# Access to management and the informativeness of analyst research[*]

T. Clifton Green[a], Russell Jame[b], Stanimir Markov[c], and Musa Subasi[d]

[a] *Goizueta Business School, Emory University*
[b] *Gatton College of Business and Economics, University of Kentucky*
[c] *Cox School of Business, Southern Methodist University*
[d] *Trulaske College of Business, University of Missouri*

**Abstract**

We examine whether access to management at broker-hosted investor conferences leads to more informative research by analysts. We find analyst recommendation changes have larger immediate price impacts when the analyst's firm has a conference-hosting relation with the company. The effect increases with hosting frequency and is strongest in the days following the conference. Conference-hosting brokers also issue more informative, accurate, and timely earnings forecasts than non-hosts. Our findings suggest that access to management remains an important source of analysts' informational advantage in the post-Regulation Fair Disclosure world.

JEL classification: G14

Keywords: Analyst research, Investor conference, Earnings forecast, Regulation FD

---

## 1. Introduction

A large literature establishes the important informational role that brokerage research analysts play in financial markets. Analysts' earnings forecasts have been found to be generally more accurate than statistical models (e.g., Brown and Rozeff, 1978; and Bradshaw, Drake, and Myers, 2012), and another line of research shows that analysts' stock recommendations tend to be profitable (e.g., Womack, 1996; and Jegadeesh, Kim, Krische, and Lee, 2004). Although analysts' expertise could arise from skillful processing of public information, another common explanation for analysts' forecasting skill relies on superior access to management. Brokerage analysts interact with firm management through visits to company headquarters, investor office meetings, and broker-hosted investor conferences. Despite the widespread nature of these costly activities, relatively little is known about the extent to which access to management provides analysts with value-relevant information.

Regulation Fair Disclosure (Regulation FD), enacted in 2000, requires that management disclose material information to all investors at the same time, which likely diminishes the value of private meetings with management. Koch, Lefanowicz, and Robinson (2012) survey the academic literature and conclude that Regulation FD has largely eliminated the benefits of management access. This calls into question analysts' supposed continued emphasis on seeking and cultivating access to management. However, other recent studies rely on indirect measures of management access based on geographic proximity (Malloy, 2005; and Bernile, Kumar, and Sulaeman, 2012), the timing of earnings announcements (Ivkovic and Jegadeesh, 2004), analyst optimism (Gintschel and Markov, 2004; and Chen and Matsumoto, 2006), or educational ties (Cohen, Frazzini, and Malloy, 2010), leaving open the possibility that subtle variants of management access continue to be a source of analysts' informational advantage.

1

In this paper, we focus on an institutional mechanism that potentially enhances access to management and explore whether analysts using this mechanism produce more informative stock recommendations and more accurate earnings forecasts. Broker-hosted investor conferences are organized to provide analysts and select investing clients with opportunities to interact with senior corporate managers. The typical conference format includes formal company presentations followed by question-and-answer sessions, often moderated by the analyst-host, and sometimes a series of one-on-one meetings between management and select clients, also often led by the analyst-host [see Bushee, Jung, and Miller (2011) and Green, Jame, Markov, and Subasi (2014) for institutional details]. Since other analysts are generally excluded from these events, investor conferences present an excellent opportunity for identifying variation in management access and evaluating the extent to which management access is a source of analysts' informational advantage.[1]

We thus hypothesize that a conference relation between a broker's analyst and a followed firm leads to greater access to management, and we investigate whether such a tie generally leads to more informative analyst research. Conferences provide specific opportunities for acquiring value-relevant information, and we examine whether the host analyst's informational advantage is stronger after the event. We measure the information content of analyst research primarily as the two-day buy-and-hold abnormal return following stock recommendation changes. Our methodology involves regressing the market reaction to recommendation changes on indicator variables related to the source (host or non-host) and the timing of the report relative to the

---

[1]Discussions with market participants suggest that it is rare for non-host analysts to attend investor conferences. While other analysts could have access to webcasts or transcripts of the formal company presentations, they are generally not privy to the information host analysts gather during the breakout sessions with select investing clients, as well as the informal interactions with management at conference events such as golf and dinners.

2

conference, as well as various recommendation, firm, analyst, and broker characteristics to control for factors influencing the informativeness of analyst research (Loh and Stulz, 2011).

We find markets respond strongly to the research of conference hosts. Our analysis of 2,749 investor conferences hosted by 107 brokerage firms reveals that host upgrades (downgrades) have two-day (0,1) abnormal returns that are 1.09% (-1.07%) larger than recommendation changes by non-hosts. This difference is amplified for recommendations made in the quarter (63 trading days) following the conference. Specifically, host upgrades (downgrades) have two-day abnormal returns that are 1.85% (-1.37%) larger than non-host upgrades (downgrades). We also examine the difference in market response between host and non-host recommendation changes over the subsequent two to 63 trading days following recommendation changes and find no significant evidence of drift or reversal.

Conference-hosting analysts do differ systematically from non-host analysts. For example, host analysts are more likely to be designated as all-stars, tend to work at larger brokerage houses, and issue recommendations on smaller firms. After including controls for the recommendation, analyst, broker, and firm characteristics known to influence the informativeness of analyst research, we find that host recommendations outperform on average by over 0.40% and the difference grows to about 0.80% in the post-conference period. The estimates are robust to the inclusion of analyst-firm fixed effects, and they are stable over time.

Intuitively, we find that the informativeness of conference hosts' research increases with hosting frequency. Specifically, recommendations by analysts that host a firm only once during the sample period incrementally outperform by roughly 0.25%, and recommendations by analysts that host a firm more than five times outperform by roughly 0.75%. We also find that hosts' incremental informativeness is strongest in the period immediately following the conference. The

difference in price impact between hosts and non-hosts peaks in the first three-day period of the post-conference quarter and persists for at least three quarters after the conference. The increased informativeness immediately following the conference suggests that conferences provide specific opportunities for gathering information, and the persistent incremental informativeness of hosts' research supports the view that conferences signal an ongoing relationship between host analysts and firm management.

We also study the effects of investor conferences on host analysts' earnings forecast accuracy and timeliness. Consistent with the market impact results, we find evidence of increased forecast accuracy for conference hosts but not for other analysts in the post-conference period. Specifically, in the three months following the conference, the hosting analyst issues forecasts that are 5% more accurate than non-hosts. We also find that conference hosts issue more timely research than non-hosts, with host analysts' earnings forecasts being significantly more likely to lead rather than lag those of non-hosts.

Taken together, the greater market response to conference-host recommendation changes as well as host analysts' more timely and accurate earnings forecasts suggests that broker-hosted investor conferences are a mechanism for hosts to gain an important informational advantage. Our findings are also generally consistent with alternative explanations. For example, the larger market impact of host analysts' recommendations could reflect overreaction. However, the evidence that host analysts also issue more accurate earnings forecasts and the absence of a return reversal help mitigate this concern. More generally, analysts could choose to invite firms to conferences for which they have a comparative advantage in covering. However, the evidence that host-analyst recommendations' market impact significantly increases with the proximity of the conference

makes it less likely that the conference effects we observe are unrelated to analysts' access to management.

Analysts expend significant resources to obtain private meetings with management.[2] Our findings provide some of the most direct evidence that interactions with management lead to more informative research, particularly following Regulation FD. Soltes (2014) analyzes brokerage analysts' interactions with the managers of a single firm over one year and finds no evidence that meetings lead to more accurate earnings forecasts. He concludes that analysts meet privately with management primarily for reasons other than firm-specific news, such as providing management access for their clients. In contrast to Soltes (2014), our analysis of more than three thousand companies over seven years provides strong evidence that brokerage research benefits from meetings with management.

In related work, Bushee, Jung, and Miller (2012) and Solomon and Soltes (2012) find evidence that institutional investors benefit from private interactions with firm management. While our result that investor conferences lead to more informative brokerage research is consistent with the evidence that management access leads to informed institutional trading, the findings are distinct. For example, Bushee, Jung, and Miller (2012) emphasize event-period returns and trading around conferences, while our analysis examines the market response to analyst research that is often issued weeks or months after the conference. Our findings suggest that host analysts disseminate value-relevant information that is distinct from information incorporated into prices through the trading of institutional investors.

---

[2]Solomon and Soltes (2012) present survey evidence that 97% of chief executive officers of publicly traded firms meet privately with investors, at an average of 46 times per year. The authors highlight the role that sell-side analysts play in arranging many of these meetings.

We caution against concluding that analysts obtain material nonpublic information at investor conferences in violation of Regulation FD. Analysts could be able to create material information by piecing together public information and nonmaterial information from management, and this type of activity is specifically permitted by Regulation FD.[3] Analysts could also be able to glean value-relevant information from management's body language or vocal cues (Mayew and Venkatachalam, 2012). Although the consensus view is that Regulation FD has served to reduce selective disclosure practices, our evidence suggests that brokerage conferences are an important source of analysts' informational advantage through recent access to management.

The remainder of the paper is organized as follows. Section 2 describes the sample and presents descriptive statistics. Section 3 examines the effects of investor conferences on the informativeness of analyst research; and Section 4 concludes.

## 2. Data and descriptive statistics

In this section, we describe our data on brokerage research reports and broker-hosted investor conferences and present descriptive statistics.

*2.1. Brokerage research reports*

We obtain data on stock recommendations from the Institutional Brokers' Estimate System (I/B/E/S) Recommendation History data set, which contains the recommendations of individual analysts with ratings ranging from 1 (strong buy) to 5 (strong sell). We focus on recommendation changes as prior research finds that recommendation changes are more informative than levels

---

[3]Securities and Exchange Commission Release Number 33-7881, http://www.sec.gov/rules/final/33-7881.htm, states: "An issuer is not prohibited from disclosing a non-material piece of information to an analyst, even if, unbeknownst to the issuer, that piece helps the analyst complete a 'mosaic' of information that, taken together, is material."

(e.g., Jegadeesh, Kim, Krische, and Lee, 2004). Recommendation changes are computed as the current rating minus the prior rating by the same analyst. We limit the sample to recommendation changes made between 2004 and 2010 to match the sample of investor conferences. We remove analysts coded as anonymous by I/B/E/S because it is not possible to track their recommendation changes. We also remove reiterations of earlier recommendations due to their typically lower information content (we examine reiterations separately as a robustness check). Our initial sample consists of 75,174 recommendation changes.

Following Loh and Stulz (2011), we exclude 18,559 recommendations that fall in the three-day window [-1,1] around quarterly earnings announcement dates (obtained from Compustat) or management earnings guidance days (as reported in First Call's Company Issued Guidelines Database). We also exclude 4,803 recommendation changes in which multiple analysts issued a recommendation on the same day. The resulting sample has 51,812 recommendation changes.

We next merge our recommendation sample with the Center for Research in Security Prices (CRSP) and Compustat. We obtain share price, stock returns, and volume from CRSP and book value of equity from Compustat. We drop firms with missing return or volume data over the prior year, as well as firms with missing or negative book values of equity. The final sample has 49,953 recommendation changes.

Prior research finds that recommendation changes have a greater price impact than earnings forecast revisions (e.g., Loh and Stulz, 2011). As a result, our primary focus is on recommendation changes, although we also present results for earnings forecast revisions. We obtain data on individual analyst's earnings forecasts from the I/B/E/S Detail History data set. Forecast revisions are computed as the current forecast for one-year-ahead earnings minus the prior forecast by the

same analyst.[4] Our initial sample consists of 397,514 forecast revisions. This number is reduced to 182,537 after excluding firm-specific news days and to 178,940 after dropping firms with missing data in CRSP or Compustat.

*2.2. Broker-hosted conferences*

We obtain data on broker-hosted investor conferences for the period January 2004 to December 2010 from the Bloomberg Corporate Events Database. The database includes information on the conference name, date, and hosting organization, as well as the presenting company name. We limit the sample to conferences hosted by I/B/E/S-listed equity research providers that employ at least five analysts in a given year. We then match companies presenting at investor conferences by name or ticker with the CRSP and Compustat databases. Our final sample consists of 68,194 presentations by 4,394 companies at 2,749 conferences hosted by 107 I/B/E/S-listed brokers.

