Non-Deal Roadshows, Informed Trading, and Analyst Conflicts of Interest

INTERNET APPENDIX

This internet appendix accompanies the article, "Non-Deal Roadshows, Informed Trading, and Analyst Conflicts of Interest." It consists of three sections. Section IA.1 provides more details on non-deal roadshows (NDRs) including a typical NDR calendar in our sample and firm characteristics around NDRs. Section IA.2 explores the representativeness of the *FLY's* NDR coverage, with a particular emphasis on whether FLY's incomplete coverage of NDRs could bias our main conclusions. Section IA.3 reports and discusses additional results briefly discussed in the body of the paper.

IA.1. Additional NDR characteristics

Table IA.1 provides a sample calendar for Microsoft during the 2013 calendar year. Microsoft participates in four distinct trips, sponsored by three different brokerage firms. They visit institutions in Europe, the US Northeast, US Midwest. and Toronto. When reporting the summary statistics in Table 1, we consider each firm-date-location as an NDR. Thus, these four trips would be classified as 14 NDRs because there are 14 distinct firm-date-location triples.

Figure IA.1 reports the timing of NDRs relative to the most recent earnings announcement. Specifically, for each NDR, we count the number of calendar days between the most recent earnings announcement date and the NDR. We then examine the fraction of all NDRs that occur between zero to 10 days after the earnings announcement, 11 to 20 days after the earnings announcement, etc. Figure IA.1 shows 46% of all NDRs occur within 30 days of the most recent quarterly earnings announcement, while only 13% occur more than 60 days after the earnings announcement. These findings are consistent with firms using NDRs as an opportunity to provide more context around their recent earnings report. The dearth of NDRs immediately prior to the earnings announcement is consistent with firms managing litigation risk by generally avoiding NDRs during periods where they may have relatively more material private information that they cannot legally disclose.

We also examine the frequency of major news events around NDRs. We collect media coverage intensity from *Bloomberg*. *Bloomberg* records the number of news articles released for a stock over the hour and then creates an hourly score by comparing the past eight-hour average count to all hourly counts over the previous 30 days for the same stock. A value of 0 indicates that the media coverage is in the lowest 80% of the hour counts relative to the previous 30 days. Similarly, *Bloomberg* assigns a score of 1, 2, 3, or 4 if the average is the value is in the 80% to 90%, 90% and 94%, 94 and 96%, or greater than the 96%. *Bloomberg* creates a daily score by taking the maximum of these hourly

scores. Figure IA.2 plots the average daily score in the [-30,30] window around NDRs. We report the news for (i) all days and (ii) all days excluding days within the [-5,5] window around earnings. We find that news coverage tends to be lower around NDRs, particularly when we include earnings announcements. This finding is consistent with the findings of Figure IA.1 and further reinforces the view that managers generally avoid NDRs during periods where the firm is more likely to be in the spotlight (e.g., right before earnings announcements or during periods of heavy media coverage).

Table IA.2 examines the distribution of market-adjusted returns in event time around NDRs. We examine returns over various event windows starting three months (i.e., 63 trading days) prior to the NDR and extending three months subsequent to the NDR. Firms that go on NDRs have typically experienced positive returns over the past several months. For example, the average return for NDR firms over the [-63, -1] window is 1.84%. We also find that the market-adjusted returns for firms conducting NDRs are 0.23% over the [0,1] window and 0.36% over the [0,5] window, suggesting that the market reaction to NDRs is typically positive. However, there is substantial dispersion in NDR returns. For example, over the [0,1] event window, the interquartile range is -1.22% to +1.54% and the median firm has a return of -0.22% over the [0,63] day window. Overall, this evidence is inconsistent with the view that managers choose to go on NDRs only when they have positive private information that they wish to convey to investors.

IA.2. Representativeness of the FLY Sample

While our sample of more than 40,000 NDRs is large, a limitation of our data is that *FLY* only reports a subset of NDR activity. This raises the important question of whether *FLY*'s NDR coverage has any systematic biases that would influence our results. In this section, we explore the severity of these concerns.

One potential concern is that *FLY* may redact or disclose more important NDRs *ex post*. To explore this possibility, every day during the month of August 2020 we recorded all NDRs posted on *FLY* that occurred or were scheduled to occur between August 1, 2020 and December 31, 2020. During this process, we found zero cases where *FLY* either redacted or added NDRs post-event.

A more general concern is that *FLY* coverage may not be representative of the universe of NDRs. To examine this possibility, we collected NDR data from two alternative sources. First, we purchased the email addresses of Fortune 1000 firms' Investment Relations Officers (IROs). After eliminating private firms and invalid email addresses, we were left with 557 IROs. We emailed all 557 of these IROs asking for their NDR calendars so that we could compare our data with theirs. Most IROs did not respond to our email, and the majority that did respond told us that they are unwilling

to share this data. The lack of response is consistent with the view that NDRs are a secretive event that firms try to conceal. Despite the general lack of support, 22 firms provided us with their NDR calendars. The sample includes 324 NDRs spanning 67 firm-years. Second, we expanded this sample through a contact at a large buy-side fund, who provided his full calendar of NDRs for 2018 (N= 237). Three NDRs appear in both samples, so our combined hand-collected sample includes 558 NDRs, of which 34% (189) are reported in *FLY*.

Using this sample, we explore two main questions. First, what are the determinants of *FLY* coverage? Second, to what extent does *FLY*'s incomplete NDR coverage affect the central findings of the paper?

IA.2.1. Determinants of FLY Coverage

We begin by examining whether *FLY* coverage is systematically correlated with firm characteristics. Specifically, for our hand-collected sample of 558 NDRs, we regress *FLY Coverage*, an indicator equal to one if the NDR was reported in *FLY,* onto the 17 firm characteristics included in Table 2. As in Table 2, we standardize all continuous variables to have mean zero and unit variance, and we cluster standard errors by firm and month. The results of this analysis are reported in Specification 1 of Table IA.3. Across the 17 variables considered, only two are statistically significant at a 5% level. Specifically, we find that *FLY* coverage is decreasing in *Intangibles* and increasing in the number of institutional investors holding the stock (#*Institutions*).[1]

In our email correspondences with IROs, some suggested that *FLY* primarily relies on leaks from brokerage firms. To test this conjecture, in Specification 2, we add brokerage fixed effects. We find that the *r*-squared jumps from 14.5% to 54.3%, confirming that *FLY* coverage is strongly related to the brokerage firm sponsoring the NDR. Further, after including brokerage fixed effects, only one firm characteristic (# *Institutions*) is significant at the 5% level, and no other variables are significant at the 10% level. The fact that # *Institutions* remains positive and significant is consistent with the idea that *FLY* obtains some of their data from leaks from the buy-side, with the additional assumption that firms with more institutional owners meet with more investors on their NDRs.

We next explore whether the explanatory power of the brokerage fixed effects is related to the brokers' reputations. In Specification 3, we drop broker fixed effects, and instead include *Bulge Bracket*,

[1] In untabulated tests, we also examine whether institutional trade informativeness, retail trade informativeness, and analyst optimism varies with *Intangibles* and # *Institutions*. We find virtually no evidence that institutional or retail trading informativeness varies with either variable. We find that target return bias is decreasing in both *Intangibles* and # *Institutions* (with very similar magnitudes). Thus, *FLY's* tilt towards firms with high intangibles and low # *Institutions* is unlikely to meaningfully bias our main findings.

an indicator equal to one if the brokerage firms is ranked as a bulge bracket bank by the Corporate Finance Institute.[2] We find that the coefficient on *Bulge Bracket* is small and statistically insignificant. Thus, while *FLY* coverage varies significantly across brokerage firms, there is no evidence that it varies with broker reputation. To provide a better sense for which brokers are included in the FLY sample, in Table IA.4 we tabulate the mean of *FLY Coverage* across the 9 bulge bracket brokerage firms and the 16 non-bulge bracket firms who sponsored at least 10 NDRs in our hand-collected NDR sample. The table further reinforces our view that *FLY* coverage is primarily a broker effect. For example, more than two-thirds of all NDRs sponsored by JP Morgan, Deutsche Bank, and UBS are reported in *FLY*. In contrast, none of the NDRs sponsored by Bank of America, Credit Suisse, Morgan Stanley, Goldman Sachs, Barclays, or Citi are reported by *FLY*.

