part of the analyst's role, it's now become central to the business model."

Describing what corporate access entails in a practitioner article, the author writes "in the traditional corporate management access model, sell-side research sales organize investor meetings for the management of companies that their analysts follow. Corporate access is a valued part of the overall research offering because the best information on a company often comes from the company itself . . . therefore, institutions want to sit down with a company's president, chief executive officer, or chief operating officer to gain perspective on the company, its sector, and the economy at large" (Ramage [2010, p. 36]). Analysts facilitate this by not only arranging the meetings, but also by covering the costs of facilitating the meetings (e.g., "book the hotel rooms, make the restaurant reservations, hire the car service," see Brinkley [2012, p. 15]). Thus, institutional investors appreciate analysts that can facilitate better access to senior management. In return, investors may drive additional trading to the analyst's firm.

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[14] There is evidence that vocal cues, available over the phone, provide useful information in the context of financial misreporting (Hobson, Mayew, and Venkatachalam [2012]). However, whether individual analysts could pick up such subtle vocal clues in regular phone conversation is unclear.

[15] Analysts surveyed in Brown et al. [2013, p. 11] "consider their private phone calls with management to be extremely valuable." While they report that private communication with management is useful for helping determine their earnings forecast, it is not clear from their comments whether this information actually enhances the quality of their forecast.

James Valentine, a former analyst and associate director for Morgan Stanley's North American research team wrote in his book that, "the buy-side often places as much value on the management access provided by the sell-side as the sell-side research itself" (Valentine [2010], p. 137). Echoing the sentiment expressed by Valentine, analyst rankings and compensation show that a significant portion of an analyst's value is not through providing better information about a firm (e.g., forecast, recommendation), but rather facilitating access to management (e.g., Institutional Investor rankings).[16]

I examine all recorded investor interactions that directly occurred as a result of an arrangement with a sell-side analyst. Over the sample period, management cites seven such events arranged by five different analysts. Of these events, five events were road shows. A total of 93 different investors gained one-on-one access to management as a result of the analysts' arrangements.

To better understand the analysts who facilitate such interactions, I examine the private meeting behavior of the analysts that set up each corporate access event. Over the sample period, five analysts (21% of the sample) privately interacted with management 28 times (37% of the sample). Thus, analysts who arranged corporate access for buy-side clients, privately met with management disproportionally. This preliminary evidence suggests that analysts who privately interact with management are more likely to have relationships with management that facilitate offering corporate access events.

4.3.2 Private vs. Public Interaction

In section 4.1, I find that analysts who interact privately with management, are similar to those who interact publicly, as in Mayew [2008], via conference calls. This raises the question of whether there are specific differences between private interaction and public interaction. Most public interaction between analysts and managers occurs through conference calls that are approximately one hour in duration.[17] Interviews with research directors suggested that this

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[16] For a detailed discussion of analyst compensation, see Groysberg, Healy, and Maber [2011].

[17] This includes quarterly earnings conference calls, but could also include conference calls held for other reasons (e.g., mergers and acquisitions, change in management, etc.). For this sample firm, the only public interaction between analysts and mangers is via the quarterly earnings conference call.

short duration created constraints on the amount of interaction. One noted that "during the conference call, we're lucky to maybe get one question within the hour. In a private conversation, we can ask so much more." This suggests that, with multiple analysts on the call, the time available for any individual analyst to ask questions is relatively limited.

I examine a number of dimensions in which private interaction between analysts and managers may differ from public interaction. These include the amount, depth, and timing of interaction, as well as the relationship that gives rise to offering corporate access events.

4.3.2.1. Private vs. Public: Amount of Interaction

Dialogue in public interaction can differ from private interaction in two ways. First, as described by a research director, "assuming you want management to continue speaking with you, you have to avoid making the C-suite lose face on the call . . . if you have difficult questions and you want management to speak openly, you have to do that off-line."[18] This suggests that public interaction is as much about maintaining a cordial relationship as seeking clarification through thoughtful questioning. Private interaction can facilitate more casual conversation where both parties can be less concerned about the public perception of their comments. To the extent that management also feels uncomfortable expressing a sentiment publicly for accountability, liability, or other reasons, an analyst can engage more openly with management during private interaction.