Panel A of Table 1 examines the frequency with which companies participate at conferences. In a typical year, our sample includes roughly 2,500 firms with nonzero analyst following and non-missing CRSP and Compustat data. Approximately 40% of these firms do not participate in any conferences, another 15% participate in one conference, 40% of firms participate in between two and ten conferences, and a little over 2% of firms participate in more than ten conferences a year.

In contemporaneous work, Green, Jame, Markov, and Subasi (2014) examine the determinants of conference participation. They find that conference participation is generally driven by the same factors that drive published research, such as firm size, institutional ownership, and trading volume. However, they also find that hard-to-value firms [e.g., firms with high levels

---

[4]We also examine forecasts of quarterly earnings and find very similar results.

of research and development and intangible assets] are more likely to be hosted at conferences than receive published research, consistent with conferences playing a distinct role in resolving valuation difficulties.

We merge the stock recommendation and earnings forecast samples with our conference data by both broker and stock. For each recommendation change and forecast revision we create four conference indicator variables:

1. *Host:* an indicator variable equal to one if the recommendation change is for a firm that participated in an investor conference hosted by the analyst's brokerage house at any point over the sample period.[5]

2. *Non-Host:* an indicator variable equal to one if the recommendation change is for a firm that has never participated in a conference hosted by the analyst's brokerage house at any point over the sample period.

3. *Host_Post-Conf_Qtr*: an indicator variable equal to one if the recommendation change is for a firm that participated in a conference in the past 63 trading days, and the report is authored by the conference host.[6]

4. *Non-Host_Post-Conf_Qtr*: an indicator variable equal to one if the recommendation change is for a firm that participated in an investor conference in the past 63 trading days, and the report is authored by a non-host.

We conjecture that firms that participate at broker-hosted investor conferences have a closer relation with the hosting analyst than with non-hosts, resulting in more private interactions (e.g., more company visits and meetings with management) and a continual flow of value-relevant information throughout the sample period. We therefore hypothesize that analysts generally issue more informative research for firms that participate at their conferences, that is, *Host* recommendations are more informative than *Non-Host* recommendations.

---

[5]We define *Host* at the broker level instead of the analyst level because the broker's resources are required to host the conference and, therefore, the hosting relation might not travel with analysts across brokers. We find similar results if we define *Host* at the analyst level. In additional untabulated analysis, we find similar (and generally slightly stronger) results when *Host* is defined to cover only recommendation changes issued within a year before or after the conference, as opposed to during the full sample period.

[6]We begin the post-conference period two days after the event. We exclude recommendation changes released on the conference day (15 observations) and the day after (35 observations), as these could have been initiated prior to the event.

In addition to providing a signal of access to management, investor conferences provide a specific opportunity for the transfer of value-relevant information. We therefore predict that hosts issue unusually informative research in the post-conference period (i.e., *Host_Post-Conf_Qtr* recommendation changes are more informative than *Host* recommendation changes). We include *Non-Host_Post-Conf_Qtr* to address the possibility that the formal conference presentation, which is often made publicly available, could help all analysts issue more informative research in the post-conference period.

Panel B of Table 1 describes the sample of recommendation changes. Of the 49,953 recommendation changes in our sample, 31,969 are classified as *Non-Host* recommendation changes, and the remaining 17,984 are *Host* recommendation changes. Our sample contains 2,524 *Host_Post-Conf_Qtr* recommendation changes, 1,195 (1,329) of which are upgrades (downgrades). The table also presents results for earnings forecast revisions. Our sample has 109,556 *Non-Host* forecast revisions and 69,384 *Host* forecast revisions, of which 8,857 are *Host_Post-Conf_Qtr* forecast revisions.

## 2.3. Other variable construction and descriptive statistics

In this subsection we introduce research, analyst, broker, and firm characteristics likely associated with research informativeness, with construction details presented in the Appendix. We first consider characteristics of the research output itself. In most settings we examine up and down recommendations and forecast revisions separately. In pooled specifications, we introduce an *Upgrade* dummy variable because research could have an asymmetric effect on prices. We define *Abs(Rec change)* and *Abs(Revision)/Price* as measures of the magnitude of the recommendation and forecast revision, respectively. We create the variable *Excess optimism* to address the concern

that hosts obtain management access because they issue more optimistic research (Gintschel and Markov, 2004; and Chen and Matsumoto, 2006).

Kecskes, Michaely, and Womack (2010) find that stock recommendations accompanied by earnings forecast revisions lead to larger price reactions. Thus, for recommendation changes we include a *Concurrent forecast* dummy, and for forecast revisions we include a *Concurrent recommendation* dummy. Ivkovic and Jegadeesh (2004) show that recommendations prior to (after) an earnings announcement lead to greater (weaker) price responses. We control for these effects by including a *Pre-earnings (Post-earnings)* dummy variable equal to one if the research was issued in the two weeks prior to (after) an earnings announcement. Earnings forecast and recommendation changes that move away from the consensus (i.e., bold changes) lead to larger price impacts (Gleason and Lee, 2003; and Jegadeesh and Kim, 2010). To capture this effect, we include an *Away from consensus* dummy. Lastly, we include an *Affiliation* dummy equal to one if the brokerage company was a lead underwriter for the firm at any point prior to issuing the recommendation. We include the affiliation dummy because the presence of an investment banking relation with the firm could influence the informativeness of analyst research (Malloy, 2005).

We next include analyst characteristics. Stickel (1995) finds that recommendation changes made by all-star analysts have greater price effects, so we create an *All-star analyst* dummy variable. We also include *Past forecast accuracy* because Loh and Mian (2006) show that analysts who possess more accurate earnings forecasts also issue more profitable recommendations. Mikhail, Walther, and Willis (1997) highlight the importance of analyst experience as a forecast accuracy determinant. We include two measures of experience: *Total experience,* which measures the number of years since the analyst first started to issue research on any stock, and *Firm*

11

*experience,* which measures the number of years the analyst has covered that specific firm. The firm experience measure is adjusted by subtracting the average experience for all other analysts covering the firm. Finally, we include *Broker size*, which reflects resources available to the analyst (Clement, 1999), and several firm characteristics: *Book-to-market, Size, Turnover, Volatility, Momentum, Analyst coverage,* and *Conference participation.*

Panel A of Table 2 presents descriptive statistics for the sample of recommendation changes. Columns 1 and 2 reveal substantial differences between *Host* and *Non-Host* recommendation changes. We observe that affiliated analysts account for 8% of *Host* recommendations and 2% of *Non-Host* recommendations.[7] Because affiliated brokers tend to have a closer relation with firm management, this finding is consistent with the view that brokers are more likely to invite a firm to their conferences if they have a close relationship with the firm's management. We also find that *Host* recommendations are more likely to be made by all-stars, analysts with greater firm-specific experience, and analysts who work at larger brokerage houses. In addition, *Host* recommendations are more likely to be made for smaller firms and firms with less analyst coverage.

We find similar differences when we compare *Host_Post-Conf_Qtr* recommendations with *Non-Host_Post-Conf_Qtr* recommendations. In particular, relative to *Non-Host_Post-Conf_Qtr* recommendations, *Host_Post-Conf_Qtr* recommendations are more likely to be made by affiliated analysts, all-star analysts, analysts with greater firm-specific experience, and analysts working for larger brokerage houses. They are less likely to be made immediately after an earnings announcement, more likely to be bold recommendations (i.e., away from the consensus), and more

---

[7]If we restrict the sample to recommendations on firms with non-missing lead underwriter data, 14% of host recommendations are issued by the lead underwriter versus. 4% by non-hosts. In unreported analysis, we also find evidence that affiliated brokers are significantly more likely than unaffiliated brokers to host firms in the year after a seasoned equity offering (17.5% versus 3.8%) and in the year following an initial public offering (8.2 versus 0.9%).

likely to be made for smaller stocks with less analyst coverage. We find no significant evidence that hosts' forecasts are generally more optimistic than non-hosts' or that hosts become overly optimistic in the post-conference period, which is consistent with the view that conference-host analysts obtain management access because they provide a valuable service to the firm, not because they issue more optimistic research. Panel B of Table 2 presents analogous results for our sample of earnings forecast revisions. Overall, the findings from Table 2 suggest analysts hosting investor conferences have characteristics associated with more informative research.

## 3. Empirical analyses

In this section, we investigate the effects of investor conferences on the informativeness of analyst research. Specifically we examine whether the price impact (Subsections 3.1–3.4), accuracy (Subsection 3.5), and timeliness (Subsection 3.6) of analyst research are related to the source (host versus non-host) and timing of the research report.

### 3.1. Informativeness of analyst research: univariate results

Following Loh and Stulz (2011), we measure of the informativeness of analyst research as the stock-price reaction in the two-day event window [0,1], where day 0 is the announcement date of the recommendation change or forecast revision. We compute the two-day buy-and-hold cumulative abnormal return (CAR) following research report $i$ as

$$CAR_i = \prod_{t=0}^{1}(1 + R_{it}) - \prod_{t=0}^{1}\left(1 + R_{it}^{DGTW}\right). \tag{1}$$

$R_{it}$ is the raw return of stock $i$ on day $t$, and $R_{it}^{DGTW}$ is the return on day $t$ of a benchmark portfolio with the same size, book-to-market, and momentum characteristics as the stock.[8] Prior work finds

---

[8] See Daniel, Grinblatt, Titman, and Wermers (1997) for a more detailed discussion of the construction of the DGTW benchmark portfolio.

evidence of drifts following recommendation changes (see, e.g., Womack, 1996). Thus, we also examine stock price reactions over the following longer event periods: [2, 21], [22, 63], and [0, 63]. For all holding periods, stocks are held in the event portfolio either until the end of holding period or until the analyst changes his recommendation (whichever comes first).

We begin by examining the two-day abnormal returns around recommendation upgrades and downgrades for our four conference variables. The results are presented in Panel A of Table 3. We find that *Host_Post-Conf_Qtr* upgrades generate the largest two-day abnormal returns (3.59%), which is consistent with hosts obtaining value-relevant information at investor conferences. We also observe that *Non-Host_Post_Conf_Qtr* upgrades are the least informative, which is inconsistent with non-hosting analysts obtaining valuable information from conference presentations. Finally, *Host* upgrades generate larger returns than *Non-Host* upgrades (3.15% versus 2.06%). This is consistent with the view that hosting brokers have closer relations with the firms they invite to conferences, and they are thus able to issue more informative research.[9]

One concern is that investors simply overreact to *Host* research. If the larger price reactions to *Host* recommendations are driven by overreaction, then *Host* research reports should lead to subsequent reversals or, at a minimum, weaker continuations than *Non-Host* reports. The longer-horizon results do not support this view. We find that both *Host* upgrades and *Non-Host* upgrades continue to drift upward and the difference in the drift between *Host* and *Non-Host* upgrades is not statistically different from zero. Over the full 63-day holding period, *Host* upgrades outperform *Non-Host* upgrades by a statistically significant 1.29%. Similarly, *Host_Post-Conf_Qtr* upgrades outperform *Non-Host_Post-Conf_Qtr* upgrades by 1.64%.

---

[9]Alternatively, brokers that issue more informative research for a firm could be more likely to host the firm at conferences. However, this interpretation does not predict that research informativeness will increase in the post-conference period, which suggests it is at best a partial explanation. Moreover, our regression analysis controls for known determinants of research informativeness.

Panel B presents similar evidence for downgrades. In particular, *Host_Post-Conf_Qtr* downgrades are the most informative, followed by *Host* downgrades. *Host* downgrades outperform *Non-Host* downgrades by -1.07%, and *Host_Post-Conf_Qtr* downgrades outperform *Non-Host_Post-Conf_Qtr* downgrades by -1.37%. Further, we find no evidence exists that these performance differentials reverse over the subsequent three months.

Panels C and D present similar results for earnings forecast revisions. Consistent with prior literature, the price effects associated with forecast revisions are significantly smaller than those associated with recommendation changes. Nevertheless, a similar pattern emerges in relative informativeness across our four conference variables. For example, Panel C shows that Host_*Post-Conf_Qtr* upgrades are associated with the largest two-day returns (0.98%), followed by *Host, Non-Host,* and *Non-Host_Post-Conf_Qtr* upgrades (0.51%). A nearly identical pattern emerges for downgrades. Further, we find no evidence of subsequent reversals for either upgrades or downgrades.

