Hiring Cheerleaders: Board Appointments of "Independent" Directors*

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ABSTRACT

We use a unique, hand-collected database of independent directors to provide evidence that firms appoint independent directors who are overly sympathetic to management, while still technically independent according to regulatory definitions. We explore a subset of independent directors for whom we have detailed, micro-level data on their views regarding the firm *prior* to being appointed to the board: sell-side analysts who are subsequently appointed to the board of companies they previously covered. We find evidence that boards appoint overly optimistic analysts who are also poor relative performers. The magnitude of the optimistic bias is large: 82.0% of appointed recommendations are strong-buy/buy recommendations, compared to 56.9% for all other analyst recommendations. We find that appointed analysts' optimism is stronger at precisely those times when firms' benefits are larger, and that appointing firms increase earnings management, and perform poorly, following these board appointments.

JEL Classification: G20, G24, G30

Key words: Independent directors, appointments, analysts, board members

What makes a good monitor? Embodied in recent regulatory requirements is the notion that independent directors provide a particular type of objective, shareholderminded monitoring.¹ At the same time, little is known about the characteristics of independent directors, or the factors that influence the selection process of these directors. The idea that boards walk onto the street and randomly select agents who are truly independent of the firm, in order to ensure arm's length board members, is surely false. Rather, it seems necessary that a senior officer or board member has some relationship with a potential independent director in order to ensure they have enough information to be able to recommend this member for board election. This reality need not be problematic, as although it could be that this relationship skews the view of these "independent" directors, it could also reduce information asymmetries regarding the potential value of the director for the given board.²

In this paper we exploit a unique hand-collected database of independent directors to test the hypothesis that boards appoint directors who, while technically independent according to regulatory definitions, nonetheless may be overly sympathetic to management. To do so we investigate a subset of independent directors for whom we have detailed, micro-level data on their views regarding the firm *prior* to being appointed to the board. We use these track records to compare the roles of optimism (i.e., hiring a cheerleader for management) versus skill (i.e., hiring an objective and able observer) in the board appointment process. Focusing on ex-ante, observable characteristics of the independent directors themselves allows us to directly evaluate the objectivity and potential efficacy of independent directors based solely on their actual opinions about the firm in question.

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¹ See, for example, the SEC's press release on November 4, 2003, in which the SEC approved new rules proposed and adopted by the New York Stock Exchange and the Nasdaq Stock Market requiring widespread strengthening of corporate governance standards for listed companies. The new rules "establish a stricter, more detailed definition of independence for directors and require the majority of members on listed companies boards to satisfy that standard...Pursuant to NYSE Section 303A(2) of the NYSE Manual, no director would qualify as "independent" unless the board affirmatively determines that the director has no material relationship with the company (either directly or as a partner, shareholder or officer of an organization that has a relationship with the company)." See

http://www.sec.gov/rules/sro/34-48745.htm for more details. See also Duchin et al. (2008) for a review of recent changes to the regulatory requirements for corporate boards.

 $^{^{2}}$ See Adams and Ferreira (2007) for a discussion of the tradeoffs involved in board construction.

The agents we examine are former sell-side analysts who end up serving on the board of companies they previously covered. Motivating our empirical strategy is the fact that 91% of the board members of the appointing firms in our sample are on the board both at the time the analyst was covering the firm *and* at the time of the subsequent board appointment, suggesting that the firm-analyst relationships we explore exhibit a great deal of continuity. Further, unlike former CEOs or other senior executives who sometimes end up on corporate boards, for whom past performance attribution is complicated by the fact that firm performance is difficult to disentangle from individual performance, sell-side analysts' opinions and performance can be easily assessed. We can explicitly compute measures of skill/ability and optimism by examining the composition and stock return performance of analysts' buy/sell recommendations. In doing so we find evidence that boards appoint overly optimistic analysts who exhibit little skill in evaluating the firm itself.

In particular, board-appointed analysts issue significantly more positive recommendations on companies for whom they end up on the board of directors; both relative to the other stocks they cover, and relative to other analysts covering these same stocks. The magnitude of this result is large: 80.4% of these recommendations are strong-buy or buy recommendations, compared to 56.9% for all other analyst recommendations. In regressions of recommendation levels (1=Strong Sell, 5=Strong Buy) on an appointment dummy (equal to 1 if the analyst recommending the given stock is subsequently appointed to the board of directors of that firm), the coefficient on appointment implies an increase in favorableness of rating from between a Hold and a Buy for the average recommendation to between a Buy and Strong Buy for appointed recommendations. This result is nearly three times as strong as the optimism effect associated with affiliation (here a dummy variable equal to 1 if the given firm has an underwriting relationship with the analyst's brokerage house), which is the subject of a vast analyst literature (see, for example, Lin and McNichols (1998), Lin et al. (2005), Michaely and Womack (1999), Hong and Kubik (2003)).

Additionally, we find that board-appointed analysts exhibit poor relative performance on their recommendations on appointing firms. For example, we find that upgrades on appointing firms by *non*-appointed analysts typically earn 21.9% in the year following an upgrade, while upgrades on appointing firms by *appointed* analysts typically earn only 3.6% in the year following an upgrade. This -18% difference is large and statistically significant. We find a similar differential in relative performance on downgrades. Thus, while it is true that optimistic analysts may simply be more likely to accept a board seat than an otherwise similar analyst, our results imply that firms are either appointing the wrong analysts, or that firms should simply demand zero analysts if the only willing supply consists of biased analysts.

To get a richer understanding of the behavior of board-appointed analysts, we also explore the dynamics of optimism in our sample. In doing so we find that appointed analysts' optimism is stronger: a) when firms have high short interest, b) before times of increased stock issuance by the firm, and c) when the last recommendation issued on the firm was a downgrade. All of these instances are precisely the times when a manager would most welcome good news on his stock.