Second, all four research directors cautioned analysts from sharing their most valuable questions on the public call. "You don't want to share your deepest insights or analysis since this will start to get others focusing on it and you want to be able to own that insight," noted one research director. Another echoed this sentiment by saying that "you really don't want to give too much to start leading others, this will just give other analysts your edge on what people are not focusing on." An executive at the sample firm also appreciated that this was often why analysts wanted to speak after the public call; analysts "have some particular insight that they want to 'own' and don't want to disclose it on the call . . . we can speak after the call."

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[18] The "C-Suite" includes the chief executive officer, chief financial officer, and chief operating officer.

Thus, by not revealing their thesis during the call, the analyst has the opportunity to gain recognition for the thesis and distribute this insight to his or her firm's clients first.

To better understand the depth of interaction, I examine analysts' private interaction soon after the quarterly earnings conference calls in table 5. I focus on interactions that take place within 48 hours after the conference call.[19] I examine whether analysts, on average, utilize private interaction as a complementary mechanism to public interaction with management.

In regression (1) in table 5, I find that analysts who participate on the call (i.e., ask at least one question) are more likely to privately interact with management after the call. Specifically, analysts participating in the conference call are 29% more likely to speak with management immediately after the conference call than analysts who do not participate in the call (i.e., from a 13% likelihood of interacting if they do not participate on the call to a 42% likelihood of interacting if they participate on the call). The analysis in table 5 supports that analysts, on average, utilize private interaction as a complement to public interaction in the context of earnings news.

4.3.2.2. Private vs. Public: Timing of Interaction

Figure 1, discussed in section 4.2, indicates that much of the private interaction occurs immediately after earnings. However, the figure also shows significant additional private interaction at other points in time. Specifically, 73% of the private interaction occurs outside the 48-hour window after the earnings announcement.

For the sample firm, public interaction only occurs at four specific points in the year during the planned earnings conference call. However, much of the most important news about the firms arrives at other points in the year. Supporting this, Ball and Shivakumar [2008, p. 975] write, "the average quarterly announcement is associated with approximately 1% to 2% of total annual information . . . the results are consistent with the view that the primary economic role of reported earnings is not to provide timely new information to the share market."

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[19] Speaking within two days of the call reflects management's ability to accommodate requests to interact/speak after the conference call.

As noted earlier, for this sample firm, public interaction only occurs immediately following earnings releases. Thus, private interaction provides the only means for analysts to discuss other news in a timely manner with managers. With 73% of the private interactions occurring outside the earnings announcement period, this provides some evidence that analysts are relying on such access.

4.3.2.3. Private vs. Public: Depth of Management Access

Quarterly public conference calls provide analysts the opportunity to speak with senior management. Typically, senior executives as well as the investor relations officer are available during the question and answer period. The sample firm is similar to the average firm in that it makes the chairman, CEO, CFO, and investor relations officer available for comment.

However, access to other senior executives and managers can offer additional analysis and insights. Table 6 details the 15 senior executives and managers that analysts gained private access to speak with over the sample period. Privately, analysts spoke with divisional vice presidents for all operating regions and product lines. This is in contrast to the four executives that analysts have access to during public interaction on the conference call.

According to one research director, "divisional managers are the best informational source because they know the details of the business and they are less polished when speaking with us." However, directly evaluating the output of these conversations is difficult. For example, there are no analyst reports that directly indicate a private conversation with a divisional manager despite company records indicating that these interactions occur. The research directors said that these interactions are particularly sensitive and they were unlikely to directly refer to them in any output. Specifically, as noted by one research director, "you can often get deeper insights than they might be willing to share publicly, but you have to make sure you don't get them into trouble so we blend these insights in with other analysis."

Thus, despite the obvious difficulty of observing a tangible effect of such interactions, the depth of management differs significantly in the private setting versus the public setting.

4.3.2.4. Private vs. Public: Corporate Access

An analyst could develop a relationship with management through public or private interaction. To explore whether public or private interaction is more closely associated with developing a relationship that facilitates an analyst's ability to offer corporate access events, I compare the number of public and private interactions for analysts, who arrange corporate access events with those that do not in table 7.[20]

In panel A, I compare the number of public interactions between analysts who arrange corporate access events and those that do not. The maximum number of public interactions is four, corresponding to the total number of public conference calls during the sample period. I find no statistical difference in the number of public interactions between analysts who arrange corporate access events and those that do not.