We also examine recommendation reiterations, which tend to be less informative than recommendation changes, and we find the same general pattern. In untabulated results, we find two-day returns of 3.24%, 1.02%, and 0.42% for *Host_Post-Conf_Qtr*, *Host*, and *Non-Host* strong buy reiterations, respectively, and two-day returns of -1.42% and -0.21% for *Host* and *Non-Hosts* strong sell reiterations. We observe no *Host_Post-Conf_Qtr* strong sell reiterations are in the sample, consistent with strong sell firms being less likely to participate at conferences.

*3.2. Informativeness of analyst research: regression evidence*

Table 2 reveals systematic differences between host and non-host analysts. In this subsection, we explore the effect of investor conferences on analyst research using a regression

framework to control for recommendation, analyst, broker, and firm characteristics shown to influence the informativeness of analyst research. We estimate the panel regression

$$CAR_i = a + \beta_1 Host_i + \beta_2 Host\_Post-Conf\_Qtr_i + \beta_3 Non-Host\_Post-Conf\_Qtr_i + \beta Controls_i + \varepsilon_i$$
(2)

where $CAR_i$ is the two-day (0,1) buy-and-hold abnormal return. To reduce the impact of firm-specific news not captured by our filters, we also winsorize $CAR_i$ at the 1st and 99th percentiles for upgrades and downgrades separately. Our results are robust to using nonwinsorized returns.

*Controls* is a vector of control variables known to influence the informativeness of analyst research. It includes recommendation characteristics [*Excess optimism, Abs(Rec change), Affiliated broker, Concurrent earnings forecast, Pre-earnings, Post-earnings,* and *Away from consensus*]; analyst and broker characteristics [*All-star analyst, Past forecast accuracy quintile, Firm experience, Total experience,* and *Broker size*]; and firm characteristics [*Book-to-market, Size, Turnover, Volatility, Momentum21, Momentum21_252, Analyst coverage,* and *Conference participation*]. All continuous variables are standardized to have mean zero and variance one. To reduce skewness, we use the natural logarithm of *Broker size* and all firm characteristics, except the two momentum variables.

The results are presented in Table 4, with t-statistics (in parentheses) computed from standard errors clustered by analyst and firm. Column 1 presents the results for recommendation upgrades. The intercept indicates that, when all continuous independent variables are at their mean and all dummy variables are equal to zero, the average upgrade by a non-hosting analyst generates a two-day abnormal return of 1.56%. Consistent with Table 3, we find that *Host* upgrades are significantly more informative than *Non-Host* upgrades. However, the magnitude of the hosting brokers' informational advantage is reduced considerably (from 1.09% to 0.35%). Much of this reduction stems from the fact that hosts tend to be larger brokers who issue recommendations on

16

smaller stocks with less analyst coverage (see Table 2). We also find that upgrades made by hosts in the post-conference period are particularly informative. Specifically, *Host_Post-Conf_Qtr* upgrades earn an additional 0.33% relative to *Host* upgrades (or an additional 0.68% relative to *Non-Host* upgrades). Similarly, *Host_Post-Conf_Qtr* upgrades outperform *Non-Host_Post-Conf_Qtr* upgrades by a statistically significant 0.81%.

Column 2 reports the results for downgrades. The results for downgrades are generally similar to the results for upgrades. Specifically, *Host* downgrades are significantly more informative than *Non-Host* downgrades, and *Host_Post-Conf_Qtr* downgrades are more informative than *Host* downgrades, although the difference is not statistically significant. In addition, *Host_Post-Conf_Qtr* downgrades outperform *Non-Host_Post-Conf_Qtr* downgrades by a statistically significant -0.79%.

To further explore the robustness of our findings, we reestimate Specifications 1 and 2 for each year from 2004 to 2010. Fig. 1 reports the coefficients on *Host, Host_Post-Conf_Qtr*, *Non-Host_Post-Conf_Qtr*, and the difference *Post-Conf_Diff* (i.e., *Host* + *Host_Post-Conf_Qtr* + *Non-Host_Post-Conf_Qtr*) for each year. The figure indicates that our results are stable over time. For both upgrades and downgrades, *Host* recommendation changes are more informative than *Non-Host* recommendation changes in every year, and *Host_Post-Conf_Qtr* recommendation changes are more informative than *Host* recommendation changes in six of the seven years.

Although the regression framework controls for a wide range of analyst, broker, and firm characteristics, unobserved factors could influence both the informativeness of an analyst's research for a particular company and the decision to invite that company to a conference. For example, an analyst could excel at covering some firms because of prior work experience or ties

to management, which leads the firms to participate at the analyst's conference more frequently. We control for this possibility by including analyst-firm fixed effects in Eq. (2).

The fixed effects absorb any variation in informativeness across analyst-firm pairs.[10] A positive coefficient on *Host* now means that an analyst issues more informative research on a firm when employed by a broker who has a hosting relation with the firm than when employed by a broker who has no hosting relation with the firm. The analyst-firm fixed effects approach is conservative, as management access likely varies more across analyst-firm pairs than within an analyst-firm pair. The fixed effect specification also suffers from relatively low power. The number of observations for analysts following the same firm for a host broker and for a non-host broker, which is needed to identify *Host*, is roughly 870 (compared with nearly 18 thousand without fixed effects). To increase power, we pool upgrades and downgrades after multiplying downgrade returns by -1. We include an upgrade dummy variable to control for the fact that upgrades tend to be more informative than downgrades.

The results from the analysis with analyst-firm fixed effects, presented in Specification 3, confirm the informativeness of host research. The estimates of *Host, Host-Post-Conf_Qtr,* and *Post-Conf_Qtr_Diff* are all statistically significant with the magnitudes being similar to those in Specifications 1 and 2. Specifically, the research for a given analyst and a particular firm is on average 0.66% more impactful when the analyst works for a host broker (after controlling for differences in experience, etc.), and her research is 0.34% incrementally more impactful in the three months after the conference.[11]

---

[10]Each analyst-firm pair receives its own intercept (roughly four thousand), and, hence, we no longer report the intercept term.

[11]In untabulated findings, we estimate analyst-firm fixed effects for upgrades and downgrades separately. The coefficient estimates for *Host* and *Host_Post-Conf_Qrt* are 0.61 (t = 1.78) and -0.09 (t = -0.30) for upgrades and for downgrades they are -0.90 (t = -2.87) and -0.49 (t = -1.75).

We conduct the same analysis on price drifts after the recommendation change, where we measure drift as buy-and-hold returns over the three month period [2, 63] or until the analyst reverses his recommendation. Consistent with the univariate evidence in Table 3, we find no evidence that the price drift is significantly different for *Host* or *Host_Post-Conf_Qtr* recommendation changes. In all three specifications, the *Host* coefficients have signs that are inconsistent with overreaction to host research. In two of the three specifications, the *Host-Post-Conf_Qtr* coefficient has a sign consistent with partial overreaction, but none of the coefficients for any host variable in the drift analysis is statistically different from zero at a 10% significance level. The results are untabulated for brevity. We consider the overreaction hypothesis further in Subsection 3.6, where we examine the accuracy of *Host* and *Host-Post-Conf_Qtr* earnings forecasts.

Panel B of Table 4 repeats the analysis of Panel A after substituting earnings forecast revisions for recommendation changes. Prior to including analyst-firm fixed effects, hosts issue significantly more informative upward and downward forecast revisions. For both up and down forecast revisions, the coefficient on *Host_Post-Conf_Qtr* is not significantly different from the coefficient on *Host.* However, *Host_Post-Conf_Qtr* revisions are significantly more informative than *Non-Host_Post-Conf_Qtr* revisions. After including analyst-firm fixed effects, *Host* revisions are no longer significantly more informative than *Non-Host* revisions, although *Host_Post-Conf_Qtr* revisions are marginally more informative. [12] In sum, the forecast revision analysis yields similar but weaker results than the recommendation changes. The weaker results for forecast

---

[12]In unreported results, we repeat the analyst-firm fixed effect analysis for upgrades and downgrades, separately. We observe that *Host* upgrade revisions continue to be significantly more informative, but we find no evidence that *Host* downgrade revisions are more informative.

revisions are not surprising in light of prior research finding relatively small price reactions to forecast revisions. Our remaining tests focus on recommendation changes.

*3.3. Hosting frequency analysis*

The positive coefficient on *Host* in Table 4 is consistent with broker-hosts benefiting from continued access to management throughout the sample period relative to non-hosts. In this subsection, we examine whether the informativeness of broker research is related to the frequency of hosting a firm at conferences. We conjecture that analysts who host a firm more often have a closer relationship with management, and therefore we expect a positive relation between research informativeness and hosting frequency.

We partition *Host* recommendation changes (17,984 observations) into *Host1* (5,836 observations), *Host2–3* (6,712 observations), *Host4–5* (3,342 observations), and *Host>5* (2,094 observations). Specifically, *Host1* recommendation changes are issued by brokers hosting the recommended firm once during the sample period, and *Host2–3* are changes by brokers hosting the recommended firm two or three times during the sample period. *Host4–5* and *Host>5* are defined analogously.

We estimate Eq. (2) after replacing the *Host* indicator variable with multiple indicators: *Host1*, *Host2–3*, *Host4–5*, and *Host>5*. Table 5, organized similar to Columns 1–3 of Table 4, presents the results. Specification 1 indicates that upgrades issued by brokers who host a firm once during the sample period earn an additional 0.12% relative to non-hosts, but this estimate is not significantly different from zero. The increase in price impact for brokers who host a firm two or three times (four or five times) is 0.37% (0.72%), and the increase for brokers who host a firm more than five times is 0.72%. Specification 2 confirms that hosting frequency also explains the price impact of downgrades. Specification 3 confirms that the results are robust to including

analyst-firm fixed effects. For example, *Host1* recommendation changes generate a price reaction of 0.47% compared with 1.44% for *Host>5* recommendation changes. Overall, the findings support the view that hosting a firm at a conference indicates a connection with management that leads to more informative research, with the strength of the connection increasing in the frequency with which the broker hosts the firm.

*3.4. Event-time analysis*

The evidence that hosts issue more informative research than non-hosts, with an incremental effect in the quarter after the conference, supports the view that conferences signal an ongoing relation with firm management and provide specific opportunities for gathering information. In this subsection, we compare host and non-host research using a finer partition of the post-conference quarter, and we also examine research outside the post-conference quarter.

We further explore whether conferences signal an ongoing relationship between the analyst-host and firm management by splitting *Host* recommendations into *Host_Pre-Conf, Host_Pre-Conf_Qtr, Host_Post-Conf_Qtr, Host_Post-Conf_Qtr2, Host_Post-Conf_Qtr3, Host_Post-Conf_Qtr4,* and *Host_Post-Conf_Qtr>4* and by including the corresponding indicator variables in Eq. (2). *Host_Pre-Conf_Quarter* is equal to one for recommendations made in the quarter prior to the conference period [i.e., the 63 trading days prior to the start of the *Post_Conf_Qtr*], and *Host_Post-Conf_Qtr* is equal to one for recommendations made one quarter after the conference period (defined in Table 4). *Host_Post_Conf_Qtr2, Host_Post-Conf_Qtr3, Host_Post-Conf_Qtr4,* and *Host_Post-Conf_Qtr>4* are defined analogously. The *Pre-Conference* dummy captures all *Host* recommendations that do not fall into one of the above categories.

The results of the analysis are presented in Table 6. Relative to recommendations issued by non-hosts, the market impact of host recommendations issued prior to one quarter before the

conference (*Host_Pre-Conference*) is significantly larger. The pre-conference effect is similar in magnitude to the effect for recommendations issued more than a year after the conference (*Host_Post-Conference >1yr*), which is consistent with hosting brokers having a close, persistent relation with the presenting firm that begins before the firm participates at the conference. Host recommendations issued between six and nine months after the conference (*Host_PostConference_Qtr3*) continue to have significant incremental market impact (0.7% to 1.0% depending on the specification), consistent with conferences signaling a tie to firm management over a long time period.