Of course, appointing overly bullish analysts need not imply bad monitoring. Perhaps optimistic directors facilitate productive cooperation and communication among board members, or have ideas on new strategies and directions for growth. To explore these issues, we examine: a) the types of firms that appoint these analysts, focusing on measures of governance and monitoring quality, and b) the actions and performance of appointing firms after these appointments. We find that appointing firms score significantly worse on several commonly-used governance metrics, including the Gompers, Ishii, and Metrick (2003) index, as well as a delay index meant to capture provisions that slow down hostile takeovers. Further, appointing firms engage in questionable behavior after the appointment of these analysts: appointing firms significantly increase their earnings management behavior, having significantly higher discretionary accruals post-appointment relative to the pre-appointment period. Finally, the post-appointment performance of these firms is poor: a calendar-time portfolio of appointing stocks underperforms a portfolio of non-appointing stocks by 1.3-2.0% per month in the year after these appointments.

Overall, our findings provide new evidence on the board selection process, and on the characteristics of independent directors. Our unique micro-level data on analyst board appointments enables us to investigate the track records of a subset of independent directors in a clean and direct way in order to investigate their optimism and expertise with respect to the appointing firms. To our knowledge, although papers have used measures of director relationships, this paper is the first to *empirically* document that firms do indeed their boards with "cheerleaders" (i.e., board members who have an empirically documented optimistic view of the firm/management, while possessing little skill in assessing the firm or its prospects, suggesting them as unsuitable monitors). Since these cheerleaders are of course technically labeled as independent directors, our findings call into question the idea that increasing the representation of independent directors on the board is by definition a positive step.

Additionally, our results on the characteristics, behavior, and ultimate performance of the appointing firms suggest that exploring the past track records and backgrounds of board members is a useful way to identify cross-sectional variation in firm governance quality. The disadvantage of our approach, of course, is that we have a small sample. We are able to definitively identify 43 analysts who get appointed to the board of a firm they previously covered. That said, we believe our results may help shed light on independent directorships in general, since even in this pool of former sell side analysts of the firm, who are potentially informed and skilled monitors, firms either seem to be demanding (or at the very least settling) for overly optimistic analysts who are poor relative performers; further, these appointments precede an increase in earnings management, and a decline in firm value. Collectively our results suggest that the board appointment process involving other classes of independent directors, where the same potential monitoring skill might not be present, could be even more problematic. Finally, from a pure empirical identification perspective, even though our sample is small, our approach relies on the fact that these analysts cover a large number of stocks and produce numerous recommendations, and so our results are identified off of over 4100 recommendations by these 43 analysts. Also, firms appointing former analysts to their board are covered by many other analysts. We exploit variation both within appointed analysts and across all analysts in order to identify systematic differences in their recommendations. And remarkably, despite the small sample, we are able to detect large and significant differences in recommendation bias and performance.

The remainder of the paper is organized as follows. Section I provides background and motivation. Section II describes the data. Section III reports our results on the positive bias in the recommendations of board-appointed analysts, and the relative underperformance of their recommendations. Section IV explores what kinds of firmanalyst relationships result in board appointments, and the dynamics of appointed analysts' recommendations. Section V examines the characteristics, actions, and postappointment performance of appointing firms. Section VI concludes.

I. Background and Motivation

Our data and approach allow us to investigate the micro foundations of several competing views on how boards function. Specifically, by looking at observable measures of the optimism and ability of a subset of board appointees, we can directly test the hypothesis that boards engage in a type of "window-dressing" when appointing independent directors. This view, embraced by many skeptics of recent regulatory reforms and articulated by Romano (2005), maintains that setting numerical targets for independent directors will not improve corporate governance (nor have any effect on firm performance) because managers can still appoint directors who are independent according to regulatory definitions, but nonetheless still overly sympathetic to management.

A competing viewpoint, which lies at the heart of recent regulatory changes (including the Sarbanes-Oxley Act of 2002 (SOX), as well as rules enacted by the Securities and Exchange Commission (SEC), New York Stock Exchange (NYSE), and National Association of Securities Dealers (NASD)), argues that independent directors are objective, shareholder-focused monitors of management, and therefore that increasing their representation on boards should uniformly improve corporate governance. Independent directors, under this view, are custodians of shareholder interests, whose presence on the board can help reduce agency problems and improve firm performance.

Yet another hypothesis suggests that boards are optimally constructed so as to maximize shareholder value, such that any mandated increases in board independence will likely hurt firm performance. Not surprisingly, since all three of these theories have predictions on how changes in board independence may affect future performance, the typical approach in the literature to evaluating these stories has been to relate measures of board independence (e.g., increases in the percentage of independent directors on a board) to future performance of the firm. The problem with this strategy is that board composition is endogenous, so identifying a link between board independence and firm performance is difficult (even if one exists) if poor performance causes an increase in board independence (as in Hermalin and Weisbach (1998)), or if other factors cause comovement in board composition and firm performance (as in Harris and Raviv (2007)). Recent theory also suggests that board independence is unlikely to have a uniform effect across firms, and that the effectiveness of independent directors may depend on the information environment of the firm (see Hermalin and Weisbach (1998), Raheja (2005), Adams and Ferreira (2007), and Harris and Raviv (2007)).³

Perhaps as a result of these issues, many studies fail to find a strong relation between board independence and firm performance (see, for example, Bhagat and Black (2002), Hermalin and Weisbach (2003), Fields and Keys (2003)). However, more recent studies (see, for example, Dahya and McConnell (2007) and Duchin et al. (2007)) identify exogenous changes in board structure by exploiting shifts in regulatory environments and provide evidence that increases in board independence precede improvements in firm performance. In particular, Duchin et al. (2007) find that the effect of outside directors on firm performance is small on average; however, consistent with the recent theory above, the effect of outside directors on firm performance varies according to the information environment of a firm: outside directors are effective when the cost of acquiring information about a firm is low, but ineffective when the cost of acquiring information is high.

The paper most closely related to ours is perhaps Brickley et al. (1999), who investigate a sample of former CEOs who end up on boards of companies after they retire as CEOs.⁴ Their focus is on the managerial incentives that these possible future

 $^{^{3}}$ Note that incorporating information considerations into evaluations of board composition builds off a long-understood notion (see Berle and Means (1932), Fama and Jensen (1983), Jensen (1993)) that the effectiveness of outside directors may be limited by their inferior information relative to corporate insiders.