IA.2.2. The impact of FLY's coverage on our results

In this section, we investigate the extent to which our central findings are affected by *FLY*'s incomplete NDR coverage by exploring whether our main findings vary with *FLY* coverage. In particular, within our hand-collected sample of 558 NDRs, we compare whether our results differ for NDRs reported by *FLY* (N=189) relative to NDRs excluded from *FLY* (N=369).

We examine whether *FLY*'s incomplete NDR coverage affects our analysis of institutional informed trading by estimating the following panel regression:

$$Ret_{it+x} = \beta_1 Local\ OIB_{it} + \beta_2 Local\ OIB_{it} \times Hand_{it} + \beta_3 Local\ OIB_{it} \times FLY\ Missing_{it} + B_4\, Hand_{it} + \beta_5 FLY\ Missing_{it} + B_6\, Non\text{-}Local\ OIB_{it} + \beta_7 Char_{it} + Qtr_t + \varepsilon_{it}. \quad \text{(IA.1)}$$

Ret_{it+x}, *Local OIB, Non-Local OIB*, and *Char* are all defined as in Equation 2. *Hand* is an indicator equal to one if the NDR is included in the hand-collected NDR sample described in Section IA.2.1, and *FLY Missing* is an indicator equal to one if the NDR was included in the hand-collected NDR sample but was not included in *FLY*. The coefficient of primary interest is β_3, which measures whether the informativeness of local institutional trading around NDRs differs significantly for NDRs excluded from *FLY* relative to the other NDRs in the hand-collected sample.

[2] The indicator equals one for the following nine brokerage firms: Bank of America, Barclays, Citigroup, Credit Suisse, Deutsche Bank, Goldman Sachs, JPMorgan Chase, Morgan Stanley, and UBS.

Specification 1 of Table IA.5 reports the results for one-quarter ahead returns. We find that the coefficient on *Local OIB*× *FLY Missing* is economically small and statistically insignificant.[3] The point estimate implies that a one-standard deviation increase in *Local OIB* is associated with 0.10% higher returns for NDRs not reported in *FLY* relative to those NDRs reported in *FLY*. The estimate for two- to four-quarter ahead returns are also always statistically insignificant. While the statistically insignificant results may be a consequence of the relatively small number of NDRs within the hand-collected sample, the typically positive point estimates on β_3 suggests that, if anything, the informativeness of local institutional trading is slightly larger for NDRs omitted from the FLY.

We next conduct analogous tests for retail trading informativeness by estimating the following regression:

$$Ret_{it+x} = \beta_1 Retail\ OIB_{it} + \beta_2 Retail\ OIB_{it} \times NDR_{it,t-10} + \beta_3 Retail\ OIB_{it} \times Hand_{it} + \beta_4 Retail\ OIB_{it} \times FLY\ Missing_{it} + \beta_5 NDR_{t,t-10} + B_6\ Hand + \beta_7 FLY\ Missing_{it} + B_8 Retail\ OIB_{it} \times Conf_{t,t-10} + \beta_9 Conf_{t,t-10} + \beta_{10} Char_{it} + \beta_{11} Retail\ OIB_{it} \times Char_{it-} + Day_t + \varepsilon_{it..} \quad \text{(IA.2)}$$

All variables are defined as in Equation 3 or Equation IA.1. The estimates from Equation IA.2 are reported in Table IA.6. We find that the coefficient on *Retail OIB* × *FLY Missing* is always statistically insignificant.

Finally, we consider analogous tests for analyst optimism. Specifically, we estimate the following regression:

$$Optimism_{jit} = \beta_1 NDR3_{jit} + \beta_2 Hand_{jit} + \beta_3 FLY\ Missing_{jit} + \beta_4 Conf3_{jit} + \beta_5 Affiliated3_{jit} + \beta_6 Controls + FE + \varepsilon_{jit.} \quad \text{(IA.3)}$$

All variables are defined as in Equation 5 and Equation IA.1. The results from Equation IA.3 are reported in Table IA.7. We find that in all four specifications the coefficient on *FLY Missing* always suggests that optimism is greater for NDRs not reported in *FLY*, and the point estimate is marginally significant ($p \leq 0.10$) in two of the four specifications. It is possible that the brokers that allow their NDR activity to most strongly influence their equity research might be the least willing to leak their NDR activity to *FLY*.

Summarizing, our analysis in this section suggests that any bias due to *FLY*'s incomplete coverage of NDRs is small, and if anything, likely slightly attenuates our main findings.[4]

[3] The coefficient on *Local OIB*× *Hand* is negative and marginally significant ($p < 0.10$). This could be consistent with IROs who work for firms that tend to provide more valuable information during NDRs being more reluctant to provide us with their full calendar of NDRs.

[4] Across the three tables, we test 13 coefficients. Of the 13 coefficients, 11 of the estimates are insignificant at a 10% level. The remaining two variables are marginally significant ($p \leq 0.10$) and suggest our main findings are understated.

IA.3. Additional Results

IA.3.1. Retail Trading Informativeness – Robustness Tests

In Table 6, we define *NDR* as an indicator variable equal to one if the firm has participated in an NDR over the past 10 trading days. In this section, we explore the sensitivity of our findings to alternative event windows. Specifically, we re-estimate Equation 3 after defining *NDR* (and *Conf*) using a one-week (i.e., 5-day), one-month (i.e., 21-day), or one-quarter (i.e., 63-day) event window. The results are reported in Table IA.8. We find the estimate on *Retail OIB* × *NDR* is at least marginally significant ($p \leq 0.10$) for all horizons. The coefficient on *Retail OIB* × *NDR* tends to decline (in absolute value) as the horizon increases. Specifically, the coefficients for the 5-day, 10-day, 21-day, and 63-day windows are: -0.028%, -0.041%, -0.025%, and -0.012%, respectively. The generally declining point estimates suggest that most informed institutional trades occur within a two-week window after the NDR. However, the (marginally) significantly negative estimates for horizons of up to one-quarter are consistent with at least some institutions obtaining a relatively long-lived informational advantage following the NDR.

As an additional robustness test, we compare the informativeness of retail trading in NDR stocks during the NDR period to their trading in NDR stocks in periods prior to and after the NDR. We create placebo NDR dates by shifting the timing of the NDR plus or minus three quarters. For example, the plus 1 (2) quarter placebo date shifts the NDR date by 63 (126) trading days. We then re-estimate Specification 1 of Equation 3 around each of the placebo periods and report the estimate on *Retail OIB* × *NDR* and the 95% confidence intervals in Figure IA.3. The estimates are always statistically insignificant and economically small (with a mean of -0.7 bps) relative to the estimate during the 10-days following the NDR (-4.1 bps).[5] These findings suggest that the large negative coefficient on *Retail OIB* × *NDR* is attributable to NDR itself rather than some omitted variable (e.g., retail investors being particularly bad at trading the types of firms that attend NDRs).

IA.3.2. NDRs and the Informativeness of Trades through the Sponsoring Broker

Section 5 of the paper documents a spike in trades routed through the sponsoring broker in the weeks following the NDR. In this section, we examine whether the trades routed through the sponsoring broker are more informed than trades routed through other brokers. We define a trade as occurring around an NDR if an NDR took place at any point between days *t-10* and *t*. We limit the

[5] Similar to Figure 2, we find no evidence that retail investors are at an informational disadvantage in the three quarters prior to the NDR (mean = 0.0 bps), and very weak evidence of an information disadvantage in the three quarters after the NDR (mean = -1.4 bps).

sample to NDR days with non-zero trading in the sponsoring broker. The final sample includes 1,368 unique NDRs and 5,471 firm-days.