In untabulated analysis, we examine the subset of recommendations by brokers who host a firm at a single investor conference during the sample period. We find that single hosts provide incrementally informative research only in the pre- or post-conference quarter, which suggests hosting a firm a single time does not signal a persistent connection to the firm, although it could provide an opportunity for information transfer.

If hosts obtain specific, value-relevant information at conferences, research issued in the period immediately following the conference is likely to be most impactful. We explore this conjecture by more finely partitioning the post-conference quarter. Specifically, we partition *Host_Post-Conf_Qtr1* into recommendations that occur in the first month following the conference (days 1–21) and those that occur after the first month (days 22–63). We further partition recommendations that occur within the first month based on their proximity to the conference event: Days1–3, Days4–6, ..., Days19–21. We partition *Non-Host_Post-Conf_Qtr1* recommendations analogously, and we limit the sample to *Non-Host* and *Host_Post-Conf_Qtr1* recommendation changes. The host coefficients, therefore, measure the incremental market impact

relative to non-host recommendation changes, which allows for a direct comparison with the estimates in Table 6.

The coefficients are plotted in Fig. 2. We find that host upgrades perform the best when issued in the first three days of the post-conference period. Specifically, host upgrades outperform non-host upgrades by a statistically significant 1.51% (t-statistic=2.65) in the first three days after the conference. The (untabulated) coefficient on non-host upgrades during this period is -0.12 (after controlling for broker, firm, and recommendation characteristics), which provides additional evidence that non-hosts are unable to benefit from investor conferences.

The downgrade recommendation evidence yields similar conclusions. In particular, host downgrades generate abnormal returns of -1.22% (t-statistic=-1.87) in the three days immediately following the conference period. The incremental market impact of host research for both upgrades and downgrades is largest in the three-day interval following the conference. We specifically test whether host research issued in the first three days is significantly more impactful than host research issued during the rest of the first month (i.e., *Host1–3* vs. *Host4–21*). When standard errors are clustered by analyst and firm, the resulting estimates are 0.82% (t-statistic=1.28) for upgrades, 0.93% (t-statistic=-1.26) for downgrades, and 0.97% (t-statistic=1.99) when pooled across recommendations. Although the statistical evidence is modest, the sample sizes are relatively small compared with the sample sizes in our earlier analyses.[13] The evidence that upgrades and downgrades made in the days immediately following the conference have the largest market response supports the view that information is transferred from management to the hosts at investor conferences.[14]

---

[13]There are only 88 host upgrades and 49 host downgrades in the first three days after the conference. As a result we do not estimate analyst-firm fixed effects.

[14]An alternative explanation is that hosts obtain value-relevant information from their clients (buy-side institutions) who also attend the conference. Although we cannot rule out this possibility, corporate insiders are undoubtedly more

*3.5. Forecast accuracy*

To better understand the nature of the host analysts' more informative stock recommendations, and help alleviate the concern that the market mistakenly perceives hosts' research to be more informative, we explore whether hosts issue more accurate earnings. Specifically, we retrieve from I/B/E/S all annual earnings forecasts released between January 1, 2004 and December 31, 2010.[15] We eliminate all analyst forecasts issued within five days of a quarterly earnings announcement (Cooper, Day, and Lewis, 2001). The sample contains 353,871 forecasts, of which 88,834 are issued by host analysts.

We estimate forecast accuracy using annual earnings forecasts, although quarterly earnings forecasts generate similar results. Following Clement (1999), we define forecast accuracy as the proportional mean absolute forecast error, calculated as

$$PMAFE_{i,j,t} = \left( AFE_{i,j,j} - \overline{AFE_{j,t}} \right) \Big/ \overline{AFE_{j,t}} . \tag{3}$$

$AFE_{i,j,t}$ is the absolute forecast error for analyst $i$'s forecast of firm $j$ for year $t$ earnings, and $\overline{AFE_{j,t}}$ is the mean absolute forecast error for firm $j$ in year $t$. We multiply PMAFE by one hundred so that the forecast errors are expressed in percentage terms.

We next estimate the panel regression

$$PMAFE_{i,j,t} = \alpha + \beta_1 Host_{i,j,t} + \beta_2 Host_{Post}\text{-}Conf_{Qtr_{i,j,t}} +$$
$$\beta_3 Non\text{-}Host\_Post\text{-}Conf\_Qtr_{i,j,t} + \boldsymbol{\beta_4 Controls_{i,j,t}} + \varepsilon_{i,j,t} \tag{4}$$

---

informed about their companies than investors. Further, the purpose of broker-hosted conferences is for hosts and their clients to gain management access. Thus, we would generally expect more information to flow from management to the host and investors instead of from investors to analysts.

[15]The literature on forecast accuracy (e.g. Mikhail, Walther, and Wallis, 1997; Jacob, Lys, and Neale, 1999; and Clement, 1999) often focuses on analysts' most recent forecast prior to the announcement. Our results are robust to restricting the sample to this subset of forecasts.

*Host* is defined as in Subsection 3.2 but modified for earnings estimates. Specifically, *Host* now equals one if the analyst is issuing an earnings estimate for a firm that participated at a conference hosted by the analyst's broker at any point during the 2004–2010 sample period. *Host_Post-Conf_Qtr* and *Non-Host_Post-Conf_Qtr* are defined analogously. We include the following control variables: *Total experience*, *Firm experience*, *Broker size*, *Forecast age*, *Forecast frequency,* and *Firms followed.* The construction of the control variables is presented in the Appendix.

The results of Eq. (4) are presented in Table 7. Although we do not observe a general relation between hosting and forecast accuracy (the coefficient on *Host* is negative in each specification but insignificantly different from zero), we do find robust evidence that conference hosts' earnings forecasts are significantly more accurate than non-hosts' in the three months following the conference. Specifically, using the full set of controls we find the post-conference forecasts of hosts are 5.01% ( $\beta_1 + \beta_2 - \beta_3$ ) more accurate than non-hosts' forecasts. The coefficients on the controls are in line with prior literature (Clement, 1999). For example, older (stale) forecasts are less accurate, while forecasts made by analysts with greater firm-specific experience are more accurate. The findings indicate that access to management at broker conferences improves analysts' forecast accuracy. The coefficient on *Non-Host_Post-Conf_Qtr* is positive and insignificantly different from zero, suggesting that the information advantage immediately after conferences accrues only to the hosting broker.

To help control for differences in forecast difficulty that vary by firm-year, in Specification 2 we add firm-year fixed effects. As an additional control for differences in analyst ability, in Specification 3 we include both analyst fixed effects and firm-year fixed effects. In both specifications, the coefficients on *Host_Post-Conf_Qtr* remain highly significant. In particular, the

proportional mean absolute forecast errors for forecasts issued by conference hosts within three months after the conference are between 4.18% and 4.65% smaller than for forecasts issued by other analysts for the same stock during the same period. Overall, the accuracy results support the view that access to management at investor conferences allows hosting analysts to produce more accurate earnings forecasts. The accuracy findings clarify the nature of information transfer at conferences as being related to firm fundamentals and help preclude the alternative explanation that the market incorrectly perceives hosts' research on conference stocks to be more informative.

*3.6. Forecast timeliness*

Several studies argue that forecast timeliness is an effective measure of analysts' unobservable information advantage. For example, Cooper, Day, and Lewis (2001) find a stronger relation between forecast timeliness and price impact than forecast accuracy and price impact, and Jackson (2005) shows that forecast timeliness is an important determinant of analyst all-star rankings. These findings prompt us to examine whether conference hosts issue earnings forecasts that are timelier than non-hosts and whether the effect is particularly strong during the post-conference period.[16]

Following Cooper, Day, and Lewis (2001), we construct the *Leader-Follower Ratio,* or *LFR,* as the ratio of the cumulative number of days by which analyst *i*'s forecast of firm *j* lags the prior two forecasts to the cumulative number of days by which the same forecast leads the next two forecasts (excluding forecasts by the same analyst).[17] The ratio captures the intuition that the forecast of a skilled or informed analyst is more likely to induce forecasts by other analysts than

---

[16]We thank Kent Womack for suggesting this analysis.
[17]For details see Fig. 2 in Cooper, Day, and Lewis (2001).

vice versa. We explore the effects of conference hosting on forecast timeliness using the panel regression

$$LFR_{i,j,t} = \alpha + \beta_1 Host_{i,j,t} + \beta_2 Host\_Post\text{-}Conf\_Qtr_{i,j,t} +$$

$$\beta_3 Non\text{-}Host\_Post\text{-}Conf\_Qtr_{i,j,t} + \beta_4 Controls_{i,j,t} + \varepsilon_{i,j,t,} \qquad (5)$$

where *Host, Host_Post-Conf_Qtr,* and *Non-Host_Post-Conf_Qtr* are defined as in Subsection 3.5. We conjecture that analysts with conference access to management are more likely to lead other analysts in issuing forecasts.

The results of the forecast timeliness estimation in Eq. (5) are presented in Table 8 with controls for *Total experience, Firm experience, Broker size, Forecast age, Forecast frequency,* and *Firms followed*. We add firm-year fixed effects in Specification 2, and Specification 3 includes analyst fixed effects and firm-year fixed effects. The coefficient on *Host* is positive and statistically significant in Specifications 1 and 2, consistent with hosts issuing more timely research. The coefficient on *Host_Post-Conf_Qtr* is statistically significant in all specifications and ranges between 0.15 and 0.16. To provide a sense of economic significance, we note the incremental increase in timeliness exhibited by hosts after the conference is comparable to the effects of broker size (which has been viewed as a measure of economic resources available to the analyst). Specifically, the effect of a 1 standard deviation change in broker size ranges from 0.12 to 0.18, whereas the post-conference difference between hosts and non-hosts ( $\beta_1 + \beta_2 - \beta_3$ ) ranges between 0.18 and 0.41, and the differences are statistically significant in all specifications. The forecast timeliness findings provide further evidence in support of the view that access to management at conferences provides analysts with an informational advantage.

## 4. Conclusion

Broker-hosted investor conferences are organized to provide their analysts and clients opportunities for quasi-private interactions with firm management. With other market participants generally excluded from these interactions, brokerage-hosted conferences provide an excellent opportunity for studying whether analysts obtain superior information through greater access to management.

Our analysis of 2,749 investor conferences hosted by 107 brokerages reveals convincing evidence that investor conferences lead to more informative, accurate, and timely research. We find analysts at brokerages with a hosting relation issue more informative recommendation changes than non-hosts, and the difference is the largest in the post-conference period. In particular, recommendation changes in the three months following conferences induce incremental abnormal returns of roughly 0.40%.

We find no evidence that the incremental market impact of hosts' post-conference research reverses in the three months following the publication of the report, which mitigates concerns that the initial response reflects market overreaction. Moreover, we find that host analysts issue more accurate and more timely earnings forecasts in the post-conference period, which collectively supports the view that access to management at investor conferences provides host analysts with informational benefits.

While investor conferences appear to be an important mechanism through which analysts obtain management access, analysts interact with management in many other ways. For example, analysts routinely take clients to meet management at company headquarters. Analysts also spend significant amounts of time communicating with management over the phone and through e-mail. The importance of management access as a source of analysts' information advantage is therefore likely to be greater than what our evidence suggests. The evidence that analysts with a hosting

relation with the firm generally issue more informative research than non-hosts, and that this difference increases with the frequency of hosting, suggests that investor conferences could serve as a more general proxy for access to management.

Our findings of systematic cross-sectional and time series variation in the informativeness, accuracy, and timeliness of analyst research suggest preferential access to management continues to be a source of analysts' informational advantage, but they offer no basis for concluding that broker-hosted investor conferences violate Regulation FD. In particular, hosts' informational advantage could arise from combining public information with nonmaterial nonpublic information, and this mosaic theory of information gathering is specifically sanctioned by Regulation FD.

**Appendix**

**Description of Control Variables**

The variables discussed in this Appendix are partitioned into three groups: research characteristics, analyst and broker characteristics, and firm characteristics.

*A.1. Research characteristics*

*Host*: dummy variable equal to one if the research is for a firm that participated at a conference hosted by the analysts' brokerage house at any point over the sample period.

*Non-Host*: dummy variable equal to one if the research is for a firm that has never participated at a conference hosted by the analysts' brokerage house.