⁴ See also Lee (2007) for more recent evidence on post-retirement board service by former CEOs. In addition to this work, Stern and Westphal (2006) use survey evidence to find that managers who engage

board appointments provide for CEOs during their tenures, but they do provide evidence that boards may consider ability and merit when selecting directors by showing that the likelihood of post-retirement board service by a CEO is positively related to the stock market performance of that CEO's firm during her tenure.⁵ The problem of course with using CEOs and senior executives is that past performance attribution is complicated by the fact that firm performance is difficult to disentangle from individual performance.⁶ In addition, in the majority of past CEO appointments (outside CEOs onto the board of another firm), one cannot calculate skill of the CEOs with respect to the exact firm they subsequently serve on the board of, making it more difficult to assess their suitability for the appointing firm in particular. By contrast, our focus on sell-side analysts alleviates this issue, since we can explicitly compute measures of skill/ability and optimism for each analyst with respect to the appointing firm (and with respect to her entire portfolio); in doing so, we can directly test the true track record and implicit firm motivation for our sample of appointed independent directors.

II. Data

The data in this study are collected from several sources. We obtain biographical information and past employment history for directors and senior company officers from Boardex of Management Diagnostics Limited. The Boardex data contain relational links among board of directors and other corporate officials. Links in the dataset are constructed by cross-referencing employment history, educational background and professional qualifications. For each firm, we use the link file to reconstruct the annual time series of identities of board members and senior officers of the firms.

We use analysts' stock recommendation data from the I/B/E/S historical recommendation detail file, which codes recommendations on a common scale from 1 to 5, where 1=Strong Buy, 2=Buy, 3=Hold, 4=Sell, and 5=Strong Sell. We search public

in ingratiatory behavior toward CEOs are more likely to receive appointments on boards with the CEO. ⁵ See also Kaplan and Reishaus (1990) and Gilson (1990), as well as a body of empirical research (summarized in Yermack (2006)) that argues that what matters for firm performance are the qualifications of outside directors, such as financial expertise (DeFond et al. (2005)), business knowledge and experience (Fich (2005)), and the time commitments of outside directors (Fich and Shivdasani (2006)).

 $^{^{6}}$ See Bertrand and Schoar (2003).

filings and other miscellaneous information available over the World Wide Web to identify security analysts that are subsequently appointed to the board of directors of the companies they follow. We start by identifying all analysts on the I/B/E/S tape who provide at least one recommendation on a domestic stock between 1993 and 2006. For each analyst, I/B/E/S provides a numeric identifier, the analyst's last name, the initial of his/her first name, and the analyst's brokerage house. Since our data construction methodology involves name searches, we delete observations with multiple names for a given analyst numeric identifier or multiple analyst and brokerage identifiers for a given name. Finally, we discard teams, as attribution of the recommendation is less clean in these cases.

We look at analysts exiting the industry during our sample period and generate an initial list of potential hires by matching the analyst's initials and last name to the names of all board members of all firms covered by the analyst during her tenure. For example if analyst J. Smith covered stock ABC and XYZ between 1994 and 1998 and exits the industry in 1998, we search the list of directors of ABC and XYZ for board members named J* SMITH appointed in or after 1998. Finally we hand-check each entry from this initial list in order to positively identify analysts appointed to the board of firms they used to cover. To do so, we search press releases regarding the appointment (which usually describe the board member's background and prior employment) and Zoominfo.com, a search engine that specializes in collecting and indexing biographical and employment data from publicly available documents over the Web. We also use a variety of other sources on a case-by-case basis, including contacting the company to confirm the identity and the background of the board member. We use a conservative approach and only retain entries for which we can positively identify the board member as a former security analyst from multiple sources.

We match our recommendation data to accounting and stock return data from CRSP/COMPUSTAT. We also utilize data on firm-level governance measures, drawn from the IIRC database available through WRDS.

Table I reports summary statistics for our sample. We can positively identify 43 analysts that upon exiting the industry are appointed to the board of directors of a firm that they themselves previously covered. In all, we can identify 51 unique situations

where analyst board appointments take place. Collectively these analysts cover a total of 1,163 firms issuing 4,130 recommendations between 1993 and 2006. Despite the fact that 51 seems like a small sample, our identification relies on the fact that these analysts cover a large number of stocks and produce numerous recommendations. Also, firms appointing former analysts to their board are covered by many other analysts: a total of 1,212 analysts making 4,579 recommendations on these firms. We therefore exploit variation within and across analysts to identify systematic differences in recommendations. Panels B, C, and D report board, firm and analyst-level characteristics for our sample. Panels B and C reveal that firms that appoint analysts to the board are slightly larger than other firms and have a slightly higher percentage of independent directors, but these differences are not statistically significant. Panel D indicates that analysts who are appointed to the board tend to work for slightly larger brokerage houses and cover more stocks than other analysts, but again this difference is not significant.

Table II reports the distribution of our analyst appointments across industries (Panel A) and across years (Panel B). The appointments are spread across a wide range of industries (29 of the Fama-French 49 industries), with the two largest appointment shares coming from Finance and Trading (10%) and the Petroleum and Natural Gas industry (10%). The total frequency (68) is greater than the total number of firm-appointments (51), as a number of the firms switch industry classifications throughout our sample period. As we do analyses both pre- and post- appointment, we retain all industries that are represented. Panel B shows that most of our appointments happen in the second half of our sample (post-2000), with roughly 30% of the appointments up to 2000, and 70% from 2001-2006.

III. Recommendations and Performance

A. Distribution of recommendations

The mere fact that analysts are subsequently appointed to boards of firms that they previously covered may not be unreasonable from a shareholder's perspective. Analysts spend years (and in some cases their entire careers) covering a small set of stocks, and so may be expected to have relative expertise on these firms. They may be the types of informed agents that shareholders would like as representatives on the board of directors. However, motivations based *solely* on this expertise carry no prediction on the level of recommendations. Actions based on window-dressing motives by firms, in contrast, do. In this section we examine the stock recommendations of analysts on firms that subsequently appoint them to their board of directors.