In panel B, I compare the number of private interactions between analysts who arrange corporate access events and those that do not. In contrast to the results on public interaction in panel A, I find a statistically significant difference, at the 5% level, for the number of private interactions between analysts who arrange corporate access events and those that do not. The number of private interactions per analyst who arranges a corporate access event is economically significant too, with an average of three more private interactions during the sample period.

The association of private interaction and corporate access events in table 7 provides some preliminary evidence that suggests that the analyst–manager relationship that gives rise to an analyst being able to offer corporate access to his or her institutional clients is created more through an analyst's private, rather than public, interaction with management.

5. Conclusion and Opportunities for Future Research

Analysts and managers consume a significant amount of time interacting privately. By using a detailed set of proprietary records from an NYSE traded firm, this paper seeks to provide some preliminary insights into the nature of this interaction.

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[20] To facilitate comparison, I use the total number of public and private interactions across the entire sample period. In this regard, the number of interactions is acting as a proxy for the level of interaction for each analyst rather than the precise number of interactions.

The evidence provided here is descriptive and further research needs to be conducted to understand the generalizability of this evidence. In addition to examining private interaction within larger samples of data, the evidence presented here offers several other fruitful opportunities for investigation with the acquisition of additional data. These include:

1. Does private interaction have unintentional or unconscious effects on analyst output? For example, does private interaction affect the tone of analysts' reports (e.g., Huang, Zang, and Zheng [2012])?

2. Investment banks now have corporate access departments. How does this function fit in with the broader production function of analysts?

3. How does private interaction influence potential biases? Does private interaction influence optimistic/pessimistic forecasting behavior that has been documented in other research (e.g., Ke and Yu [2006], Libby et al. [2008])?

4. What are the determinants of the supply and demand for private interaction with management? How does this vary across firms?

5. The data show that some analysts are meeting executives of firms they do not cover. How does this contribute to their production? Are there other activities that analysts conduct with firms outside their specific scope of coverage?

6. What are the specific questions discussed in private meetings (i.e., in the spirit of Schwartz-Ziv and Weisbach [2012])? How do these vary over time depending on the firm's circumstances and the characteristics of the individual executives?

7. Managers are not subject to the same limitations in conveying material information to credit analysts as they are to sell-side analysts.[21] How do credit analysts utilize their privileged access to management in developing their ratings?

Investigating any of these questions requires access to nonpublic data that is proprietary in nature. This raises the broader methodological question of the accessibility of such data.

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[21] Credit analysts were initially exempted from Reg FD. Later, this privilege was revoked, but credit analysts can still access material information as "covered persons." See "SEC Issues Final Rule Release: Removal from Regulation FD of the Exemption for Credit Rating Agencies" (Skadden, Arps, Slate, Meagher & Flom LLP, October 2010).

Collaborating with a firm's management, as in this study, is one means to acquire this type of data. By showing that such research can be done with the appropriate level of confidentiality, this paper can hopefully begin stimulating the interest of other firms to begin providing proprietary records to researchers. Surveying analysts and managers could also be employed. For instance, Brown et al.'s recent survey of analysts (Brown et al. [2013]) offers a detailed examination into the inputs that analysts often utilize to generate forecasts and complements the analysis described in this paper from the perspective of an analyst.

Ultimately, there are important questions around firms' financial reporting and disclosure choices that cannot be addressed by simply relying on publicly available databases. External reporting choices are generated by internal processes. The only way that researchers can fully understand how firms are making their external reporting and disclosure choices is by acquiring data on these internal processes. This will require collaborating with and developing relationships with firms. The investigation here is an attempt to utilize more internal firm data to shed light on external reporting questions of interest to financial accounting researchers.

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Figure 1 – Frequency of Private Interaction over Time

Figure 1 depicts a time-series histogram showing the frequency of private analyst interactions with management from November 2010 until October 2011. Arrows indicate the release date of quarterly earnings.