*Host_Post-Conf_Qtr*: dummy variable equal to one if the research is for a firm that participated at a conference in the past 63 trading days, and the report is authored by the conference host.

*Non-Host_Post-Conf_Qtr*: a dummy variable equal to one if the research is for a firm that participated at an investor conference in the past 63 trading days, and the report is authored by a non-host.

*Upgrade*: dummy variable equal to one if the research is favorable (e.g., a recommendation change from hold to buy or an upward revised earnings forecast).

*Excess optimism*: The residual from a regression of analyst earnings forecast errors on forecast bias determinants [forecast age, analyst firm-specific and overall experience, broker size, and underwriting affiliation (see, e.g., Lim, 2001) and firm-month dummies]. Forecast errors are defined as the analyst's most recent earnings forecast (prior to the research report in question) less the reported earnings, scaled by the price three months prior to the forecast date. Missing values are set equal to zero.

*Abs(Rec change)*: absolute value of the recommendation change. For example, going from a hold (=3) to a strong buy (=1) would have a value of two.

*Abs(Revision)/Price*: absolute value of the forecast revision scaled by the price of the stock two days prior to the revision. This value is winsorized at 99%.

*Concurrent forecast*: dummy variable equal to one if the recommending analyst issued an earnings forecast for the stock in the three day period surrounding the recommendation and the forecast was in the same direction as the recommendation change.

*Concurrent recommendation*: dummy variable equal to one if the analyst issuing a forecast revision also issued a recommendation change for the stock in the three trading days surrounding the forecast revision and the recommendation change was in the same direction as the revision.

*Pre-earnings*: dummy variable equal to one if the recommendation change or forecast revision was issued in the two weeks prior to an earnings announcement.

*Post-earnings*: dummy variable equal to one if the recommendation change or forecast revision was issued in the two weeks after an earnings announcement.

*Away from consensus:* dummy variable equal to one if the absolute deviation of the recommendation change (or forecast revision) from the consensus is larger than the absolute deviation of the prior recommendation (or prior earnings forecast) from the consensus. If the firm has fewer than three outstanding recommendations (forecast revisions), this value is set to zero, and we include an indicator variable (not reported) that equals one when there is a missing value and zero otherwise.

*Affiliated broker*: dummy variable equal to one if the analyst works for a brokerage firm that was a lead underwriter for the firm in an initial or seasoned public equity offering at any point after January 1, 1990 but prior to issuing the recommendation (data from Securities Data Corporation). If a firm has not issued equity since 1990, then we classify the firm as having no affiliated brokers.

*Forecast age*: number of calendar days between the forecast issue date and the earnings announcement date.

*Forecast frequency:* number of forecasts issued by an analyst for a particular firm during the year ending five days before the current forecast.

## A.2. Analyst and broker characteristics

*All-star analyst*: dummy variable equal to one if the analyst is ranked as an All-American (first, second, third, or runner-up teams) in the annual polls in the *Institutional Investor* magazine in the year prior to the recommendation (or forecast) change. For 2009–2010, all-star is determined based on data available in 2008.

*Past forecast accuracy*: Analysts are ranked into quintiles based on their prior one-year forecast accuracy in the stock, with Quintile 1 being the most accurate and Quintile 5 being the least accurate. If fewer than five analysts are covering the stock, the value is set to zero, and we include an indicator variable (not reported) that equals one when there is a missing value and zero otherwise.

*Firm experience*: number of years the analysts has covered the firm minus the average number of years all other analysts have covered the firm.

*Total experience*: number of years since the analyst first issued an earnings forecast (for any firm).

*Broker size*: total number of analysts working at the brokerage firm of the recommending analyst.

*Firms followed*: total number of firms followed by an analyst in a given year.

## A.3. Firm characteristics

*Book-to-market*: book to market ratio computed as the book value of equity for the year ended before the most recent June 30, divided by market capitalization on December 31st of the same fiscal year. Negative values are excluded, and positive values are winsorized at the 99%.

*Size*: market capitalization computed as share price times total shares outstanding as of the end of June in the year prior to the recommendation change (in millions of dollars).

*Turnover*: average daily turnover (i.e., share volume scaled by shares outstanding) over the 63 days prior to the recommendation change.

*Volatility*: standard deviation of daily returns over the 63 days prior to the recommendation change.

*Momentum$_{21}$*: stock return over the 21 trading days prior to the recommendation.

*Momentum$_{21-252}$*: stock return over the prior 252 trading days prior to the recommendation, excluding the 21 trading days prior to the recommendation.

*Analyst coverage*: total number of analysts covering the firm in the year of the recommendation change.

*Conference participation*: total number of broker-hosted conferences the firm participated at during the year of the recommendation change.

# References

Bernile, G., Kumar, A., Sulaeman, J., 2012. Leveling the playing field: financial regulation and disappearing local bias of institutional investors. Unpublished working paper. University of Miami, Miami, FL.

Bradshaw, M., Drake, M., Myers, J., Myers, L., 2012. A re-examination of analysts' superiority of time series forecasts of annual earnings. Review of Accounting Studies 17, 944-968.

Brown, L., Rozeff, M., 1978. The superiority of analyst forecasts as measures of earnings expectations: evidence from earnings. Journal of Finance 33, 1-16.

Bushee, B., Jung, M., Miller, G., 2011. Conference presentations and the disclosure milieu. Journal of Accounting Research 49, 1163-1192.

Bushee, B., Jung, M., Miller, G., 2012. Do investors benefit from selective access to management? Unpublished working paper. University of Pennsylvania, Philadelphia, PA.

Chen, S., Matsumoto, D., 2006. Favorable versus unfavorable recommendations: the impact on analysts' access to management-provided information. Journal of Accounting Research 44, 657-689.

Clement, M., 1999. Analyst forecast accuracy: do ability, resources, and portfolio complexity matter? Journal of Accounting and Economics 27, 285-303.

Cohen, L., Frazzini, A., Malloy, C., 2010. Sell side school ties. Journal of Finance 65, 1409-1437.

Cooper, R., Day, T., Lewis, C., 2001. Following the leader: a study of individual analysts' earnings forecasts. Journal of Financial Economics 61, 383-416.

Daniel, K., Grinblatt, M., Titman, S., Wermers, R., 1997. Measuring mutual fund performance with characteristic-based benchmarks, Journal of Finance 52, 1035-1058.

Gintschel, A., Markov, S., 2004. The effectiveness of Regulation FD. Journal of Accounting and Economics 27, 293-314.

Gleason, C., Lee, C., 2003. Analyst forecast revisions and market price discovery. Accounting Review 78, 193-225.

Green, T., Jame, R., Markov, S., Subasi, M., 2014. Broker-hosted investor conferences, Journal of Accounting and Economics, forthcoming.

Ivkovic, Z., Jegadeesh, N., 2004. The timing and value of forecast and recommendation changes. Journal of Financial Economics 73, 433-463.

Jacob, J., Lys, T., Neale, M., 1999. Expertise in forecasting performance of security analysts. Journal of Accounting and Economics 28, 51-82.

Jackson, A., 2005, Trade generation, reputation, and sell-side analysts, Journal of Finance 60, 673-717.

Jegadeesh, N., Kim, J., Krische, S., Lee, C., 2004. Analyzing the analysts: when do recommendations add value? Journal of Finance 59, 1083-1124.

Jegadeesh, N., Kim, W., 2010. Do analysts herd? An analysis of recommendations and market reactions. Review of Financial Studies 23, 901-937.

Kecskes, A., Michaely, R., Womack, K., 2010. What drives the value of analysts' recommendations: earnings estimates or discount rate estimates? Unpublished working paper. Virginia Polytechnic Institute and State University, Blacksburg, VA.

Koch, A., Lefanowicz, C., Robinson, J., 2012. Regulation FD: a review and synthesis of the academic literature. Unpublished working paper, University of Virginia, Charlottesville, VA.

Lim, T., 2001. Rationality and analysts' forecast bias. Journal of Finance 56, 369-385.

Loh, R., Mian, M., 2006. Do accurate earnings forecasts facilitate superior investment recommendations? Journal of Financial Economics 80, 455-483.

Loh, R., Stulz, R., 2011. When are analyst recommendations influential? Review of Financial Studies 24, 593-627.

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

Malloy, C., 2005. The geography of equity analysts. Journal of Finance 60, 719-755.

Mikhail, M., Walther, B., Willis R., 1997. Do security analysts improve their performance with experience? Journal of Accounting Research 35, 131-157.

Solomon, D., Soltes, E., 2012. What are we meeting for? The consequences of private meetings with investors. Unpublished working paper. Harvard University, Cambridge, MA.

Soltes, E., 2014. Private interaction between firm management and sell-side analysts. Journal of Accounting Research 52, 245-272.

Stickel, S., 1995. The anatomy of buy and sell recommendations. Financial Analyst Journal 51, 25-39.

Womack, K., 1996. Do brokerage analysts' recommendations have investment value? Journal of Finance 51, 137-167.

**Table 1**

Summary statistics

The table presents summary statistics for conference participation and analyst stock recommendation changes and earnings forecast revisions from the Institutional Brokers' Estimate System data set for the period January 2004 to December 2010. Panel A reports the fraction of firms with no missing data that participate in broker-hosted investor conferences by year. In Panel B, recommendation changes are computed as the current recommendation level minus the previous recommendation by the same analyst. Forecast revisions are computed as the current forecast for one-year ahead earnings minus the prior forecast by the same analyst. *Host* (*Non-Host*) refers to a recommendation change or forecast revision on a firm that the broker has (has never) hosted at a conference. *Host Post-Conference Qtr (Non-Host Post-Conference Qtr)* is the subset of *Host* (*Non-Host*) recommendations or forecast revisions issued in the 63 trading day post-conference period. Detailed variable definitions appear in the Appendix.

Panel A: Proportion of companies that participate in broker-hosted conferences

| Year | Number of firms | No conference participation | One conference | Two to three conferences | Four to five conferences | Six to ten conferences | More than ten conferences |
|---|---|---|---|---|---|---|---|
| 2004 | 2,584 | 57.4% | 18.9% | 16.1% | 5.3% | 2.1% | 0.2% |
| 2005 | 2,619 | 36.2% | 15.3% | 21.9% | 12.0% | 11.6% | 3.1% |
| 2006 | 2,615 | 36.8% | 13.7% | 22.0% | 11.9% | 12.7% | 2.8% |
| 2007 | 2,591 | 35.6% | 14.6% | 20.5% | 12.4% | 14.2% | 2.7% |
| 2008 | 2,520 | 34.9% | 16.5% | 21.5% | 11.7% | 12.8% | 2.6% |
| 2009 | 2,513 | 38.8% | 16.3% | 22.3% | 11.3% | 9.9% | 1.4% |
| 2010 | 2,456 | 33.0% | 13.9% | 23.3% | 13.3% | 13.9% | 2.6% |
| Average | 2,557 | 39.0% | 15.6% | 21.1% | 11.1% | 11.0% | 2.2% |

Panel B: Frequency of analyst research by revision type

| Revision Type | Full sample | Excluding news | No missing data | *Non-Host* | *Host* | *Host Post= Conference Qtr* | *Non-Host Post Conference Qtr* |
|---|---|---|---|---|---|---|---|
| Recommendation changes | | | | | | | |
| -4 | 365 | 238 | 230 | 190 | 40 | 6 | 95 |
| -3 | 195 | 138 | 136 | 115 | 21 | 2 | 62 |
| -2 | 16,474 | 10,862 | 10,568 | 7,233 | 3335 | 502 | 3,318 |
| -1 | 22,072 | 14,703 | 14,102 | 8,705 | 5397 | 819 | 4,098 |
| 1 | 20,881 | 15,056 | 14,433 | 8,705 | 5728 | 765 | 4,026 |
| 2 | 14,762 | 10,492 | 10,185 | 6,766 | 3419 | 428 | 3,146 |
| 3 | 148 | 119 | 109 | 96 | 13 | 1 | 45 |
| 4 | 277 | 204 | 190 | 159 | 31 | 1 | 78 |
| Upgrades | 36,068 | 25,871 | 24,917 | 15,726 | 9,191 | 1,195 | 7,295 |
| Downgrades | 39,106 | 25,941 | 25,036 | 16,243 | 8,793 | 1,329 | 7,573 |
| All | 75,174 | 51,812 | 49,953 | 31,969 | 17,984 | 2,524 | 14,868 |
| Earnings forecast revisions | | | | | | | |
| Upward | 201,575 | 82,654 | 80,934 | 50,463 | 30,471 | 3,864 | 21,833 |
| Downward | 195,939 | 99,883 | 98,006 | 59,093 | 38,913 | 4,993 | 25,070 |
| All | 397,514 | 182,537 | 178,940 | 109,556 | 69,384 | 8,857 | 46,903 |