Table III presents the distribution of analysts' recommendations and tests the hypothesis that analysts hired by the firm they formerly covered issued more optimistic recommendations on these firms. Panel A reports the distribution of recommendations issued by analysts on firms who subsequently appoint them to the board of directors (I.e., if analyst Jim Smith covers firm XYZ and he is later hired by XYZ to serve on the board, we report the distribution of his recommendations on XYZ in Panel A). We refer to these as "Appointed recommendations."

We compare this distribution to three benchmarks. Panel B reports the distribution of all other recommendations on the I/B/E/S tape. Panel C reports the distribution of recommendations by analysts who are *not* appointed to the board, on those same firms that do appoint an analyst to the board. (I.e. we report recommendations on XYZ by all other analysts, excluding the appointed analyst Jim Smith). Panel D reports the distribution of recommendation by analysts who are appointed to the board, on all the stocks they cover *excluding* the firm who appoints them to the board. (I.e. we report Jim Smith's recommendations on all other firms, excluding the appointing firm XYZ).

Comparing Panel A and Panel B reveals that appointed recommendations are significantly more optimistic than the I/B/E/S population. Roughly 42% of recommendations issued by analysts subsequently hired by the firm they cover are Strong Buy recommendations compared with only 25% for the whole sample. Similarly, over 82% of appointed recommendations are buys (Buy or Strong Buy), compared with only 57% of all of the non-appointed recommendations; we are able to safely reject the null hypothesis of no difference between the two distribution (Chi-square statistic=39.2, p-value=0.000). Panels C and D report very similar results in comparison to the Appointed recommendations of Panel A (Chi-square tests in both cases reject equal distributions with p-values<0.001). To summarize, we find that analysts hired by the

firm they previously covered issue significantly more optimistic recommendations on these firms relative to: 1) the universe of all sell side analysts, 2) recommendations on all other firms that they themselves issue, 3) recommendations on the appointing firm issued by all other analysts.

B. Regression results on the positive bias in board-appoint analyst recommendations

In this section we run panel regressions on analyst recommendations to control for other determinants of recommendation levels. The dependent variable is the recommendation level of (1-5), which we reverse-score such that 1=Strong Sell, 2=Sell, 3=Hold, 4=Buy, and 5=Strong Buy.⁷ The key independent variable of interest is a categorical variable (*Appointing Firm*) that is equal to 1 if the recommendation is issued by an analyst who is subsequently appointed by the given firm as a board member, and 0 otherwise. A positive coefficient on this variable indicates that the appointed analyst issues more optimistic stock recommendations on the appointing firm relative to all other recommendations.

We include a number of firm-level controls: size, book-to-market, past 1-month, and past 1-year returns (from month t-12 to t-2). In addition, control variables for analyst and brokerage house include: two measure of analyst experience, the number of years an analyst has been issuing recommendations on I/B/E/S, and the number of years the analyst has been issuing recommendations on the given stock; an affiliation dummy, equal to one if the analyst is employed by a bank that has an under-writing relationship with the given firm; an All-Star dummy variable, equal to one if the analyst is listed as an "All-Star" in the October issue of Institutional Investor magazine in that year⁸; a measure of brokerage size, equal to the total number of analysts employed by the brokerage house; and fixed effects for recommendation month, analyst, firm, and industry, where indicated.⁹ Standard errors are clustered at the recommendation month level.

Table IV reports the regression results. Consistent with the results in Table III,

⁷ Note that on I/B/E/S, Strong Buys are coded equal to 1, and Strong Sells are coded equal to 5; we reverse this convention and set Strong Buys=5 and Strong Sell=1, and so on, such that increases in recommendation levels correspond to increases in optimism.

⁸ The list of affiliated analysts and all-star analysts are from Ljungqvist at al. (2006, 2007).

⁹ We use a 48-industry classification from Ken French's website.

in every specification the coefficient on *Appointing Firm* is positive and highly significant, indicating that the appointed recommendations are significantly more optimistic. The interpretation of the coefficient in the first column, equal to 0.48 (t=5.90), is that analysts' recommendations are shifted half of a rating higher on firms that subsequently appoint them as board members; so while the mean rating is between a Buy and a Hold (3.74), the appointed analyst's recommendation rises to between a Strong Buy and a Buy (4.22) on firms to which he is subsequently appointed. The appointment effect is largely unaffected by other firm-level, analyst-level, and brokerage-level controls. The effect does not seem to be driven by a certain time period of overly positive recommendations (month fixed-effects), by recommendations in a specific industry (industry fixed-effects), by something specific about analysts appointed to boards (analyst fixed-effects), or by something specific about firms that appoint covering analysts to their boards (firm fixed-effects).¹⁰ Finally, in the last column we run the same regression specification, but as an ordered logit, and find nearly identical results.¹¹

To get an idea of the magnitude of the appointment effect, we compare it with a well-documented conflict of interest effect: underwriting affiliation of a given analyst's investment bank with the firm in question (Lin and McNichols (1998), Lin, McNichols, and O'Brien (2005)). This literature shows that analysts have positively biased recommendations on these affiliated firms to which their investment banks do business. We include this affiliation effect in the regressions (Columns 2-6), and find that affiliation does have a positive effect on recommendations. However, it has no impact on the appointment effect, and the affiliation effect magnitude is 3 to 4 times smaller than the appointment effect (0.11 to 0.14 vs. 0.36 to 0.44).

In unreported tests we also check if this main effect is simply a reflection of the analyst's overall optimism on all her recommended stocks, or the analyst's optimism on

¹⁰ Given that we include fixed effects in all the regressions, constants are not reported. We also include firm age (which is highly correlated with size) in the regressions as a robustness check, and the results are virtually identical in terms of magnitude and significance.