29
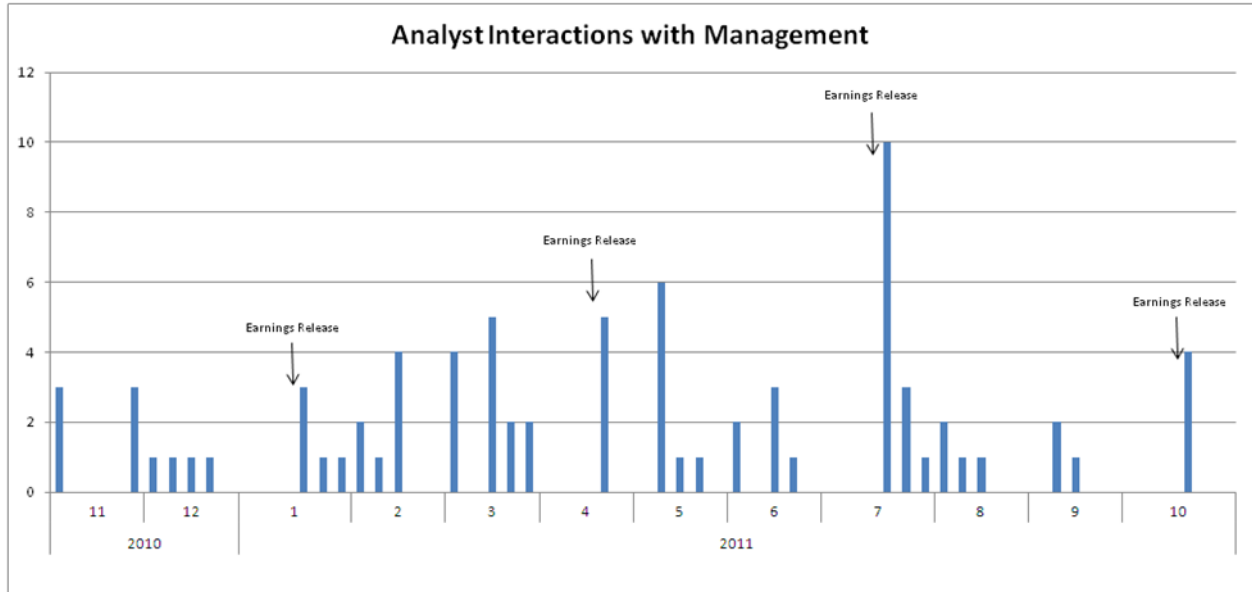
Figure 2 – Private Interaction and Report Writing

Figure 2 depicts a histogram showing the time between interacting and writing a report. All reports created within seven days before or after interacting are included. Time less than zero indicates that the analyst interacted and then wrote a report. Time greater than zero indicates that a report was written and then a private interaction occurred. To distinguish between reports and interaction that occurred on the same day, "-1/0" indicates that the analyst interacted with management either the day before or on the day the report was written. "0/1" includes all private interactions that occurred on the day the report was written (but after its writing) or the day after writing a report.
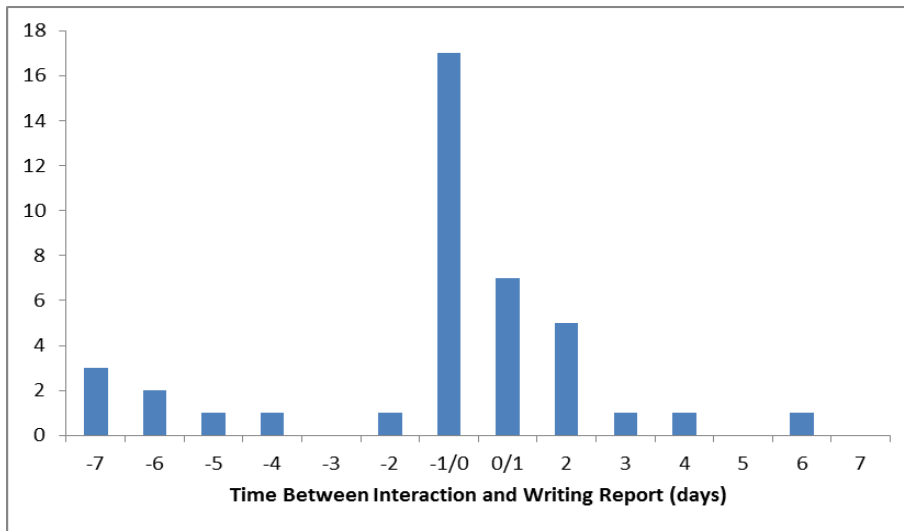
Figure 3 – Reason for Creating Analyst Report