For each day, we compute *Sponsoring Broker OIB* as the total shares of firm *i* bought through the sponsoring broker on day *t* less the total shares of firm *i* sold through the sponsoring broker on day *t*, scaled by total trading volume in firm *i* through the sponsoring broker on day *t*. We compute an analogous measure based on trades through all other brokers (*Non-Sponsoring Broker OIB*).

We first consider portfolio sorts. At the end of each day, we place stocks into two portfolios based on whether *Sponsoring Broker OIB* is greater than zero (*Sponsor Buys*) or less than zero (*Sponsor Sells*), and we report the average return to the strategy of buying stocks in the *Sponsor Buy* portfolio and selling stocks in the *Sponsor Sell* portfolio. We also consider analogous tests based on *Non-Sponsoring Broker OIB*. Figure IA.4 plots the returns to these strategies over the subsequent 12 weeks. We find *Sponsor Buys* outperform *Sponsor Sells* by 0.17% over the subsequent 12 weeks, while *Non-Sponsor Buys* underperform *Non-Sponsor Sells* by 0.48% over the same period.

We also examine the informativeness of trades executed through the sponsoring and non-sponsoring brokers using the following panel regression:

$$Ret_{it+x} = \alpha + \beta_1 Sponsoring\ Buy_{it} + \beta_2 Non\text{-}Sponsoring\ Buy_{it} + \beta_3 Char_{it} + Day_t + \varepsilon_{it..} \quad \text{(IA.4)}$$

Ret_{it+x} is the monthly (i.e., 21 trading day) return for firm *i* in month $t+x$. We let x vary from one to three months. *Sponsor Buy* (*Non-Sponsor Buy)* is an indicator equal to one if the *Sponsoring Broker OIB* (*Non-Sponsoring Broker OIB*) is greater than zero, and zero if the OIB measure is less than zero. *Char* is the same vector of firm characteristics from Equation 2. All continuous independent variables are standardized to have mean zero and unit variance. Standard errors are double clustered by firm and month.

Table IA.9 reports the estimates from Equation IA.4. Most of the estimates of *Sponsor Buy* and *Non-Sponsor Buy* are insignificant. However, there is evidence that the stocks purchased through non-sponsoring brokers underperform the stocks sold during the 2nd month, both in absolute terms (−0.41%) and relative to trades executed through the sponsoring broker (−0.70%). In sum, there is weak evidence that trades through the non-sponsoring broker are less informed than trades through the sponsoring broker. However, the differences in informativeness of trades through sponsoring and non-sponsoring brokers is less dramatic than the differences in the informativeness of local and non-local institutional investors (Table 4). One potential explanation for this finding is that investor location is a better proxy for whether the investor attended the NDR than the trading activity routed

through the sponsoring broker.[6] Consistent with this view, we find that the increase in local institutional trading during the NDR quarter (Table 3) is much greater in magnitude than the increase in trading through the sponsoring broker in the weeks following the NDR (Table 6).[7]

IA.3.3. NDRs and Analyst Optimism - Robustness

Figure 4 documents that NDR brokers issue optimistic recommendations and target prices for at least three years prior to the NDR. It is perhaps surprising that we observe elevated levels of optimism up to three years prior to an NDR because it seems unlikely that brokers would engage in such large strategic behavior so far in advance of the NDR. One potential explanation is that brokers might repeatedly sponsor the firm's NDRs, and the observed optimism long before an NDR might be capturing optimism that is proximate to another NDR. For example, consider a broker that took a firm on an NDR in January 2014 and January 2016. In this example, months −36 through −25 for the January 2016 NDR are also months −12 through −1 for the January 2014 NDR. To explore this possibility, we repeat the analysis in Figure 4 after partitioning the sample into brokers who sponsor an NDR for the firm only once during the sample period (*Single Sponsor*) and brokers who sponsor multiple NDRs for the firm (*Multiple Sponsor*).

Figures IA.5A and IA.5B report the results of this analysis for recommendations and target returns, respectively. The partition reveals two clear differences. First, across all periods, the level of optimism is significantly smaller for brokers that only organize one NDR compared to those that organize multiple NDRs. Second, the increase in optimism is far more concentrated in a shorter window around the NDR for single sponsors. The patterns suggest that brokerages that regularly organize NDRs for the firm persistently maintain a very high level of optimism.

The results in Table 9 focus on the levels of NDR broker optimism. However, the evidence from Figure 4 suggests that analyst optimism is also increasing in the period immediately prior to the NDR. To more formally examine changes in recommendation optimism around the NDR, we re-estimate Equation 5 after replacing the dependent variable with either *Upgrade,* an indicator variable equal to one if the analyst revises his (or her) recommendation level upward (e.g., from a buy to a strong buy) for a firm in that month, or *Downgrade*, defined analogously. We also add an additional control variable, *Lag Rec,* defined as the recommendation level of the analyst in the prior month. This variable controls for the fact that upgrades (downgrades) are far more common when the existing

[6] An alternative possibility is that the Abel Noser sample has greater noise since it captures a much smaller fraction of total institutional trading. During our sample period, Abel Noser trading accounts for roughly 4% of CRSP total trading volume.
[7] The results in Table 6 examine total commissions rather than total trading volume. However, in unreported tests, we find similar results after replacing commissions with trading volume.

recommendation level is more pessimistic (optimistic). Specification 1 of Table IA.10 shows that NDR brokers are 0.68 percentage points more likely to issue an upgrade in the three months prior to the NDR. This estimate reflects a 49% increase relative to the base probability of issuing an upgrade (1.38%). Specification 3 reports even more dramatic results for downgrades. Specifically, NDR brokers are 1.25 percentage points less likely to issue a downgrade, a 78% decrease relative to the base probability (1.61%). The inclusion of firm-month fixed effects yields similar, albeit slightly weaker, estimates.

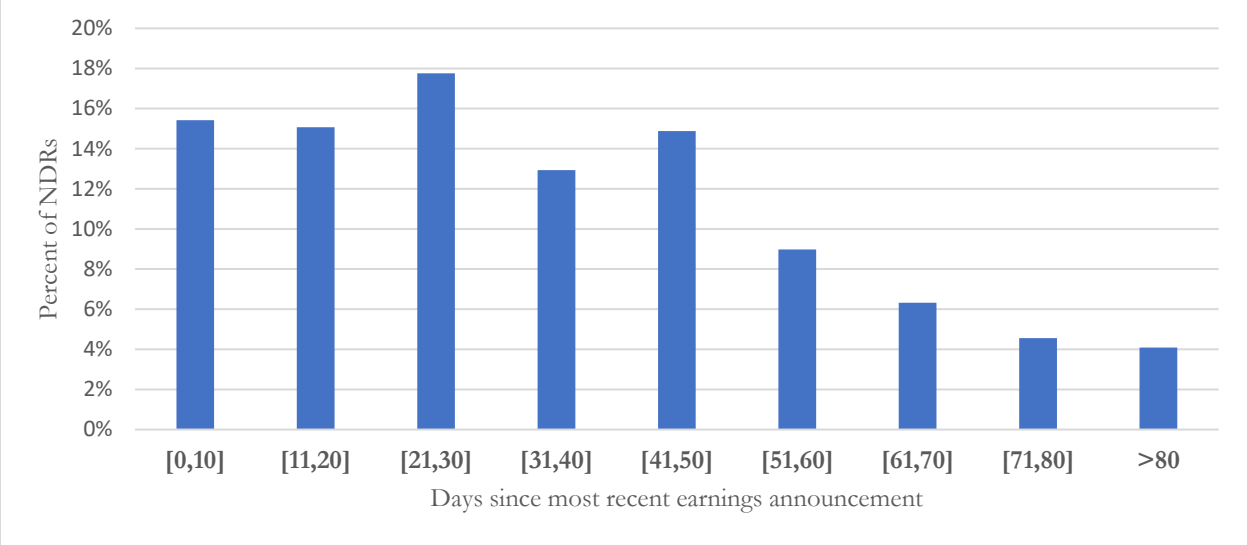


Figure IA.1: Timing of NDRs Relative to Most Recent Earnings Announcement
We sort all NDRs based on the timing of the NDR relative to the most recent earnings announcement. The figure reports the fraction of all NDRs that occur over different event windows. For example, [0,10] reports the fraction of all NDRs that occur within 10 calendar days after an earnings announcement, [11,20] reports the fraction of all NDRs that occur between 11 and 20 calendar days after the earnings announcement, etc.