¹¹ When the coefficients are transformed back into marginal effects, the predicted appointment effect is 0.42 (t=5.12). We only report one set of coefficients, while the coefficients in an ordered logit can theoretically change for each increment of the dependent variable (1 to 2, 2 to 3, etc.). We have checked this, especially for *Appointing Firm*, and the coefficient estimates are nearly identical across the increments.

the broader industry of the appointing firm. We find that appointed analysts are not simply overly optimistic on all their stocks. Appointed analysts are indeed optimistic on firms in the same industry as the one that subsequently appoints them to the board, but this industry optimism effect is about one-third of the firm-level appointment effect identified earlier, and does not affect its magnitude or significance; in magnitude, this overall industry optimism of appointed analysts is similar to the affiliation effect discussed above.

C. Regression results on the performance of appointed analyst recommendations

In this section we run panel regressions of analyst predictive ability. Under the hypothesis that analysts are selected to serve on the board on the basis of their perceived ability, potential efficacy, and general understanding of the appointing firm, one might expect that appointed analysts would demonstrate higher predictive ability on their stock recommendations on the appointing firm. To test this, we employ panel regressions where the dependent variable is the return to the recommendation in the year immediately following a recommendation change (*RecChange*). The changes we examine are upgrades from the consensus recommendation (Upgrade), and downgrades from the consensus recommendation (Downgrade). The key variable of interest is an interaction term (Appointing Firm*RecChange), which equals 1 if the analyst recommending the stock in question is subsequently appointed to the board of directors of that firm, and the recommendation in question is an upgrade (or downgrade) from consensus. Dummy variables for Appointing Firm and RecChange are also included. The rest of the independent variables are the same as those used in Table IV. Note that by controlling for firm size, book-to-market, and past year returns on the righthand side, we control for well-known determinants of firm-level expected returns.

Table V presents the results. Note that we are focusing on changes from the consensus, not changes from an analyst's prior recommendation, in order to increase the power of our tests. If analysts bring new and valuable information to the market, upgrades should predict positive future abnormal returns, and downgrades should predict negative future abnormal returns. The positive and significant coefficients on RecChange (i.e., Upgrade) in Columns 1-3, and the negative and significant coefficients

on RecChange (i.e., Downgrade) in Columns 4-6 indicate that recommendation changes (from consensus) by analysts are generally informative about future returns.

By contrast, Table V indicates that *appointed* analysts demonstrate virtually no predictive ability on the recommendations they issue on firms that subsequently appoint them. For example, the negative and significant coefficient on the interaction term in Column 1 (=-0.183) implies that appointed analysts do much worse on their upgrades on appointing firms than the other analysts covering these same stocks. Further, Column 1 indicates that upgrades on appointing firms by non-appointed analysts typically earn a statistically significant 21.9% (=7.5%+14.4% (the f-test of the combined effect has a p-value < 0.03) in the year following an upgrade, while upgrades on appointing firms by appointed analysts typically earn only an insignificant 3.6%(=7.5%+14.4%-18.3%), (f-test combined effect p-value>0.55) in the year following an Column 4 illustrates a similar result for downgrades. Downgrades on upgrade. appointing firms by non-appointed analysts typically earn -12.4% (=-9.3%-3.1%) in the year following a downgrade, while downgrades on appointing firms by appointed analysts typically earn 5.1% (=-9.3%-3.1%+17.5%) in the year following a downgrade. Controlling for analyst and year fixed effects in Columns 3 and 6 dampens the relative differences between non-appointed and appointed analysts on these appointing firms (to 15.9% vs. 1.5% for upgrades, and -3.2% vs. 7.1% for downgrades) somewhat, and the statistical significance for the downgrade effect, but in all cases still reveals an economically large difference in their relative performance. In unreported tests we also find that appointed analysts do not demonstrate any superior ability to predict future earnings on the appointing firm. In short, we cannot find anything in the track records of appointed analysts to suggest that these analysts would be particularly effective monitors of the firm. Instead, our results provide evidence that boards appoint biased analysts who exhibit little skill in evaluating the firm itself.

IV. Determinants of board appointments, and the timing of positive recommendations

In this section we explore the determinants of board appointments, and the dynamics of appointed analysts' recommendations.

A. Determinants of board appointments

Our prior results document an upward bias in the analyst recommendations of analysts on those stocks to which they are subsequently appointed to the board. We now run predictive regressions of board appointments on the level of their recommendations, and a host of other analyst- and firm-level characteristics, to uncover other potential determinants of board appointment. To run these tests we collapse all analyst-firm recommendation relationships to one observation per relationship. So, if Analyst AB makes 14 recommendations on Firm XY and 30 recommendations on Firm YZ over the sample, this would enter as two observations: one for the AB-XY relationship and one for the AB-YZ relationship. We then put whether or not the specific firm-analyst relationship ends up in a board appointment as the dependent variable. This allows us to measure what specific factors are driving certain relationships that end up in board appointments, relative to those that do not. This collapsing results in roughly 153,000 unique analyst-firm relationships. From Table I, there are 51 unique appointments by firms of their own analysts to the boards of directors. The independent variables are now averages across the entire analyst-firm relationship. For example, Firm Level Recommendation is the average recommendation level given by the analyst over the entire period when the analyst recommended the given firm. The rest of the independent variables are described in Table IV, and are averaged over the life of the analyst-firm relationship. For instance, All Star is now the percent of years that the analyst had all star status while recommending the given stock.