The histogram in figure 3 shows the frequency each reason is cited as the motivating factor for creating an analyst report. Each report contributes one reason. For each report, the reason is the first event cited in the headline or bolded introductory section of the report. The histogram includes all reports created by analysts that issue guidance for the sample firm from November 2010 to October 2010.
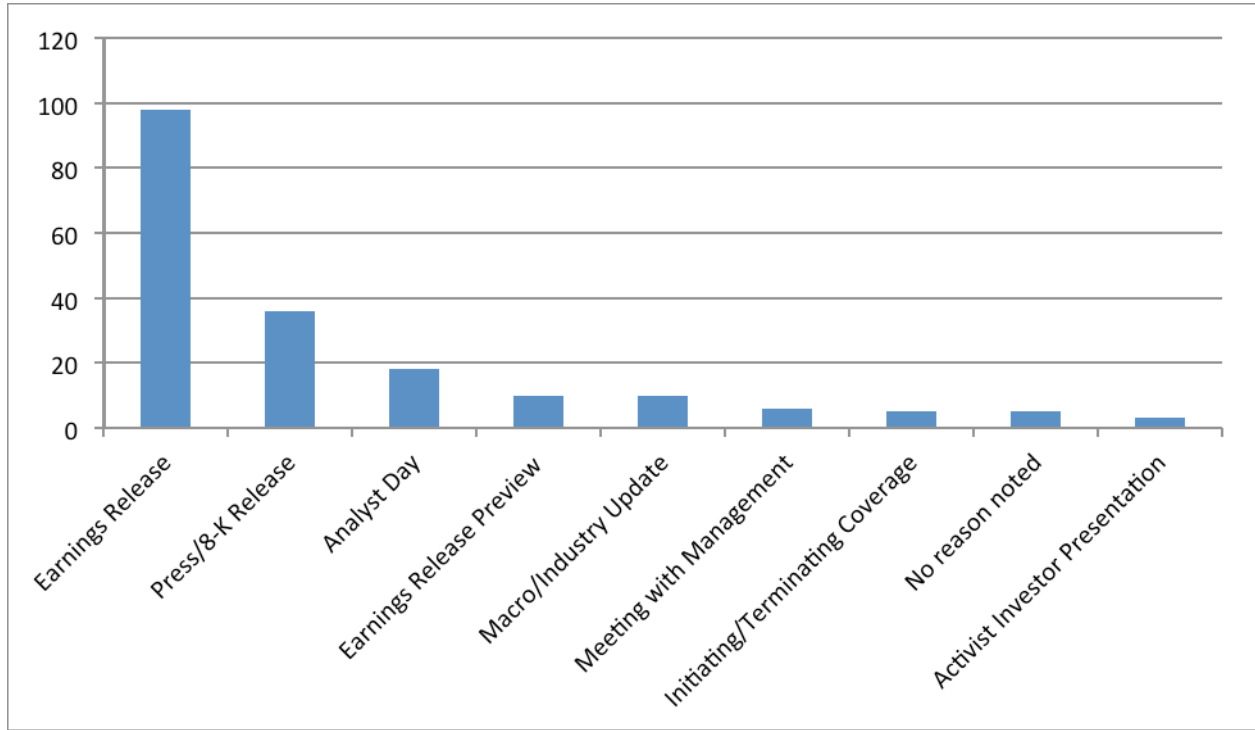
Table 1 – Descriptive Statistics

Table 1 shows descriptive statistics for explanatory variables used in the analysis. Number of firms covered is the number of firms for which an analyst issues quarterly earnings estimates. Years as Analyst measures the length of time an analyst is included on the IBES database. Years covering firm measures the length of time for which an analyst has issued earnings estimates on the firm. All-Star Analyst is a binary variable that is equal to 1 if the analyst was an *Institutional Investor* award winning analyst at some point over the past three years. Industry Coverage is the number of distinct industries an analyst covers on Thomson. Frequency of forecasts is the number of earnings forecasts issued by the analyst over the prior quarter. Meet prior month is a binary variable that is equal to 1 if the analyst privately interacted with management in the prior month. Strong buy and buy are binary variables that are equal to 1 if the analyst has a Strong buy or buy recommendation at the beginning of the month. Firm/Broker Influence is the logged number of Google hits of the firm's name. Raise Debt/Equity Firm Relationship is a binary indicator equal to 1 if the analyst's firm has helped the sample firm underwrite equity or debt funding. All variables are measured over the period from November 2010 to October 2011 on a monthly basis. The sample size for each variable is 223 observations.