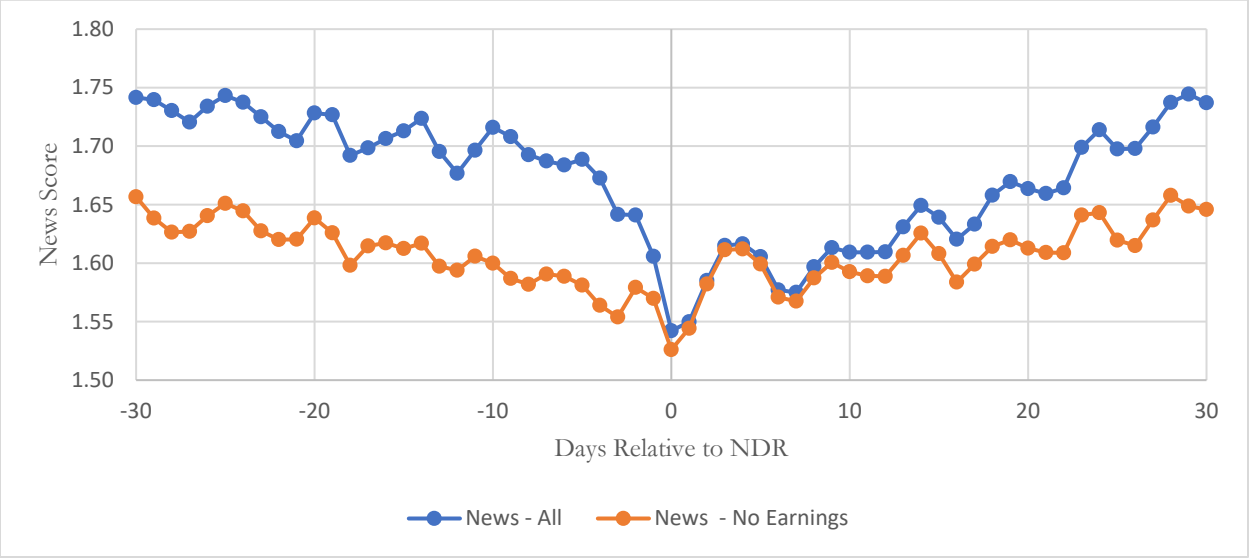


Figure IA.2: The Intensity of Media Coverage around NDRs
For each NDR, we compute the intensity of media coverage in the [-30,30] window centered around the NDR date. Media coverage is measured from Bloomberg. Bloomberg records the number of news articles released for a stock over the hour and then creates an hourly score by comparing the past eight-hour average count to all hourly counts over the previous 30 days for the same stock. A value of 0 indicates that the media coverage is in the lowest 80% of the hour counts relative to the previous 30 days. Similarly, Bloomberg assigns a score of 1, 2, 3, or 4 if the average is the value is in the 80% to 90%, 90% and 94%, 94 and 96%, or greater than the 96%. Bloomberg creates a daily score by taking the maximum of these hourly scores. The blue line (*News-All*) reports the results for all days and the organ line (*News – No Earnings*) reports the results for all days excluding days within the [-5,5] window around earnings announcements.

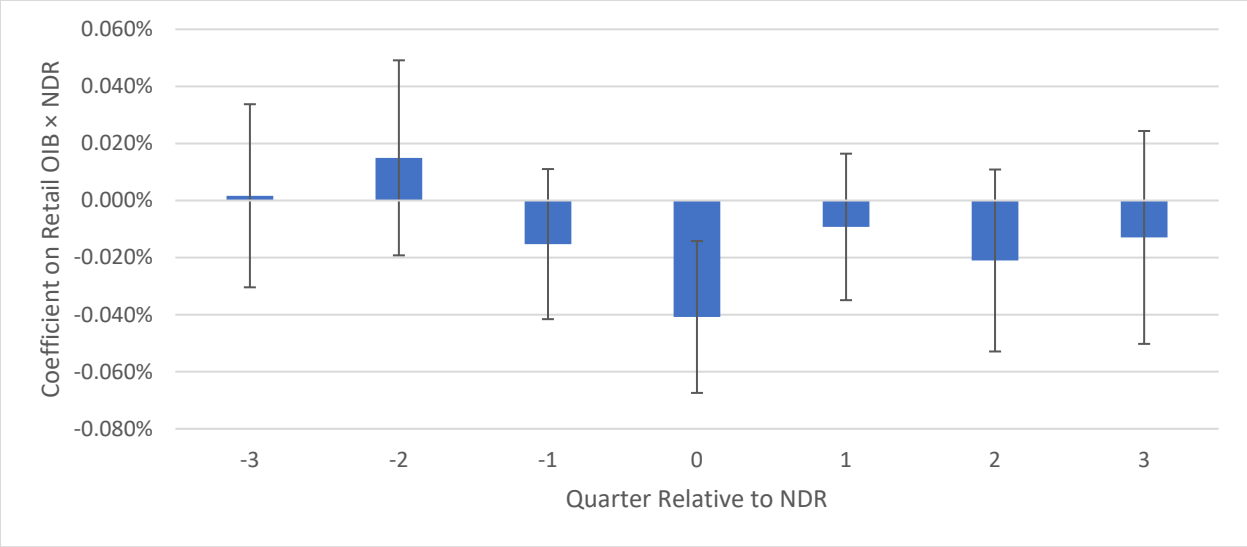


Figure IA.3: NDRs and the Informativeness of Retail Trading – Placebo NDR Dates
This figure repeats the regressions reported in Specification 1 of Table 6 of the paper after altering the timing of the NDR +/- three quarters. For example, in Quarter -1, we set the NDR as occurring one-quarter (63 trading days) prior to the actual NDR date. The figure plots the estimate and 95% confidence intervals for *Retail OIB x NDR* for each of the seven separate regressions.