Table VI reports the regression results from the cross-sectional regressions.¹² From Column 1, the coefficient on *Firm Level Recommendation* indicates that (in line

¹² Here, fixed effects at the analyst level are included, but recommendation month fixed effects cannot be included here, as these are purely cross-sectional regressions at the firm-analyst relationship level. All standard errors are adjusted for clustering at the firm level.

with Table IV) firms are more likely to appoint analysts that have more positive recommendations on the firm. The coefficient of 0.033 (t=4.72) implies that an analyst that is on average one rating more optimistic, for instance a Buy rather than a Hold (which represents a roughly 1 SD increase in rating) is about twice as likely to be appointed to the board of directors (unconditional probability of .035%, moves to .068%).¹³

We now explore what kinds of firm-analyst relationships, analyst characteristics, and analyst behaviors results in board appointments. For example, Table VI indicates that, in addition to positive firm-level recommendations, investment banking affiliations (Affiliation) and all-star status (All Star) are significant predictors of board appointment. These findings are perhaps not surprising since investment banking affiliations likely strengthen the nature of the firm-analyst coverage relationship, and all-star status conveys an outside certification that could be useful in the process of board selection. Column 2 of Table VI explores an interaction of recommendation level on the appointing firm with all-star status: the coefficient on [All Star*Rec] of 0.162 (t=2.87) implies that a one standard deviation increase in the frequency of being an allstar while covering the firm will increase the positive bias' effect on being appointed by over 2 times. Notice that this column also reveals that All Star analysts who have the average level of recommendation are not significantly more likely to be appointed as board members. It is only those All Star analysts that are *also* optimistic about the appointing firm who get appointed as board members. This highlights the critical role of optimism in the appointment likelihood. Column 3 reveals a similar effect with regard to affiliation: the coefficient on [Affiliation * Rec] of 1.18 (t=2.10) implies that a one standard deviation increase in the amount of time the analyst's brokerage is affiliated with the firm increases by 4 to 5 times the effect of that analyst's positive bias on being appointed.

Column 4 presents the interaction effect of analyst coverage and recommendation

¹³ We have run all specifications of Table VI using a probit specification. All of the magnitudes and significance levels are similar; for example, the estimated effect of recommendation level in the probit analogue of Column 1 implies a doubling of the predicted appointment probability (at the mean level of all independent variables) from .012% to .025% (t=3.90). We report OLS regressions because of the interpretation complications associated with non-linear model estimated interaction term effects varying over the level of covariates (Ai and Norton (2003).

level. The fewer analysts there are covering a given firm, the greater the impact of each of the covering analysts' recommendations, by definition, on the consensus recommendation for the firm. Few Analysts is a dummy variable equal to 1 if there are fewer than the median number of analysts covering the firm; when this variable is included in these predictive regressions without interactions included (result not shown), it has a positive and significant coefficient, indicating that a board appointment is more likely to happen in those firms with fewer analysts covering them. As with the interaction results in Columns 2 and 3, the positive and significant coefficient on [*Few Analysts*Rec*] in Column 4 implies that the positive bias in recommendations has a significantly larger effect on board appointment when there are fewer analysts covering the firm (so that the positive bias has a larger impact on the consensus). These first three columns all show that certain characteristics of the firm and analyst can enhance the effect of positive bias on the analyst's chance of being appointed as a board member.

The last 2 columns of Table VI explore exactly which analyst behaviors increase the probability of appointment. For example, Column 5 shows that the positive bias in recommendations has an even larger effect on appointment when the analyst has a higher percentage of recommendations that are upgrades from the consensus recommendation (i.e., the coefficient on [% Recs Upgrade*Rec] is positive and strongly significant). These upgrades from consensus are potentially times that are most beneficial from the firm's point of view. Along these same lines, Column 6 finds that in addition to an average upward bias, what an analyst does in her final recommendation on the firm (perhaps very salient from the point of view of the board) has a significant impact on whether she is appointed to the board. If the last recommendation was an upgrade from consensus, the probability of being appointed is significantly higher, roughly doubling from the unconditional probability.

B. Dynamics of recommendation behavior

While Section A gave an idea of the characteristics of those relationships in which firms appoint former analysts who covered their firms, in this section we examine the dynamics of analysts' recommendations on those firms. Specifically, we identify situations where firms may find a positive recommendation especially advantageous, and check the behavior of the appointed analysts versus all other analysts at these times. The three situations we examine are: i.) periods preceding large amounts of stock issuance by the firm, ii.) periods following especially high short interest in the firm, and iii.) periods where the last analyst's recommendation downgraded the stock from the consensus.

To examine the first two scenarios, we use the same framework as in Table IV: the dependent variable is the level of recommendation, and as before the variable Appointing Firm measures the recommendations of analysts on the firms that subsequently appoint them to the board. All of the control variables from Table IV are included (but unreported) in Table VII. In addition to these variables we include the following dummy variables: Last Rec. Downgrade, which equals 1 when the prior recommendation by the last analyst was a downgrade from consensus; *High Short* Interest, which equals 1 if the firm had above median short interest level in the month prior to the recommendation being issued; and *High Future Issuance*, which is equal to 1 if the firm has above median stock issuance in the 6 months following the recommendation. The results are in Columns 1-3 of Table VII. From Column 1, the average analyst's recommendation is significantly more negative following times of high short interest (i.e., the coefficient on high short interest is negative and significant). However, Column 2 shows that analysts who are subsequently appointed to boards of the firms they cover have the complete opposite behavior and issue significantly more positive recommendations following months of high short interest on these firms. From Column 3, these same analysts also issue especially positive forecasts when the appointing firm has a large amount of stock issuance in the near future. Specifically, the coefficients on [High Short*Appointing Firm] of 0.326 (t=2.14) and on [High Issue *Appointing Firm] of 0.303 (t=2.19) imply that the appointed analysts issue recommendations roughly twice as upwardly biased at these times.

To test the effect following a downgrade by another analyst, we use a slightly different specification. In Columns 4 and 5, the dependent variable is a categorical variable equal to 1 if the given recommendation is a downgrade from the current consensus estimate. While the average analyst downgrades 42% of the time, the coefficient on *Appointing Firm* of -0.17 (t=3.06) indicates that analysts downgrade only

25% of the time, or about 40% less often (17%/42%) on firms to which they are subsequently appointed to the board. In Column 5, we see that consistent with prior findings on analyst herding, the average analyst is about 7% more likely to downgrade from consensus if the prior analyst downgraded. Analysts later appointed to boards again do the exact opposite: they are especially *unlikely* to downgrade the firms they are appointed to at exactly those times when the last analyst downgraded from the consensus.