**Table 2**

Investor conferences and characteristics of analyst research

   This table describes research output characteristics for different analyst, broker, and firm types. The details of the variable construction are presented in the Appendix. The sample includes stock recommendations and earnings forecasts over the 2004-2010 sample period with non-missing data: 49,953 recommendation changes in Panel A and 178,940 earnings forecast revisions in Panel B. *Host* (*Non-Host*) refers to a recommendation change or forecast revision on a firm that the broker has (has never) hosted at a conference. *Host Post-Conference Qtr (Non-Host Post-Conference Qtr)* is the subset of *Host* (*Non-Host*) recommendations or forecast revisions issued in the 63 trading day post-conference period. Post-conference difference reports the difference between *Host Post-Conference Qtr* and *Non-Host Post-Conference Qtr*. The last column reports the t-statistic testing whether the difference in Column 5 is significantly different from zero. The t-statistic is based on standard errors clustered by analyst and firm.

| Characteristic | *Non-Host* (1) | *Host* (2) | *Host Post-Conference Qtr* (3) | *Non-Host Post-Conference Qtr* (4) | Post-Conference Difference (3)-(4) (5) | t-stat (Post-conference difference) (6) |
|---|---|---|---|---|---|---|
| Panel A: Recommendation changes | | | | | | |
| Upgrade | 0.49 | 0.51 | 0.47 | 0.49 | -0.02 | (-1.52) |
| Excess optimism | 0.17 | -2.01 | -0.51 | 0.75 | -1.27 | (-0.40) |
| All-star analyst | 0.08 | 0.19 | 0.19 | 0.08 | 0.11 | (6.21) |
| Affiliated broker | 0.02 | 0.08 | 0.09 | 0.02 | 0.08 | (9.46) |
| Concurrent forecast | 0.18 | 0.17 | 0.16 | 0.18 | -0.01 | (-1.05) |
| Pre-earnings | 0.15 | 0.15 | 0.14 | 0.16 | -0.02 | (-2.23) |
| Post-earnings | 0.19 | 0.16 | 0.14 | 0.19 | -0.05 | (-5.05) |
| Away from consensus | 0.50 | 0.52 | 0.54 | 0.52 | 0.03 | (2.64) |
| Past forecast accuracy | 2.52 | 2.54 | 2.46 | 2.51 | -0.05 | (-1.16) |
| Firm experience | 0.22 | 0.54 | 0.54 | 0.20 | 0.35 | (4.30) |
| Total experience | 7.29 | 7.69 | 7.65 | 7.30 | 0.36 | (1.55) |
| Broker size | 46.99 | 90.21 | 87.51 | 44.23 | 43.28 | (9.53) |
| Book-to-market | 0.56 | 0.52 | 0.49 | 0.52 | -0.03 | (-1.42) |
| Size (billions of dollars) | 10.74 | 7.62 | 5.84 | 12.76 | -6.92 | (-10.75) |
| Turnover (percent) | 14.28 | 13.32 | 14.51 | 15.44 | -0.94 | (-2.17) |
| Volatility (percent) | 2.99 | 3.07 | 3.06 | 2.98 | 0.07 | (1.12) |
| $Momentum_{21}$ (percent) | 0.98 | 1.21 | 1.31 | 0.66 | 0.66 | (1.40) |
| $Momentum_{21-252}$ (percent) | 13.07 | 11.83 | 12.33 | 13.23 | -0.90 | (-0.38) |
| Analyst coverage | 16.25 | 15.35 | 14.75 | 18.63 | -3.88 | (-7.30) |
| Conference participation | 3.33 | 4.87 | 6.06 | 5.41 | 0.65 | (4.52) |

Panel B: Earnings forecast revisions

| | | | | | | |
|---|---|---|---|---|---|---|
| Upgrade | 0.46 | 0.44 | 0.44 | 0.47 | -0.03 | (-3.75) |
| Excess optimism | -0.29 | 1.05 | 1.00 | 0.65 | 0.35 | (0.18) |
| All-star analyst | 0.12 | 0.24 | 0.24 | 0.11 | 0.12 | (6.55) |
| Affiliated broker | 0.03 | 0.10 | 0.11 | 0.03 | 0.08 | (12.46) |
| Concurrent recommendation | 0.06 | 0.05 | 0.05 | 0.06 | -0.01 | (-3.11) |
| Pre-earnings | 0.17 | 17.89 | 0.18 | 0.18 | 0.00 | (0.12) |
| Post-earnings | 0.25 | 0.2 | 0.19 | 0.24 | -0.05 | (-6.08) |
| Away from consensus | 0.41 | 0.45 | 0.45 | 0.42 | 0.03 | (4.23) |
| Past forecast accuracy | 2.48 | 2.41 | 2.43 | 2.48 | -0.05 | (-2.43) |
| Firm experience | 0.17 | 0.44 | 0.54 | 0.12 | 0.42 | (3.47) |
| Total experience | 7.55 | 7.75 | 7.84 | 7.55 | 0.29 | (1.31) |
| Broker size | 66.41 | 103.42 | 96.55 | 65.38 | 31.16 | (8.73) |
| Book-to-market | 0.62 | 0.58 | 0.56 | 0.60 | -0.04 | (-2.08) |
| Size (millions) | 13.18 | 11.48 | 10.82 | 15.10 | -4.28 | (-5.80) |
| Turnover (percent) | 13.86 | 13.97 | 13.77 | 14.96 | -1.19 | (-3.99) |
| Volatility (percent) | 2.84 | 2.94 | 2.96 | 2.86 | 0.09 | (2.02) |
| $\text{Momentum}_{21}$ (percent) | 0.39 | 0.05 | -0.15 | 0.32 | -0.47 | (-1.97) |
| $\text{Momentum}_{21\text{-}252}$ (percent) | 10.67 | 9.62 | 8.75 | 10.24 | -1.48 | (-1.56) |
| Analyst coverage | 17.66 | 16.98 | 16.20 | 20.14 | -3.93 | (-12.21) |
| Conference participation | 2.9 | 4.55 | 5.85 | 4.85 | 1.00 | (10.14) |

**Table 3**

Investor conferences and abnormal returns around analyst research: univariate evidence

This table reports the buy-and-hold abnormal returns for different horizons following recommendation changes (Panels A and B) and earnings forecast revisions (Panels C and D). Recommendations and forecasts are grouped into four categories: *Host* (*Non-Host*) refers to a recommendation change or forecast revision on a firm that the broker has (has never) hosted at a conference. *Host Post-Conference Qtr (Non-Host Post-Conference Qtr)* is the subset of *Host* (*Non-Host*) recommendations or forecast revisions issued in the 63 trading day post-conference period. Host difference and Post-conference difference report differences in means for (*Host – Non-Host*) and (*Host Post-Conference Quarter – Non-Host Post-Conference Quarter*). Abnormal return is measured as the raw return less the return on a *Size-Book-to-market-Momentum* matched portfolio. Abnormal returns are computed over four different holdings periods. For example, [0, 1] reflects the buy-and-hold abnormal return over the event day and the day after the event. Similarly, [2, 21] reflects the abnormal return summed from the second day after the event to 21 days after the event. The sample spans 2004–2010. Statistical significance is based on standard errors clustered by firm and analyst. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

| Revision Type | Number of observations | [0, 1] | [2, 21] | [22, 63] | [0, 63] |
|---|---|---|---|---|---|
| **Panel A: Upgrade recommendation changes** | | | | | |
| *Host* | 9,191 | 3.15*** | 0.23* | 0.11 | 3.43*** |
| *Non-Host* | 15,726 | 2.06*** | 0.17* | -0.04 | 2.13*** |
| *Host_Post-Conf_Qtr* | 1,195 | 3.59*** | 0.18 | -0.55 | 3.20*** |
| *Non-Host_Post-Conf_Qtr* | 7,295 | 1.74*** | 0.11 | -0.21 | 1.56*** |
| Host difference | | 1.09*** | 0.06 | 0.15 | 1.29** |
| Post-conference difference | | 1.85*** | 0.07 | -0.34 | 1.64** |
| **Panel B: Downgrade recommendation changes** | | | | | |
| *Host* | 8,793 | -2.85*** | -0.54*** | -0.54*** | -3.98*** |
| *Non-Host* | 16,243 | -1.78*** | -0.50*** | -0.32* | -2.67*** |
| *Host_Post-Conf_Qtr* | 1,329 | -3.05*** | -0.47 | -0.95* | -4.75*** |
| *Non-Host_Post-Conf_Qtr* | 7,573 | *-1.69\*\*\** | *-0.37\*\*\** | *-0.28* | *-2.39\*\*\** |
| Host difference | | *-1.07\*\*\** | *-0.04* | *-0.22* | *-1.31\*\*\** |
| Post-conference difference | | *-1.37\*\*\** | *-0.10* | *-0.68* | *-2.36\*\*\** |
| **Panel C: Upward forecast revisions** | | | | | |
| *Host* | 30,471 | 0.84*** | 0.29*** | 0.02 | 1.09*** |
| *Non-Host* | 50,463 | 0.59*** | 0.19*** | 0.01 | 0.72*** |
| *Host_Post-Conf_Qtr* | 3,864 | 0.98*** | 0.44** | -0.39** | 0.97*** |
| *Non-Host_Post-Conf_Qtr* | 21,833 | 0.51*** | 0.03 | -0.07 | 0.40** |
| Host difference | | 0.25*** | 0.10 | 0.01 | 0.38*** |
| Post-conference difference | | 0.47*** | 0.41** | -0.32 | 0.57* |
| **Panel D: Downward forecast revisions** | | | | | |
| *Host* | 38,913 | -0.79*** | -0.43*** | -0.18** | -1.47*** |
| *Non-Host* | 59,093 | -0.62*** | -0.40*** | -0.25*** | -1.35*** |
| *Host Post-Conf Qtr* | 4,993 | -0.89*** | -0.85*** | -0.35* | -2.09*** |
| *Non-Host Post-Conf Qtr* | 25,070 | -0.55*** | -0.40*** | -0.20* | -1.27*** |
| Host difference | | -0.17*** | -0.03 | 0.07 | -0.12 |
| Post-conference difference | | -0.34** | -0.45** | -0.14 | -0.82*** |

**Table 4**

Investor conferences and the market response to analyst research

   This table reports the results from the regression

$$CAR_i = \alpha + \beta_1 Host_i + \beta_2 Host\_Post\text{-}Conf\_Qtr_i + \beta_3 Non\text{-}Host\_Post\text{-}Conf\_Qtr_i + \boldsymbol{\beta_4 Controls_i} + \varepsilon_i.$$

$CAR_i$ is the two-day cumulative abnormal return following a recommendation change or a forecast revision. *Host* (*Non-Host*) refers to research on a firm that the broker has (has never) hosted at a conference. *Host_Post-Conference Qtr (Non-Host Post-Conference Qtr)* is the subset of *Host* (*Non-Host*) recommendations or forecast revisions issued in the 63 trading day post-conference period. Post-conference difference tests whether *Host_Post-Conf_Qtr* research is more informative than *Non-Host_Post-Conf_Qtr* research (i.e., $\beta_1 + \beta_2 - \beta_3 > 0$). *Controls* is a vector of recommendation, analyst, broker, and firm characteristics, defined in the Appendix. Recommendation upgrades and downgrades are examined separately in Specifications 1 and 2. Specification 3 pools upgrades and downgrades (returns on downgrades are multiplied by -1) and adds analyst-firm fixed effects. Specifications 4–6 analyze forecast revisions in a similar way. Standard errors are clustered by analyst and firm, and t-statistics are reported below each estimate.