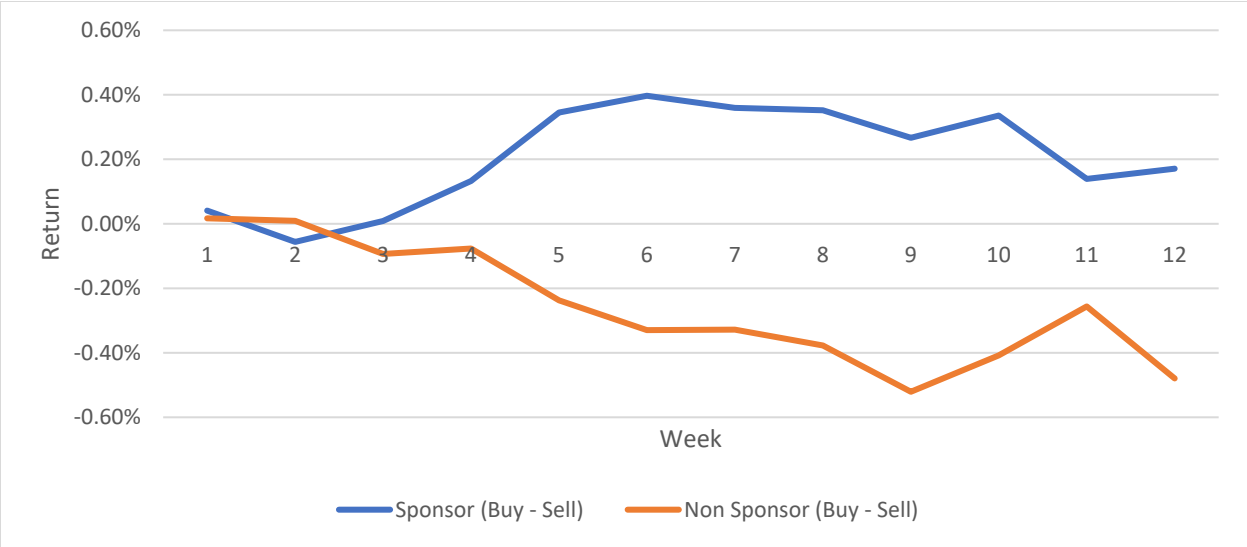
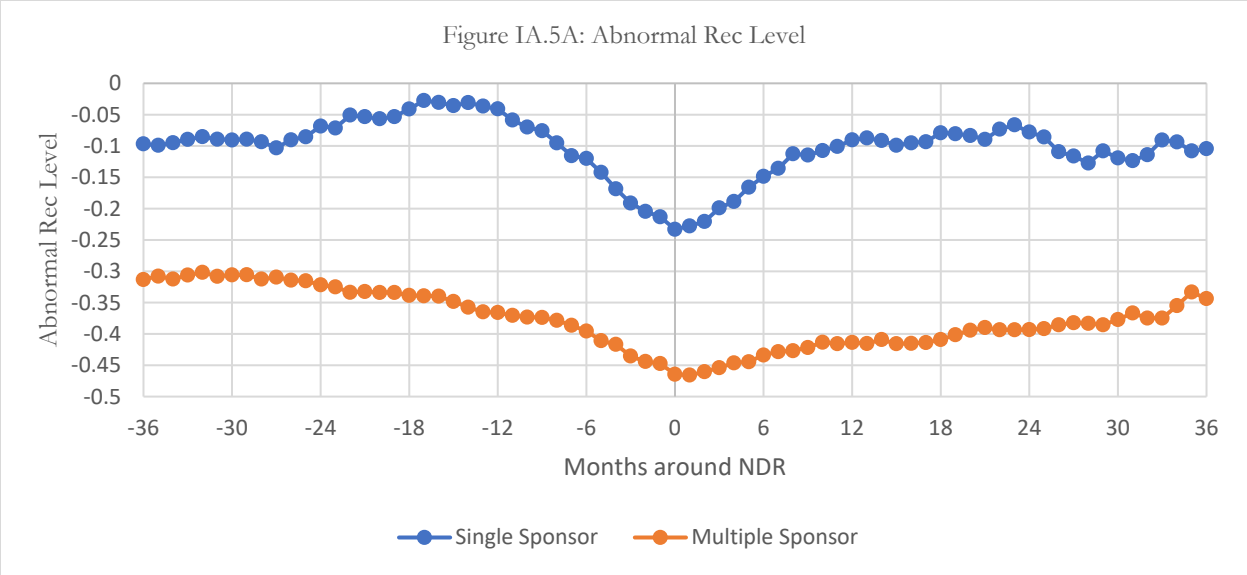


Figure IA.4: NDRs and the Informativeness of Institutional Trading through the Sponsoring Broker
At the end of each day, from January 2013 through June 2014, we sort all firms that conducted an NDR during the past 10 days into two groups based on the order imbalances of institutions who executed their trades through the sponsoring broker (*Sponsor)* and institutions who executed their trades through all other brokers (*Non-Sponsor*). We define *Sponsor OIB* as the total shares of firm *i* bought through the sponsoring broker on day *t* less the total shares of firm *i* sold through the sponsoring broker on day *t*, scaled by total trading volume in firm *i* through the sponsoring broker on day *t*. *Non-Sponsor OIB* is defined analogously. *Sponsor* (*Non-Sponsor*) reports the cumulative market-adjusted return to a strategy that buys stocks with positive *Sponsor OIB (Non-Sponsor)* and sells stocks with negative *Sponsor OIB* (*Non-Sponsor OIB*) for horizons ranging from one week to 12 weeks after the day of the trade.



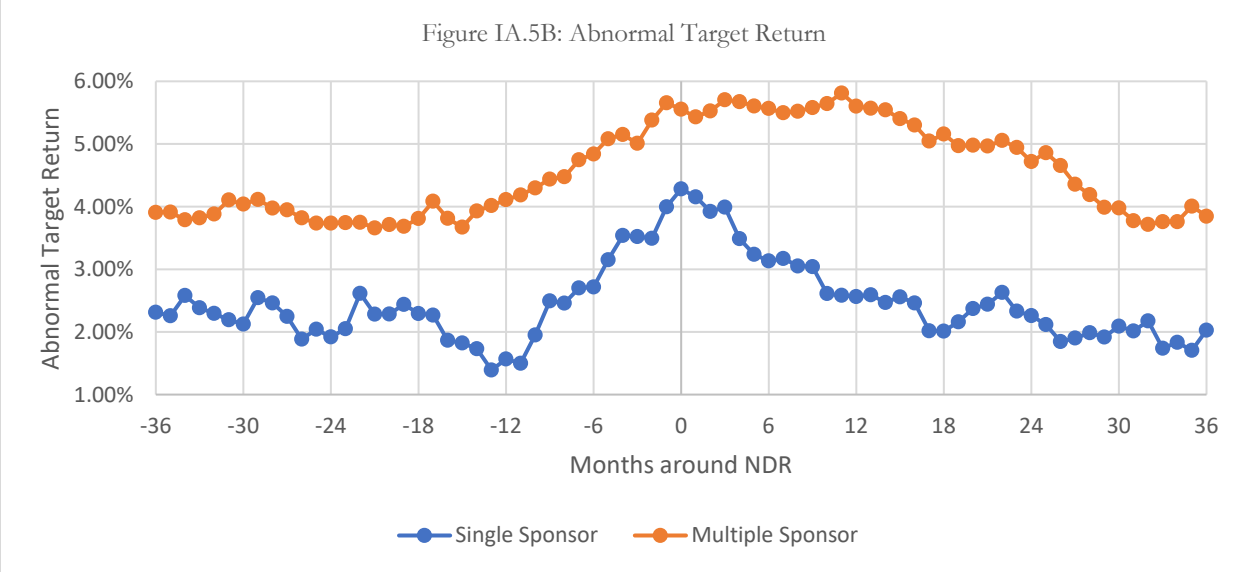


Figure IA.5: Relative Optimism of NDR Broker around Non-Deal Roadshows by Sponsoring Frequency
Figures IA.5A and IA.5B repeat Figures 4A and 4B after partitioning the sample of NDRs into brokers who sponsor an NDR for the firm only once during the sample period (*Single Sponsor*) and brokers who sponsor multiple NDRs for the firm (*Multiple Sponsor*).

Table IA.1: NDR Data Example

This table provides an example of the NDR data collected from TheFlyOnTheWall.com (*FLY*). This snapshot includes all observations for Microsoft over the 2013 calendar year.

Date	Location	Broker Name
25-Feb-13	Europe	UBS
27-Feb-13	Europe	UBS
1-Mar-13	United Kingdom	UBS
19-Mar-13	New York	JPMorgan
20-Mar-13	Philadelphia	JPMorgan
20-Mar-13	Trenton	JPMorgan
30-Apr-13	Cleveland	Pacific Crest
1-May-13	Columbus	Pacific Crest
2-May-13	Chicago	Pacific Crest
4-Nov-13	Toronto	JPMorgan
5-Nov-13	Toronto	JPMorgan
5-Nov-13	Chicago	JPMorgan
6-Nov-13	Chicago	JPMorgan
7-Nov-13	Minneapolis	JPMorgan

Table IA.2: Returns around NDRs

This table reports the distribution of equally weighted marked-adjusted returns over different event-time windows around the NDRs. The sample includes 43,799 NDRs from January 2013 through December 2019.