	Mean	Standard Dev	Q1	Median	Q3
Number Firms Covered	17.5	7.1	13.0	16.0	22.0
Years as Analyst	11.2	5.4	6.8	10.6	14.1
Years Covering Firm	5.7	4.5	2.0	4.9	7.7
All-Star Analyst	0.2	0.4	0.0	0.0	0.0
Industry Coverage	3.5	1.2	3.0	3.0	4.0
Frequency of Forecasts	5.7	5.5	1.0	4.0	10.0
Meet Prior Month (0/1)	0.2	0.4	0.0	0.0	0.0
Strong Buy (0/1)	0.3	0.4	0.0	0.0	1.0
Buy (0/1)	0.5	0.5	0.0	0.0	1.0
Firm/Broker Influence	16.1	1.5	14.7	16.4	17.1
Raise Debt/Equity Firm Relationship (0/1)	0.2	0.4	0.0	0.0	0.0

Table 2 – Correlation Table

Table 2 shows the correlation of variables used in the analysis. A ' * ' indicates statistical significance at the 5% level. See Table 1 for variable definitions.

Panel A: Pearson Correlations

	Meeting	Number Firms Covered	Years as Analyst	Years Covering Firm	All-Star Analyst	Industry Coverage	Frequency of Forecasts	Meet Prior Month (0/1)	Strong Buy (0/1)	Buy (0/1)	Firm/Broker Influence	Raise Debt/Equity Firm Relationship (0/1)
Meeting	1											
Number Firms Covered	-0.1804*	1										
Years as Analyst	-0.1349*	0.1539*	1									
Years Covering Firm	0.0645	0.2720*	0.5041*	1								
All-Star Analyst	0.0649	-0.0536	-0.0397	0.0789	1							
Industry Coverage	-0.0595	0.1834*	0.0825	-0.1763*	0.0081	1						
Frequency of Forecasts	0.2159*	-0.0824	0.1675*	0.0999	0.0586	-0.0039	1					
Meet Prior Month (0/1)	0.3248*	-0.1992*	-0.1570*	-0.0163	-0.0165	-0.031	0.131	1				
Strong Buy (0/1)	-0.077	-0.1905*	-0.1076	-0.0889	-0.064	0.1157	0.0606	-0.0707	1			
Buy (0/1)	0.1474*	0.3906*	0.1922*	0.0976	-0.2043*	0.1032	-0.0516	0.1626*	-0.6109*	1		
Firm/Broker Influence	0.1409*	0.2106*	-0.0484	-0.0268	0.0316	0.2846*	0.1440*	0.1407*	-0.005	-0.0121	1	
Raise Debt/Equity Firm Relationship (0/1)	0.2066*	0.0881	-0.4043*	-0.2523*	-0.2388*	0.1122	0.0259	0.2666*	-0.3042*	0.2501*	0.0382	1

Table 3 – Who Privately Interacts with Management

Table 3 examines the determinants of private interaction with management using a probit model. Private interaction is a binary variable equal to 1 if an analyst interacts privately with an analyst in a given month and 0 otherwise. See Table 1 for additional variable explanations. All standard errors are double-clustered by analyst and month. ***,**,* indicate statistical significance at the 1%, 5% and 10% level respectively.