All of these tests point to the same types of behaviors, each of which is consistent with firms engaging in a calculated form of window-dressing when appointing analysts as board members: not only do analysts who are subsequently appointed to boards of firms they cover have significantly more positive recommendations, but they have especially large positive biases at precisely those times likely to be most valuable to these firms.

V. Characteristics, Actions, and Post-Appointment Performance of Appointing Firms

In this section, we examine what types of firms appoint their former analysts as board members, and what types of firm behaviors, and resultant value implications, we see following these appointments. In light of our findings that appointing firms select overly optimistic analysts who are also poor relative performers (and who are optimistic at precisely at times those times likely to be most valuable to the firms), we test what types of governance our appointing firms have relative to all other firms. We use established measures of governance, namely those from Gompers, Ishii, and Metrick (2003), to establish an initial relationship. We use two main measures. The first, *GIndex*, is a composite of 24 unique governance provisions, in which one point is added for each provision added. Higher values of the *GIndex* indicate fewer shareholder rights, and thus higher values are often associated with weaker shareholder governance (Gompers, Ishii, and Metrick (2003)). We also focus on the *Delay* index of governance. *Delay* is meant to capture provisions that slow down hostile takeovers.¹⁴ The reason we

¹⁴ Delay is composed of four unique provisions: i.) blank check (a special class of preferred stock the board has control over), ii.) classified boards (staggered board terms of directors, preventing a complete ousting

isolate this sub-index is that the legal literature has argued that given the modern characteristics of the takeover market, this index subsumes all others in importance (Coates (2000) and Daines and Klausner (2001)).

Table VIII contains the results of these tests. We run regressions of the measures of governance on a number of control variables, and on a variable that measures those firms that appoint their former sell side analysts to their boards. The independent variable, *Appointing Firm*, is equal to 1 for firms who appoint their former analysts at some point over our sample period, and zero otherwise. This variable thus captures how much better (or worse) the governance is at the firms who engage in appointing their past analysts to their boards, controlling for the other firm, industry, and year effects in the regression. Columns 1-3 contain regressions using the *GIndex* as the governance measure. From these columns, the positive and significant coefficient on Appointing Firm (0.284, (t=4.05) in Column 3) implies that firms who appoint former analysts to their boards do have relatively weaker governance. To get an idea of the magnitude, the unconditional mean of *GIndex* is 8.98, so this coefficient represents a roughly 3% increase.

Column 4 uses the measure of the *Delay* index. This sub-index takes a value of between 0 and 4, with an unconditional mean of 2.17. The coefficient on *Appointing Firm* in Column 4 of 0.243 (t=11.00) thus represents over an 11% increase in these important hostile takeover defenses by those firms appointing analysts. To further understand exactly which of these provisions to delay hostile takeovers is driving the strong relationship with *Delay*, we separately test the relationship between *Appointing Firm* and each of the four component provisions (these components are described in detail in footnote 14). We find that two of the four governance provisions have an especially strong relationship with this propensity to appoint analysts, in terms of magnitude and significance. These are the Classified Board (*CBoard*) and Limits to Written Consent (*Limits*). The coefficient in Column 5 implies that appointing firms are 16% more likely to have the delay provision of classified boards than firms that do

of the board at any election), iii.) special meeting provisions (make it difficult or impossible for bidders to call a special meeting to replace board members or alter takeover defenses), and iv.) limits to written consent (make difficult or completely disallow action by written consent, making it more difficult and time consuming for potential bidders).

not (.093 relative to a mean of .58). The coefficient in Column 6 of 0.138 implies that appointing firms are over 38% more likely to have the delay provision of required written consent than firms that do not appoint their analysts to their boards (.138 relative to a mean of .358). All of the results in Table VIII suggest that firms that appoint their former sell side analysts as board members are firms that have worse shareholder rights and governance.

Table IX then explores the dynamic effect of appointing the analyst to the board. Here, we use the actual appointment dates (given in Table II), to identify changes in behavior and valuation implications. The results thus far are consistent with more poorly governed firms appointing analysts that are both overly optimistic and poor performers, with respect to the appointing firms. If firms are simply hiring cheerleaders for the current management and board, we may expect these firms to engage in even more potentially questionable activities for shareholders once having the cheerleader on the board. One of these questionable behaviors that is both well documented and established in the literature is earnings management. Specifically, we focus on the portion of earnings management that is discretionary, and that has been shown to have a positive short-term impact on a firm's stock price: discretionary accruals (Sloan (1996)).

The regressions testing whether firms change their behavior after appointing their former analyst are in Panel A of Table IX. Specifically, we regress a firm's discretionary accruals¹⁵ on *After Appointment*, a categorical variable equal to 1 if the former analyst is a board director, and zero otherwise. In these tests, we include only those firms that do appoint analysts as board members to isolate the pre- and post-appointment effect on their behavior (a total of 402 firm-year observations). In addition, we include year fixed effects and firm fixed effects, as we want to capture solely the marginal effect of having the former analyst on the board, within a given firm, and controlling for sample time trends. We also include a number of firm-level control variables, which given the firm and year fixed effects, can be interpreted as the effect of these variables after firm

¹⁵ Discretionary accruals are computed using the modified Jones model described in Dechow, Sloan, and Sweeney (1995), and are equal to the residuals from firm-level regressions of total accruals on nondiscretionary accruals (where non-discretionary accruals are equal to the change in sales minus the change in receivables plus gross property, plant, and equipment, all scaled by last year's total assets); each firm must have a minimum of ten years of data to be included in these regressions

averages and time period trends have been removed. The most important control variable is *Total Accruals.*¹⁶ With total accruals included, the coefficient on *After Appointment* can be interpreted as follows: given the same level of actual accruals before and after appointment, how much more of the accruals are discretionary (earnings management) after the appointment. From Column 1, the positive and significant coefficient of 0.022 (t=2.06) implies that firms have significantly higher discretionary accruals (do significantly more earnings management), once the former analyst joins the board. To get an idea of magnitude, the unconditional average of accruals in the sample is -0.01 (with a median of 0), while 0.022 represents a move to the 75th percentile, so the entire upper-quartile spread. Controlling for the level of *Total Accruals* has no effect on the magnitude or significance of *After Appointment* (Column 3). In the model including all controls (even current year's earnings level), the estimated change in behavior even increases in point-estimate and significance level, with *After Appointment* having a coefficient of 0.030 (t=2.51).