	Mean	Std. Dev	Q1	Median	Q3
[-63, -21]	0.94%	18.52%	-7.32%	-0.10%	7.41%
[-20, -6]	0.54%	11.41%	-4.48%	0.17%	4.89%
[-5, -1]	0.32%	6.29%	-2.19%	0.16%	2.56%
[0,1]	0.23%	3.49%	-1.22%	0.11%	1.54%
[2,5]	0.13%	4.65%	-1.90%	0.02%	2.00%
[6,21]	0.04%	9.87%	-4.23%	-0.11%	3.97%
[22, 63]	0.29%	19.33%	-8.17%	-0.29%	7.68%
[-63, -1]	1.84%	24.06%	-9.27%	0.28%	10.10%
[0,63]	0.70%	23.36%	-9.67%	-0.22%	9.53%

Table IA.3: Determinants of *Fly* Coverage

This table reports estimates from OLS linear probability models. The sample includes the 558 NDRs in the hand-collected sample described in Section IA.2. The dependent variable is an indicator equal to one if the NDR is reported in *FLY* and zero otherwise. All independent variables are defined in Appendix A. All continuous variables are standardized to have mean zero and unit variance. Standard errors are double clustered by firm and month, and *t*-statistics are reported in parentheses below the corresponding coefficient estimate.

	(1)	(2)	(3)
Intangibles	-5.62%	-2.33%	-5.62%
	(-3.43)	(-1.24)	(-3.43)
(R&D + ADV)/OE	-5.39%	-4.07%	-5.40%
	(-1.84)	(-1.37)	(-1.84)
Log (MB)	5.93%	1.95%	5.98%
	(1.06)	(0.36)	(1.08)
Negative Book	4.52%	-7.40%	4.67%
	(0.19)	(-0.35)	(0.20)
Idiosyncratic Risk	-10.60%	-3.25%	-10.50%
	(-1.67)	(-0.59)	(-1.67)
Institutional Ownership	0.46%	-1.62%	0.48%
	(0.11)	(-0.58)	(0.11)
Log (Firm Age)	-1.03%	1.03%	-1.02%
	(-0.34)	(0.36)	(-0.33)
Net Shares	-0.84%	-0.76%	-0.85%
	(-0.59)	(-0.57)	(-0.59)
Log (Analyst Coverage)	-5.84%	-1.40%	-5.84%
	(-1.61)	(-0.39)	(-1.61)
Log (# Institutions)	7.88%	4.96%	7.87%
	(2.37)	(2.10)	(2.36)
Log (Firm Size)	-8.38%	-3.06%	-8.41%
	(-1.82)	(-0.54)	(-1.83)
Log (Turnover)	4.35%	-1.31%	4.33%
	(0.92)	(-0.31)	(0.92)
R-squared	-4.14%	-1.86%	-4.11%
	(-1.28)	(-0.73)	(-1.27)
Mom1	0.85%	1.33%	0.84%
	(0.57)	(0.99)	(0.57)
Mom12	3.88%	3.12%	3.87%
	(0.95)	(0.88)	(0.95)
SEO	32.30%	0.33%	32.20%
	(1.52)	(0.02)	(1.49)
M&A - Acquirer	-30.70%	-0.50%	-30.70%
	(-1.49)	(-0.04)	(-1.46)
Bulge Bracket			0.36%
			(0.11)
Fixed effects	Year	Year and Broker	Year
R-squared	14.50%	54.30%	14.50%
Observations (NDRs)	558	558	558

Table IA.4: FLY NDR Coverage by Brokerage Firm

This table provides descriptive statistics of NDR activity at the brokerage level. The sample includes the 558 NDRs in the hand-collected sample described in Section IA.2. For each broker, we report the total number of NDRs in the hand-collected sample (#*NDR*s), the total number of NDRs reported in FLY (*FLY*), the total number of NDRs not reported in FLY (*Non-FLY*), and the percentage of NDRs reported in FLY (*Percent FLY*). We report the results separately for the nine bugle bracket banks (Panel A) and 16 non-bulge bracket banks that sponsored at least 10 NDRs (Panel B).

Panel A: Bulge bracket banks

	# *NDRs*	*FLY*	*Non-FLY*	*Percent FLY*
JPMorgan	27	23	4	85%
Deutsche Bank	24	17	7	71%
UBS	19	13	6	68%
Bank of America	17	0	17	0%
Credit Suisse	16	0	16	0%
Morgan Stanley	14	0	14	0%
Goldman Sachs	13	0	13	0%
Barclays	13	0	13	0%
Citi	7	0	7	0%

Panel B: Non-bulge bracket banks

	# *NDRs*	*FLY*	*Non-FLY*	*Percent FLY*
Stephens	26	21	5	81%
SunTrust	22	12	10	55%
RBC	21	11	10	52%
William Blair	21	10	11	48%
Jefferies	21	19	2	90%
Piper Jaffray	19	11	8	58%
Wells Fargo	19	0	19	0%
Oppenheimer	19	15	4	79%
Stifel Nicolaus	18	0	18	0%
Evercore ISI	16	4	12	25%
Cowen	15	1	14	7%
Sidoti	13	2	11	15%
Strategas	13	0	13	0%
Raymond James	12	0	12	0%
Baird	11	0	11	0%
Guggenheim	11	3	8	27%

Table IA.5: NDRs and the Informativeness of Local Institutional Trading by Fly Coverage

This table repeats the analysis in Table 4 after interacting *Local OIB* with *Hand* and *FLY Missing*. The sample includes all firm-quarters with NDR activity (as reported in either the FLY sample or the hand-collected sample) and non-zero trading by local and non-local institutional investors in the firm-quarter from January 2013 through December 2019. *Hand* is an indicator equal to one if the NDR was included in the hand-collected NDR sample described in Section IA.2. *FLY Missing* is an indicator equal to one if the NDR was included in the hand-collected NDR sample but was not reported by *FLY*. All other independent variables are defined in Appendix A. All continuous independent variables are standardized to have mean zero and unit variance. Standard errors are double clustered by firm and quarter, and *t*-statistics are reported in parentheses below the corresponding coefficient estimate.

	Qtr. 1	Qtr. 2	Qtr. 3	Qtr. 4
Local OIB	0.653%	0.006%	0.352%	0.021%
	(3.93)	(0.04)	(1.52)	(0.10)
Local OIB × Hand	-0.422%	0.114%	-0.331%	-0.560%
	(-1.93)	(0.55)	(-1.27)	(-1.16)
Local OIB × FLY Missing	0.101%	-0.216%	0.195%	0.638%
	(0.38)	(-0.96)	(0.99)	(1.41)
Hand	3.201%	-0.829%	2.577%	4.901%
	(1.95)	(-0.87)	(1.20)	(3.51)
FLY Missing	0.437%	1.527%	-1.425%	-3.985%
	(0.20)	(0.96)	(-0.60)	(-2.54)
Non-Local OIB	0.103%	-0.175%	-0.079%	0.137%
	(0.48)	(-0.83)	(-0.35)	(0.59)
Log (Firm Size)	-0.486%	-0.220%	-0.164%	0.139%
	(-1.30)	(-0.69)	(-0.45)	(0.39)
Log (Turnover)	0.170%	-0.299%	-0.241%	-0.538%
	(0.57)	(-0.76)	(-0.77)	(-1.80)
Log (Vol)	-0.786%	-0.124%	-0.447%	-0.378%
	(-1.24)	(-0.22)	(-0.64)	(-0.61)
Ret (m-1)	-0.086%	0.736%	-0.365%	-0.593%
	(-0.30)	(1.84)	(-0.94)	(-1.37)
Ret (m-7, m-2)	-0.244%	0.050%	0.491%	0.209%
	(-0.63)	(0.19)	(1.08)	(0.60)
Log (BM)	-1.458%	-1.838%	-1.303%	-0.839%
	(-1.57)	(-2.57)	(-1.58)	(-1.07)
Observations (Firm-quarters)	11,342	10,897	10,399	9,943

Table IA.6: NDRs and the Informativeness of Retail Trading by Fly Coverage

This table repeats the analysis in Table 6 after interacting *Retail OIB* with *Hand* and *FLY Missing*. *Hand* is an indicator equal to one if the NDR was included in the hand-collected NDR sample described in Section IA.2. *FLY Missing* is an indicator equal to one if the NDR was included in the hand-collected sample but was not reported by *FLY*. All other independent variables are defined in Appendix A. All continuous independent variables are standardized to have mean zero and unit variance. Standard errors are double clustered by firm and month, and *t*-statistics are reported in parentheses below the corresponding coefficient estimate.