	(1) Private Interaction
Number Firms Covered	-0.115***
	(0.0222)
Years as Analyst	-0.0737***
	(0.0243)
Years Covering Firm	0.131***
	(0.0357)
All-Star Analyst	0.585***
	(0.216)
Industry Coverage	-0.0218
	(0.0859)
Frequency of Forecasts	0.0268**
	(0.0136)
Meet Prior Month	0.124
	(0.301)
Strong Buy	0.402
	(0.266)
Buy	1.215***
	(0.343)
Firm/Broker Influence	0.245**
	(0.105)
Raise Debt/Equity Firm Relationship	0.894**
	(0.398)
constant	-3.913***
	(1.495)
# Observations	223
R^2	0.28

Table 4 – Private Analyst Interaction and Forecast Quality

Table 4 compares the forecast accuracy of analysts before and after privately interacting. Forecast error is defined as the percentage difference between the analyst's estimate and the actual. Pre-interaction estimates are calculated as of the day of the interaction and post-interaction estimates are the most recent updated forecasts after the meeting. All estimates that are generated both before and after interaction are included. Panel A includes all updated estimates by analysts who privately interacted with management. Panel B includes only those estimates that are released within 7 days of privately interacting with management.

	Mean	Median	Standard Deviation
Panel A: All Updated Estimates (n=173)			
Pre-Interaction	.038	.031	.024
Post-Interaction	.036	.031	.026
P-value (one-sided):			.14
P-value (two-sided):			.28
	Mean	Median	Standard Deviation
# Days to Update	26	21	21

	Mean	Median	Standard Deviation
Panel B: Estimates Updated Within 7 Days of Interaction (n=51)			
Pre-Interaction	.040	.031	.028
Post-Interaction	.034	.031	.023
P-value (one-sided):			.04
P-value (two-sided):			.08
	Mean	Median	Standard Deviation
# Days to Update	3	2	3

Table 5 – Conference Call and Private Interaction

Table 5 examines whether analysts interact privately after the quarterly conference call using a probit model. Interact After CC is a binary variable equal to 1 if an analyst interacts privately with management within two days after the conference call and 0 otherwise. On Conference Call is a binary variable equal to 1 if an analyst asks at least one question during the conference call and 0 otherwise. See Table 1 for additional variable explanations. All standard errors are double-clustered by analyst and month. ***,**,* indicate statistical significance at the 1%, 5% and 10% level respectively.

	(1) Interact After Conference Call
Participate On Conference Call	0.926*
	(0.553)
Number Firms Covered	-0.134**
	(0.0638)
Years as Analyst	0.0372
	(0.0303)
Years Covering Firm	0.0893
	(0.0659)
Frequency of Forecasts	-0.0358
	(0.0404)
Meet Prior Month	0.204
	(0.464)
Firm/Broker Influence	0.392***
	(0.103)
Raise Debt/Equity Firm Relationship	2.112***
	(0.744)
constant	-6.786***
	(1.442)
# Observations	88
R^2	0.39

Table 6 – Executives Available for Interaction: Public vs. Private

Table 6 details the executives who spoke with sell-side analysts over the sample period publicly (over the conference call) or privately. In the private interaction sample, there are 6 executive vice presidents of products or divisions who spoke with sell-side analysts (shown in right hand column). The specific divisions are not shown to preserve the confidentiality of the sample firm.

Managers Available for Public Interaction	Managers Available for Private Interaction
Chairman	Chairman
Chief Executive Officer	Chief Executive Officer
Chief Financial Officer	Chief Financial Officer
Investor Relations Officer	Investor Relations Officer
	Chief Investment Officer
	Chief Risk Officer
	Exective Vice President Asia Pacific
	Exective Vice President Americas
	Exective Vice President Middle East & Africa
	Executive Vice President- Product/Division (x 6)

Table 7 – Public vs. Private Interaction and Corporate Access

Table 7 compares analysts who organize corporate access versus those that do not by the level of public/private interaction. Panel A examines by the amount of public interaction (via quarterly conference call). Panel B investigates by the number of private interactions over the sample period. The sample firm provided the names of analysts who facilitated corporate access events for the firm.

Panel A: Number of Public Interactions Per Analyst			
	Number Analysts	Mean	Standard Deviation
Non-Corporate Access Analyst	22	1.1	1.6
Corporate Access Analyst	5	2.0	1.6
		t=-1.21	
		P-value (two-sided): .24	
Panel B: Number of Private Interactions Per Analyst			
	Number Analysts	Mean	Standard Deviation
Non-Corporate Access Analyst	22	1.5	2.2
Corporate Access Analyst	5	4.6	4.2
		t=-2.38	
		P-value (two-sided): .03	