| Explanatory Variable | Recommendation changes | | | Forecast revisions | | |
|---|---|---|---|---|---|---|
| | Upgrade (1) | Downgrade (2) | Pooled (3) | Upward (4) | Downward (5) | Pooled (6) |
| Intercept | 1.56 | -1.10 | | 0.61 | -0.71 | |
| | (12.22) | (-7.53) | | (13.60) | (-13.96) | |
| *Host* | 0.35 | -0.46 | 0.66 | 0.15 | -0.10 | 0.06 |
| | (3.83) | (-4.63) | (3.57) | (3.95) | (-2.10) | (0.65) |
| *Host_Post-Conference_Qtr* | 0.33 | -0.25 | 0.34 | 0.11 | -0.10 | 0.09 |
| | (2.09) | (-1.53) | (2.35) | (1.67) | (-1.53) | (1.71) |
| *Non-Host_Post-Conference_Qtr* | -0.13 | 0.08 | -0.11 | -0.03 | 0.03 | 0.00 |
| | (-1.58) | (0.92) | (-1.32) | (-0.58) | (0.54) | (0.00) |
| *Upgrade* | | | 0.19 | | | 0.03 |
| | | | (3.29) | | | (0.87) |
| *Excess optimism* | 0.00 | 0.04 | 0.02 | 0.05 | 0.07 | -0.02 |
| | (-0.12) | (0.89) | (0.37) | (2.85) | (3.62) | (-0.98) |
| *Abs(Rec change)* or *Abs(Rev/Price)* | 0.45 | -0.46 | 0.72 | 0.08 | -0.26 | 0.21 |
| | (6.99) | (-6.48) | (6.82) | (4.15) | (-10.34) | (10.13) |
| *All-star analyst* | 0.20 | -0.11 | 1.46 | -0.02 | -0.06 | 0.49 |
| | (1.77) | (-1.03) | (1.76) | (-0.44) | (-1.17) | (2.86) |
| *Affiliated broker* | 0.48 | -0.22 | 0.69 | 0.12 | 0.15 | -0.25 |
| | (2.86) | (-1.32) | (1.48) | (1.93) | (2.11) | (-1.54) |
| *Concurrent for.* or *Concurrent rec.* | 0.55 | -0.83 | 0.74 | 1.94 | -1.63 | 1.75 |
| | (7.42) | (-9.18) | (9.12) | (25.80) | (-20.12) | (27.34) |
| *Pre-earnings* | -0.04 | 0.03 | -0.03 | -0.05 | 0.16 | -0.12 |
| | (-0.47) | (0.41) | (-0.37) | (-1.04) | (3.24) | (-3.40) |
| *Post-earnings* | -0.46 | 0.70 | -0.36 | -0.40 | 0.47 | -0.35 |
| | (-6.27) | (8.44) | (-5.02) | (-9.56) | (8.90) | (-9.82) |
| *Away from consensus* | 0.26 | -0.69 | 0.48 | 0.13 | -0.10 | 0.09 |
| | (3.51) | (-10.45) | (8.76) | (4.34) | (-2.71) | (3.70) |
| *Past forecast accuracy* | -0.07 | 0.07 | -0.04 | -0.04 | 0.02 | -0.02 |
| | (-2.63) | (2.75) | (-1.12) | (-3.90) | (1.66) | (-1.77) |
| *Firm experience* | 0.07 | -0.06 | 0.06 | 0.03 | 0.01 | -0.02 |
| | (1.99) | (-1.92) | (0.54) | (2.04) | (0.62) | (-0.31) |
| *Total experience* | -0.01 | -0.04 | -0.51 | -0.02 | 0.00 | -0.08 |
| | (-0.32) | (-0.97) | (-3.03) | (-0.95) | (0.07) | (-0.77) |
| *log(Broker size)* | 0.46 | -0.31 | 0.27 | 0.03 | -0.04 | -0.01 |
| | (10.01) | (-7.67) | (2.81) | (2.12) | (-2.22) | (-0.20) |
| Firm controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Fixed effects | No | No | Analyst-firm | No | No | Analyst-firm |
| Number of observations | 24,917 | 25,036 | 49,953 | 80,934 | 98,006 | 178,940 |
| Adjusted $R^2$ | 8.49% | 6.67% | 57.31% | 3.12% | 2.13% | 22.77% |
| Within $R^2$ | | | 2.43% | | | 1.45% |
| Post-conference difference | 0.81 | -0.79 | 1.10 | 0.29 | -0.23 | 0.14 |
| | (4.87) | (-4.85) | (4.93) | (4.07) | (-3.40) | (1.58) |

**Table 5**

Hosting frequency and the market response to recommendation changes

This table reports the results of regressing two-day abnormal returns following recommendation changes on indicator variables related to the source and timing of the report. Recommendations are grouped into categories related to brokers hosting investor conferences. *Host1* is an indicator variable equal to one if the issuing analyst works at a broker that hosted the recommended firm once during the sample period. Similarly, *Host2-3 (Host4-5)* is equal to one if the issuing analyst hosted the recommended firm two or three (four or five) times, and *Host>5* is equal to one if the issuing analyst hosted the recommended firm more than five times. *Host_Post-Conference_Qtr (Non-Host Post-Conference_Qtr)* is the subset of *Host* (*Non-Host*) recommendations or forecast revisions issued in the 63 trading day post-conference period. The regression contains all control variables included in Table 4, but for brevity their coefficients are unreported. Specification 1 (2) reports the results for upgrades (downgrades) and Specification 3 pools upgrades and downgrades (multiplying the return on downgrades by -1) and adds analyst-firm fixed effects. Standard errors are clustered by analyst and firm, and t-statistics are reported below each estimate.

| Explanatory Variable | Upgrades (1) | Downgrades (2) | Pooled (3) |
|---|---|---|---|
| Intercept | 1.55 | -1.09 | |
| | (12.10) | (-7.47) | |
| *Host1* | 0.12 | -0.38 | 0.47 |
| | (1.17) | (-2.99) | (2.09) |
| *Host2–3* | 0.37 | -0.50 | 0.71 |
| | (3.38) | (-4.13) | (2.81) |
| *Host4–5* | 0.72 | -0.47 | 0.99 |
| | (4.92) | (-2.99) | (2.34) |
| *Host>5* | 0.72 | -0.78 | 1.44 |
| | (3.80) | (-4.20) | (3.13) |
| *Host_Post-Conference_Qtr* | 0.22 | -0.20 | 0.32 |
| | (1.37) | (-1.20) | (2.22) |
| *Non-Host_Post-Conference_Qtr* | -0.11 | 0.07 | -0.10 |
| | (-1.31) | (0.80) | (-1.25) |
| Controls | Yes | Yes | Yes |
| Fixed effects | No | No | Analyst-firm |
| Number of observations | 24,917 | 25,036 | 49,953 |
| Adjusted $R^2$ | 8.57% | 6.68% | 57.32% |
| Within $R^2$ | | | 2.47% |

**Table 6**
Investor conferences and the market response to recommendation changes: event-time analysis
   This table reports the results of regressing two-day abnormal returns following recommendation changes on indicator variables related to the source and timing of report. For analysts working at brokers that host a firm at an investor conference, the *Post-conference* period is categorized (using indicator variables) into *Quarter 1* (trading days 2–63)), *Quarter 2* (trading days 64–126), *Quarter 3* (days 127–189), *Quarter 4* (days 190–252), and *>Quarter 4* (days >252). We include *Pre-conference [Quarter -1],* which reflects recommendations made one quarter prior to the firm participating at the conference. We also add a *Pre-conference* dummy that captures any host recommendations that do not fall into one of the above categories. The regression includes the full set of controls as in Table 4. For brevity the coefficients on the control variables are unreported. Specification 1 (2) reports the results for upgrades (downgrades), and Specification 3 pools upgrades and downgrades (multiplying the return on downgrades by -1) and adds analyst-firm fixed effects. Standard errors are clustered by analyst and firm, and t-statistics are reported below each estimate.

| Explanatory Variable | Upgrades | Downgrades | Pooled |
| --- | --- | --- | --- |
| | (1) | (2) | (3) |
| Intercept | 1.56 | -1.08 | |
| | (12.28) | (-7.42) | |
| *Host* | | | |
| *Pre-conference [< Quarter -1]* | 0.21 | -0.40 | 0.37 |
| | (2.04) | (-3.30) | (2.08) |
| *Pre-conference [Quarter -1]* | 0.50 | -0.21 | 0.49 |
| | (3.39) | (-1.26) | (2.71) |
| *Post conference [Quarter 1]* | 0.68 | -0.74 | 0.98 |
| | (3.99) | (-4.31) | (4.57) |
| *Post conference [Quarter 2]* | 0.34 | -0.83 | 0.66 |
| | (1.99) | (-4.46) | (2.82) |
| *Post conference [Quarter 3]* | 0.81 | -0.71 | 0.96 |
| | (4.08) | (-3.56) | (4.17) |
| *Post conference [Quarter 4]* | 0.06 | -0.25 | 0.23 |
| | (0.29) | (-1.12) | (0.98) |
| *Post conference [ > 1 year]* | 0.20 | -0.42 | 0.63 |
| | (1.54) | (-2.73) | (3.05) |
| *Non-host post conference [Quarter 1]* | -0.12 | 0.05 | -0.10 |
| | (-1.46) | (0.56) | (-1.30) |
| Controls | Yes | Yes | Yes |
| Fixed effects | No | No | Analyst-firm |
| Number of observations | 24,917 | 25,036 | 49,953 |
| Adjusted $R^2$ | 8.56% | 6.72% | 57.34% |
| Within $R^2$ | | | 2.50% |

**Table 7**
Investor conferences and forecast accuracy
  Specification 1 reports the results of the panel regression
  $PMAFE_{i,j,t} = \alpha + \beta_1 Host_{i,j,t} + \beta_2 Host\_Post\text{-}Conf\_Qtr_{i,j,t} + \beta_3 Non\text{-}Host\_Post\text{-}Conf\_Qtr_{i,j,t} + \boldsymbol{\beta_4 Controls_{i,j,t}} + \varepsilon_{i,j,t}$
*PMAFE* is the proportional mean forecast accuracy defined as the *Absolute forecast error* for analyst *i*'s forecast
of firm *j* for year *t* earnings less the mean absolute forecast error (across all analysts for firm *j* in year *t*), scaled by
the mean absolute forecast error (multiplied by one hundred). *Host* (*Non-Host*) refers to a recommendation change
on a firm that the broker has (has never) hosted at a conference. *Host Post-Conference Qtr (Non-Host Post-
Conference Qtr)* is the subset of *Host* (*Non-Host*) recommendations or forecast revisions issued in the 63 trading
day post-conference period. Post-conference difference*,* below the main regression estimates, tests whether
conference hosts' earnings estimates are more accurate than non-hosts during the post-conference period (i.e., $\beta_1 +$
$\beta_2 - \beta_3 < 0$). Controls include earnings estimate, analyst, and broker characteristics. The definitions of all control
variables are in the Appendix. Specification 2 adds firm-year fixed effects, and Specification 3 adds analyst and
firm-year fixed effects. The sample includes 353,871 earnings forecasts from 2004–2010. Standard errors are
clustered by analyst and firm, and t-statistics are reported below each estimate.

| Explanatory Variable | (1) | (2) | (4) |
|---|---|---|---|
| Intercept | 0.21 | | |
| | (0.95) | | |
| *Host* | -0.45 | -0.20 | -0.15 |
| | (-1.14) | (-0.46) | (-0.11) |
| *Host_Post-Conf_Qtr* | -4.46 | -3.57 | -4.31 |
| | (-6.16) | (-4.83) | (-4.53) |
| *Non-Host_Post-Conf_Qtr* | 0.10 | 0.41 | 0.19 |
| | (0.29) | (1.01) | (0.40) |
| *Firm experience* | -0.96 | -1.26 | -5.01 |
| | (-4.28) | (-5.01) | (-5.21) |
| *Total experience* | -0.54 | -0.50 | -1.41 |
| | (-2.49) | (-2.22) | (-1.09) |
| *log(Broker size)* | -0.28 | -0.73 | 0.59 |
| | (-1.44) | (-3.51) | (1.00) |
| *Forecast age* | 31.04 | 32.61 | 33.47 |
| | (183.01) | (182.60) | (159.53) |
| *Forecast frequency* | 0.13 | -0.65 | -0.50 |
| | (0.65) | (-2.70) | (-1.32) |
| *Firms followed* | 0.15 | 0.31 | 0.71 |
| | (0.76) | (1.43) | (1.44) |
| Fixed effects | None | Firm-year | Analyst and firm-year |
| Adjusted $R^2$ | 14.48% | 14.33% | 21.52% |
| Post-conference difference | -5.01 | -4.18 | -4.65 |
| | (-6.86) | (-5.56) | (-2.98) |