	Week 1 (Exc. 0)	Week 1 (Inc. 0)	Week2	Week 3	Week 4
Retail OIB	0.042%	0.001%	0.018%	0.014%	0.015%
	(7.68)	(0.21)	(3.95)	(2.95)	(2.98)
Retail OIB x NDR	-0.040%	-0.035%	-0.009%	-0.031%	-0.006%
	(-2.98)	(-2.41)	(-0.63)	(-2.13)	(-0.41)
Retail OIB x Hand	-0.098%	-0.140%	0.072%	0.093%	-0.126%
	(-1.21)	(-1.76)	(0.59)	(1.32)	(-0.71)
Retail OIB x FLY Missing	-0.041%	0.012%	-0.070%	0.100%	0.242%
	(-0.33)	(0.09)	(-0.48)	(0.96)	(0.95)
NDR	0.065%	0.065%	0.041%	0.029%	0.054%
	(2.36)	(2.23)	(1.72)	(1.03)	(1.80)
Hand	0.260%	0.345%	0.170%	-0.106%	-0.180%
	(1.88)	(1.30)	(0.80)	(-0.61)	(-1.60)
FLY Missing	-0.105%	-0.235%	0.119%	0.304%	0.196%
	(-0.60)	(-0.86)	(0.55)	(1.57)	(1.01)
Retail OIB x Conf	-0.006%	-0.001%	0.006%	0.004%	-0.029%
	(-0.57)	(-0.07)	(0.54)	(0.41)	(-1.40)
Conf	0.020%	0.036%	-0.006%	-0.021%	-0.012%
	(0.59)	(1.02)	(-0.15)	(-0.62)	(-0.33)
Log (Turnover)	-0.071%	-0.104%	-0.062%	-0.059%	-0.054%
	(-3.23)	(-4.28)	(-2.87)	(-2.71)	(-2.63)
Log (Vol)	-0.059%	-0.063%	-0.061%	-0.058%	-0.063%
	(-1.39)	(-1.44)	(-1.31)	(-1.24)	(-1.46)
Log (Firm Size)	0.008%	0.045%	0.021%	0.020%	0.017%
	(0.33)	(1.66)	(0.82)	(0.81)	(0.67)
Log (BM)	-0.024%	-0.014%	-0.021%	-0.027%	-0.030%
	(-0.52)	(-0.28)	(-0.43)	(-0.51)	(-0.63)
Ret (w-1)	-0.029%	-0.061%	-0.030%	-0.028%	-0.038%
	(-1.25)	(-2.47)	(-1.44)	(-1.37)	(-1.34)
Ret (m-1)	-0.060%	-0.068%	-0.024%	0.004%	0.025%
	(-1.94)	(-2.13)	(-0.85)	(0.16)	(0.85)
Ret (m-7, m-2)	0.034%	0.042%	0.039%	0.031%	0.021%
	(1.21)	(1.42)	(1.24)	(0.96)	(0.71)
Retail OIB x Log (Turnover)	-0.007%	0.007%	-0.008%	0.004%	0.000%
	(-1.37)	(1.16)	(-1.53)	(0.75)	(-0.05)
Retail OIB x Log (Vol)	0.037%	0.010%	0.020%	0.002%	0.011%
	(5.73)	(1.53)	(3.21)	(0.27)	(1.91)
Retail OIB x Log (Firm Size)	-0.021%	0.002%	0.006%	-0.008%	0.007%
	(-2.53)	(0.21)	(0.72)	(-1.16)	(0.94)
Retail OIB x Log (BM)	0.002%	-0.007%	-0.005%	0.007%	-0.008%
	(0.17)	(-0.67)	(-0.47)	(0.75)	(-0.96)
Retail OIB x Ret (w-1)	-0.005%	0.000%	0.008%	-0.009%	-0.006%
	(-0.52)	(-0.05)	(1.27)	(-1.33)	(-0.72)
Retail OIB x Ret (m-1)	-0.010%	-0.005%	-0.012%	0.007%	0.012%
	(-1.17)	(-0.56)	(-1.37)	(0.82)	(1.55)
Retail OIB x Ret (m-7, m-2)	-0.009%	0.003%	-0.021%	-0.005%	0.003%
	(-1.29)	(0.46)	(-3.10)	(-0.70)	(0.51)

Table IA.7: NDRs and Analyst Optimism by Fly Coverage

This table repeats the analysis in Table 9 after including *Hand* and *FLY Missing*. *Hand* is an indicator equal to one if the NDR was included in the hand-collected NDR sample described in Section IA.2. *FLY Missing* is an indicator equal to one if the NDR was included in the hand-collected NDR sample but was not reported by *FLY*. All other independent variables are defined in Appendix A. All continuous independent variables are standardized to have mean zero and unit variance. Standard errors are double clustered by firm and month, and *t*-statistics are reported in parentheses below the corresponding coefficient estimate.

	Rec Level		Target Return	
	[1]	[2]	[3]	[4]
NDR3	-0.39	-0.29	7.71%	4.47%
	(-39.20)	(-31.32)	(17.65)	(22.65)
Hand	0.03	-0.03	-8.41%	-0.67%
	(0.36)	(-0.35)	(-5.33)	(-0.57)
FLY Missing	-0.11	-0.17	3.93%	0.63%
	(-1.12)	(-1.77)	(1.70)	(0.41)
Conf3	-0.16	-0.06	7.62%	1.47%
	(-15.59)	(-6.35)	(15.68)	(9.42)
Affiliated3	-0.11	-0.05	4.51%	1.14%
	(-6.23)	(-2.97)	(6.03)	(4.46)
Log (Broker Size)	0.07	0.05	-5.03%	-1.88%
	(19.88)	(14.27)	(-22.78)	(-19.84)
Firm Experience	0.00	0.00	2.76%	0.46%
	(-0.38)	(-0.34)	(6.31)	(3.01)
Experience	-0.03	-0.01	0.97%	0.34%
	(-7.61)	(-3.00)	(4.04)	(3.97)
Firms Followed	0.10	0.00	-5.08%	0.44%
	(20.64)	(1.21)	(-18.60)	(4.92)
All-Star	0.10	0.09	-2.06%	-0.65%
	(8.37)	(8.70)	(-5.00)	(-3.28)
Fixed Effects	Month	Firm-Month	Month	Firm-Month
R-squared	2.57%	29.67%	4.57%	71.85%
Obs. (Broker-Firm-Month)	1,565,813	1,565,813	1,955,800	1,955,800

Table IA.8: NDRs and the Informativeness of Retail Trading - Alternative Event Windows

This table repeats Specification 1 of Table 6 using an alternative event window when defining *NDR* and *Conf*. Specification 1 repeats the analysis after redefining *NDR* (*Conf*) equal to one if the firm attended an NDR (Conference) over the past five trading days. Specifications 2, 3, and 4 report analogous results using event windows of 10 trading days, 21 trading days, and 63 trading days, respectively.

	5-Days	10-Days	21-Days	63-Days
Retail OIB	0.040%	0.042%	0.045%	0.043%
	(7.37)	(7.66)	(7.77)	(6.21)
Retail OIB x NDR	-0.028%	-0.041%	-0.025%	-0.012%
	(-1.84)	(-3.01)	(-2.40)	(-1.64)
NDR	0.068%	0.067%	0.052%	0.089%
	(2.13)	(2.43)	(2.27)	(4.98)
Retail OIB x Conf	-0.006%	-0.006%	-0.013%	-0.002%
	(-0.44)	(-0.57)	(-1.49)	(-0.29)
Conf	0.040%	0.020%	0.000%	0.031%
	(1.00)	(0.59)	(0.01)	(1.24)
Log (Turnover)	0.008%	0.008%	0.009%	-0.001%
	(0.34)	(0.33)	(0.37)	(-0.02)
Log (Vol)	-0.071%	-0.071%	-0.071%	-0.075%
	(-3.22)	(-3.23)	(-3.24)	(-3.41)
Log (Firm Size)	-0.059%	-0.059%	-0.058%	-0.062%
	(-1.39)	(-1.39)	(-1.38)	(-1.47)
Log (BM)	-0.024%	-0.024%	-0.024%	-0.017%
	(-0.52)	(-0.51)	(-0.52)	(-0.38)
Ret (w-1)	-0.030%	-0.029%	-0.029%	-0.029%
	(-1.26)	(-1.25)	(-1.25)	(-1.25)
Ret (m-1)	-0.060%	-0.060%	-0.060%	-0.060%
	(-1.93)	(-1.94)	(-1.93)	(-1.95)
Ret (m-7, m-2)	0.034%	0.034%	0.034%	0.032%
	(1.21)	(1.21)	(1.20)	(1.15)
Retail OIB x Log (Turnover)	-0.021%	-0.021%	-0.020%	-0.020%
	(-2.61)	(-2.54)	(-2.41)	(-2.50)
Retail OIB x Log (Vol)	-0.007%	-0.007%	-0.007%	-0.007%
	(-1.41)	(-1.37)	(-1.30)	(-1.34)
Retail OIB x Log (Firm Size)	0.036%	0.037%	0.037%	0.037%
	(5.67)	(5.73)	(5.81)	(5.67)
Retail OIB x Log (BM)	0.002%	0.002%	0.001%	0.001%
	(0.21)	(0.17)	(0.10)	(0.14)
Retail OIB x Ret (w-1)	-0.005%	-0.005%	-0.005%	-0.005%
	(-0.52)	(-0.52)	(-0.53)	(-0.53)
Retail OIB x Ret (m-1)	-0.010%	-0.010%	-0.010%	-0.010%
	(-1.18)	(-1.17)	(-1.16)	(-1.17)
Retail OIB x Ret (m-7, m-2)	-0.009%	-0.009%	-0.009%	-0.009%
	(-1.30)	(-1.29)	(-1.28)	(-1.29)

Table IA.9: NDRs and the Informativeness of Institutional Trading through the Sponsoring Broker

This table reports estimates from the following panel regression:

$$Ret_{it+x} = \beta_1 SponsorBuy + \beta_2 Non\text{-}SponsorBuy_{it} + \beta_3 Char_{it} + Day_t + \varepsilon_{it.}$$

Ret_{it+x} is the monthly (i.e., 21 trading day) return for firm *i* following the day where institutional trading is measured (i.e., day *t*). *Sponsor Buy* is an indicator equal to one if the *Sponsoring Broker OIB* is greater than zero, and zero if the OIB measure is less than zero, and *Sponsoring Broker OIB* is computed as the total shares of firm *i* bought through the sponsoring broker on day *t* less the total shares of firm *i* sold through the sponsoring broker on day *t*, scaled by total trading volume in firm *i* through the sponsoring broker on day *t* (as reported in Abel Noser). *Non-Sponsor Buy* is computed analogously. *Char* is a vector of firm characteristics taken from Boehmer, Jones, Zhang, and Zhang (2020) and defined in Appendix A. Calendar day fixed effects are included. All continuous independent variables are standardized to have mean zero and unit variance. Standard errors are double clustered by firm and month, and *t*-statistics are reported in parentheses below the corresponding coefficient estimate. The last row also reports a test of whether the coefficient on *Sponsor Buy* is significantly different from *Non-Sponsor Buy*. The sample spans from January 2013 to June 2014 and includes all days within 10 trading days of the NDR with non-zero trading volume through the sponsoring broker.

	Month 1	Month 2	Month 3
Sponsor Buy	0.10%	0.29%	-0.35%
	(0.45)	(1.18)	(-1.34)
Non-Sponsor Buy	-0.04%	-0.41%	-0.27%
	(-0.18)	(-1.76)	(-1.01)
Log (Firm Size)	0.20%	-0.09%	-0.10%
	(1.39)	(-0.62)	(-0.66)
Log (Turnover)	-0.30%	-0.58%	-0.81%
	(-0.66)	(-1.28)	(-1.42)
Log (Vol)	0.72%	2.65%	5.03%
	(0.45)	(2.03)	(3.01)
Ret (w-1)	0.11%	0.21%	0.06%
	(0.42)	(0.76)	(0.23)
Ret (m-1)	3.73%	-1.96%	-10.37%
	(0.58)	(-0.33)	(-1.31)
Ret (m-7, m-2)	-4.81%	4.39%	-3.97%
	(-1.23)	(1.29)	(-1.12)
Log (BM)	1.42%	0.37%	0.08%
	(0.93)	(0.24)	(0.03)
Sponsor - Non-Sponsor Buy	0.14%	0.70%	-0.08%
	(0.41)	(1.98)	(-0.21)
Obs. (Firm-Days)	5,471	5,471	5,471

Table IA.10: NDRs and Changes in Analyst Optimism

This table reports estimates from the following panel regression:

$$\Delta Optimism_{jit} = \beta_1 NDR3_{jit} + \beta_2 Conf3_{jit} + \beta_3 Affiliated3_{jit} + \beta_4 Controls + FE + \varepsilon_{jit}.$$

The sample consists of all broker-firm-months from 2013 through 2019 where the broker issues at least one recommendation for the firm in the prior 24 months. The dependent variable is a measure of the change in optimism for analyst *j* for firm *i* in month *t*. The dependent variable is either *Upgrade* (Specifications 1 and 2), an indicator variable equal to one if the analyst's recommendation level is revised upward for a firm in that month, or *Downgrade* (Specifications 3 and 4), an indicator equal to one if the analyst's recommendation level is revised downward for a firm in that month. *NDR3* is an indicator variable equal to one if the broker takes the firm on an NDR over the subsequent three months. *Conf3* and *Affiliated3* are indicator variables equal to one if the broker hosts the firm at a conference or has an investment banking relation with the firm in the subsequent three months. *Controls* is a vector of broker and analyst characteristics. Detailed variable definitions are provided in Appendix A. The regressions include either month fixed effects or firm-month fixed effects. All continuous independent variables are standardized to have mean zero and unit variance. Standard errors are double clustered by firm and month, and *t*-statistics are reported in parentheses below the corresponding coefficient estimate.

	Upgrades		Downgrades	
	[1]	[2]	[3]	[4]
NDR3	0.68%	0.62%	-1.25%	-1.04%
	(10.90)	(9.67)	(-20.01)	(-16.37)
Conf3	0.18%	0.06%	-0.49%	-0.26%
	(3.59)	(1.23)	(-9.42)	(-4.47)
Affiliated3	0.36%	0.13%	-0.52%	-0.39%
	(3.48)	(1.13)	(-5.97)	(-3.76)
Log (Broker Size)	-0.19%	-0.19%	0.00%	0.00%
	(-9.39)	(-8.85)	(0.00)	(-0.02)
Firm Experience	0.01%	0.06%	0.05%	0.07%
	(0.32)	(2.24)	(1.49)	(2.16)
Experience	-0.03%	-0.05%	-0.09%	-0.06%
	(-1.95)	(-3.21)	(-4.55)	(-3.22)
Firms Followed	0.03%	0.09%	0.12%	0.02%
	(1.85)	(5.04)	(5.44)	(1.32)
All-Star	0.00%	-0.05%	0.22%	0.26%
	(0.05)	(-1.13)	(4.03)	(4.90)
Lag (Rec Level)	1.52%	1.72%	-1.16%	-1.42%
	(31.23)	(31.04)	(-25.08)	(-24.76)
Fixed Effects	Month	Firm-Month	Month	Firm-Month
R-squared	1.38%	16.55%	0.83%	19.46%
Observations	1,518,539	1,518,539	1,518,539	1,518,539