**Table 8**
Investor conferences and forecast timeliness

Specification 1 reports the results of the panel regression

$$LFR_{i,j,t} = \alpha$$
$$+ \beta_1 Host_{i,j,t} + \beta_2 Host\_Post\text{-}Conf\_Qtr_{i,j,t} + \beta_3 Non\text{-}Host\_Post\text{-}Conf\_Qtr_{i,j,t} + \boldsymbol{\beta_4 Controls_{i,j,t}} + \varepsilon_{i,j,t}$$

*LFR* is the leader-follower ratio computed as the ratio of the number of days by which analyst *i*'s forecast of firm *j* lags the prior two forecasts to the days by which the forecast leads the next two forecasts. *Host* (*Non-Host*) refers to a recommendation change on a firm that the broker has (has never) hosted at a conference. *Host Post-Conference Qtr (Non-Host Post-Conference Qtr)* is the subset of *Host* (*Non-Host*) recommendations or forecast revisions issued in the 63 trading day post-conference period. Post-conference difference, below the main regression estimates, tests whether conference hosts' earnings forecasts are more timely than non-hosts during the post-conference period (i.e. $\beta_1 + \beta_2 - \beta_3 < 0$). Controls include earnings estimate, analyst, and broker characteristics. The definitions of all control variables are in the Appendix. Specification 2 adds firm-year fixed effects, and Specification 3 adds analyst and firm-year fixed effects. The sample includes 353,871 earnings forecasts over the 2004–2010 sample period. Standard errors are clustered by analyst and firm, and t-statistics are reported below each estimate.

| Explanatory Variable | (1) | (2) | (3) |
|---|---|---|---|
| Intercept | 2.11 | 0.00 | 0.00 |
| | (213.45) | . | . |
| *Host* | 0.23 | 0.11 | 0.02 |
| | (12.18) | (5.56) | (0.32) |
| *Host_Post-Conf_Qtr* | 0.16 | 0.15 | 0.15 |
| | (3.64) | (3.50) | (2.80) |
| *Non-Host_Post-Conf_Qtr* | -0.02 | -0.03 | -0.01 |
| | (-1.71) | (-1.57) | (-0.66) |
| *Firm experience* | 0.09 | 0.06 | -0.08 |
| | (9.10) | (6.08) | (-2.11) |
| *Total experience* | 0.02 | -0.00 | -0.28 |
| | (2.10) | (-0.59) | (-5.40) |
| *log(Broker size)* | 0.17 | 0.18 | 0.12 |
| | (23.92) | (27.49) | (5.33) |
| *Forecast age* | -0.31 | -0.33 | -0.31 |
| | (-49.73) | (-51.19) | (-38.46) |
| *Forecast frequency* | -0.04 | 0.13 | 0.11 |
| | (-4.72) | (16.72) | (9.59) |
| *Firms followed* | -0.06 | -0.04 | 0.08 |
| | (-8.78) | (-5.18) | (4.88) |
| Fixed effects | None | Firm-year | Analyst and firm-year |
| Adjusted $R^2$ | 1.23% | 5.17% | 9.58% |
| Post-conference difference | 0.41 | 0.28 | 0.18 |
| | (9.57) | (6.74) | (2.31) |
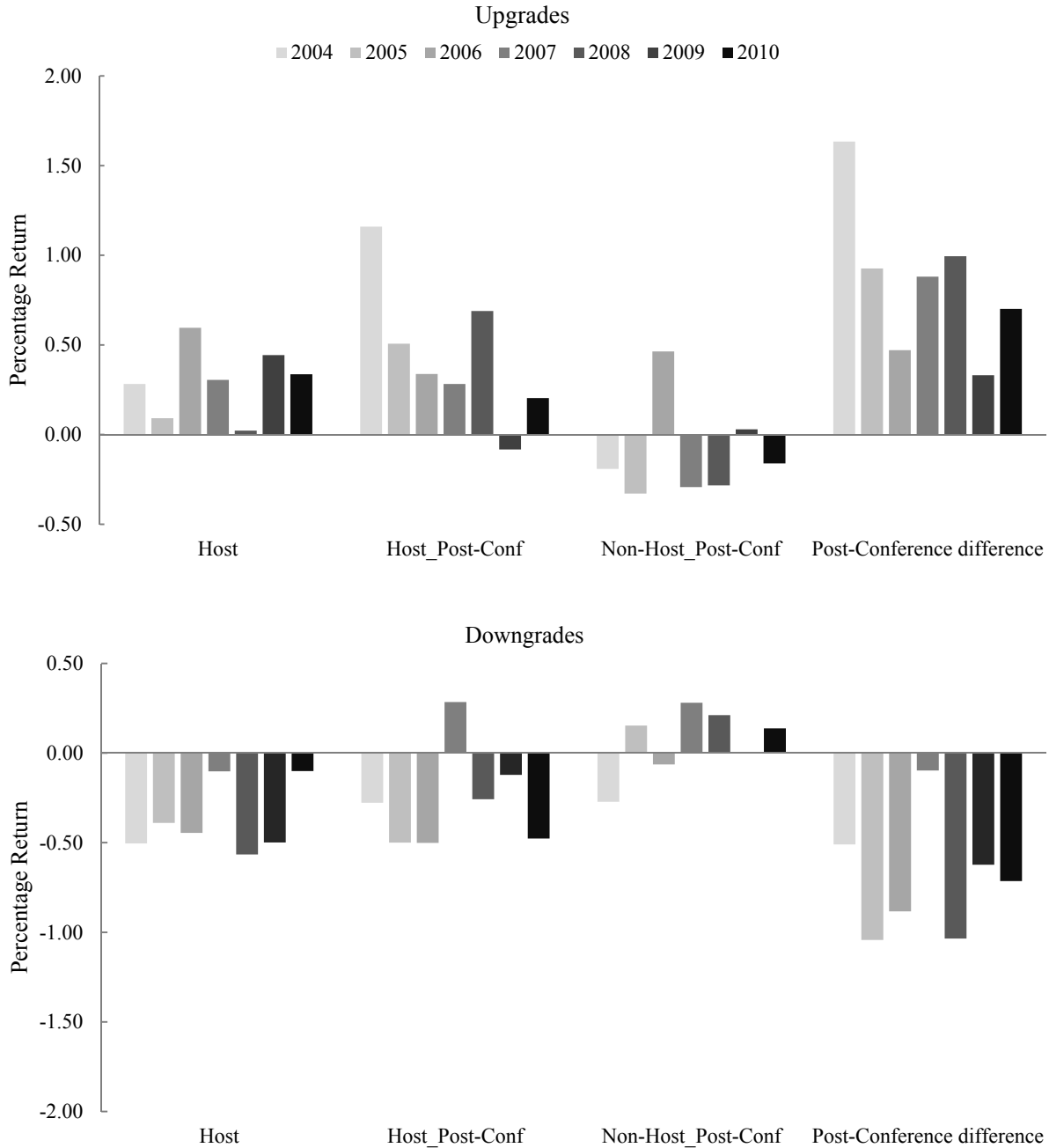
**Fig. 1.** Investor conferences and two-day abnormal returns around recommendation changes: time series. This figure plots the estimates of the panel regression

$$CAR_i = \alpha + \beta_1 Host_i + \beta_2 Host\_Post\text{-}Conf\_Qtr_i + \beta_3 Non\text{-}Host\_Post\text{-}Conf\_Qtr_i + \boldsymbol{\beta_4 Controls_i} + \varepsilon_i$$

$CAR_i$ equals the cumulative two-day abnormal return around a recommendation change. *Host* (*Non-Host*) refers to a recommendation change on a firm that the broker has (has never) hosted at a conference. *Host Post-Conference Qtr (Non-Host Post-Conference Qtr)* is the subset of *Host* (*Non-Host*) recommendations issued in the 63 trading day post-conference period. **Controls** is a vector that contains all of the recommendation, analyst, broker, and firm characteristics included as controls in specifications 1 and 2 of Table 4. The regression is estimated annually from 2004 to 2010. The figure plots the annual coefficients on *Host, Host_Post-Conf_Qtr,* and *Non-Host_Post-Conf_Qtr*, as well as the annual estimates of Post-conference difference, (i.e., $\beta_1 + \beta_2 - \beta_3$). Panel A reports the results for the upgrades (24,917 observations), and Panel B reports the results for downgrades (25,036 observations).
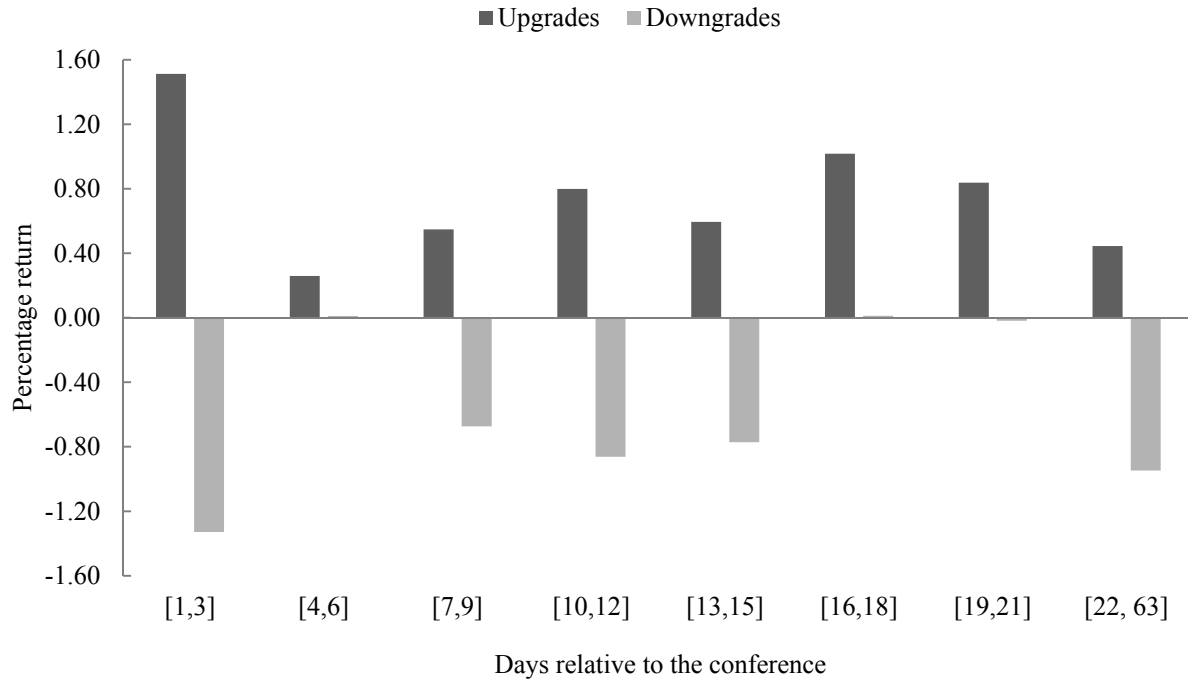
**Fig. 2.** Two-day abnormal returns around *Host* recommendation changes: event-period. This figure plots the coefficients on indicator variables reflecting the timing of host's research relative to the conference. Specifically, we modify Table 4's regression by including indicator variables that partition *Host_Post_Conf_Qtr* recommendations into recommendations that occur within the first month of the conference (days 1 to 21) and the remainder of the quarter (days 22 to 63). We further partition month 1 recommendations into three day intervals (i.e., days 1–3, day 4–6, etc.). The figure plots the coefficients on these indicator variables. The number of observations in the upgrades (downgrades) samples is 23,722 (23,707).