Next we compute value-weighted calendar-time portfolio returns in order to assess the post-appointment performance of our sample of appointing firms. Our goal is to assess the valuation implications associated with the observed appointment and potential behavior changes. It could as easily be a signal of a firm characteristic that causes both the appointment of former analyst and poor subsequent performance (e.g. poor governance). In either case, the action of appointing a former analyst (who was optimistic and a poor relative performer) to the firm's board of directors is informative about the future of the firm itself. To perform our analysis we construct two portfolios (After Appointment and Non-Appointment), as well as for a spread portfolio (Spread) which goes long the After Appointment portfolio and short the Non-Appointment portfolio each month. Firms that appoint analysts to the board enter the After Appointment portfolio in the month following their appointment, and remain in the portfolio for a year; all other stocks are placed in the Non-Appointment portfolio. Each month we compute the value-weighted return on each portfolio. We require the After Appointment portfolio to contain at least 3 stocks in any given month, and thus use a sample period of February 1997 to December 2006. We also compute 3-factor (Fama

¹⁶ Total Accruals are the total annual amount of accruals of the firm, calculated as in Healy (1985).

and French (1996), 4-factor (Carhart (1997), and 5-factor (Pastor and Stambaugh (2003)) alphas on each of the portfolios.

Panel B of Table IX presents the average monthly value-weighted calendar-time portfolio returns on all three portfolios. Panel B illustrates that the magnitude of underperformance by appointing firms is large: the Spread portfolio earns -1.3% per month in raw returns, and up to almost -2.0% per month in abnormal returns; the 3and 5-factor specifications are significant at the 5% level, while the raw and 4-factor specifications are significant at the 10% level. The entire spread in abnormal returns between the two portfolios is due to the underperformance of the After Appointment portfolio, as the Non-Appointment portfolio earns alphas of almost exactly zero. Thus, the post-appointment performance of our sample of appointing firms is poor.

VI. Conclusion

In this paper we use a unique, hand-collected database of independent directors to provide evidence that firms appoint independent directors who are overly sympathetic to management, while still technically independent according to regulatory definitions. The sample of independent directors we collect provides us information on the directors' views regarding the firm *prior* to being appointed to the board. Namely, these are former sell-side analysts who are appointed to boards of companies they previously covered. Our empirical strategy thus allows us to directly evaluate the objectivity and potential effectiveness of a class of independent directors based solely on their *observable* opinions about the firm in question. We use the analysts' track records to examine the roles of optimism and ability in the board appointment process. In doing so we find strong evidence that boards appoint overly optimistic analysts (i.e., cheerleaders for management) who exhibit little skill in evaluating the firm itself.

The magnitude of the optimistic bias is large: 82.0% of appointed recommendations are strong-buy/buy recommendations, compared to 56.9% for all other analyst recommendations. By contrast, board-appointed analysts exhibit poor relative performance on their recommendations on appointing firms. For example, we find that upgrades on appointing firms by appointed analysts perform significantly worse than non-appointed analyst upgrades on the same firms. Additionally, these appointed analysts appear to be especially optimistic at times that are most favorable to the appointing firms (e.g. prior to stock issuances). We find that the types of firms that appoint analysts are those with significantly worse governance characteristics. This governance seems to further worsen following the analyst's appointment, as for instance, the firms engage in significantly more earnings management, which is coupled with a significant decrease in firm value.

Collectively, we believe our results shed new light on the views and characteristics of independent directors, and of the firms who appoint them. Additionally, the characteristics, actions, and post-appointment performance of the appointing firms suggest that exploring more deeply the past track records and backgrounds of *all* board members (beyond simply independent vs. inside) is a useful way to identify cross-sectional variation in firm governance quality. Before the question of whether independent boards benefit shareholders can be adequately addressed, more research is needed to determine the true nature of "independence" within corporate boards, which begins with understanding the true independence of directors.

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Table I: Summary Statistics

This table shows summary statistics for the sample of sell side analysts and their covered stocks between 1993 and 2006. Panel A reports the composition of the sample. Panels B and C report board and firm-level characteristics for the sample of firms that subsequently appoint an analyst who used to cover them to the board of directors, and for the sample of all other firms ("Others"). Panel D reports analyst characteristics for the sample of analysts who are appointed to the board of a firm they previously covered, and for the sample of all other analysts ("Others"). Brokerage Size is the total number of analysts issuing recommendations at the given analyst s brokerage house. Experience measures an analyst's history of recommending stocks on I/B/E/S at the time of the recommendation, in years.

| Panel A: sample composition | | |
|--|---|---------|
| Number of firms covered by appointed analysts | 1,163 | |
| Number of firms appointing analysts to the board | 51 | |
| Number of analysts appointed to board of firm they covered | 43 | |
| Number of analyst-firm appointments | 51 | |
| Number of analysts covering appointing firms | 1,212 | |
| Panel B: board characteristics | Sample of firms appointing an analyst to their board | Others |
| Average size of board | 6.34 | 6.55 |
| Percentage of independent directors on board | 0.57 | 0.49 |
| Panel C: firm characteristics | Sample of firms appointing an analyst to their board | Others |
| Number of recommendations | 4,716 | 416,226 |
| Market value of equity percentile | 0.83 | 0.78 |
| Book-to-market percentile | 0.34 | 0.39 |
| 12-month prior return percentile | 0.56 | 0.54 |
| Number of analysts covering stock | 10.81 | 9.27 |
| Panel D: analyst characteristics | Sample of analysts appointed to board of firm they previously covered | Others |
| Number of stocks covered | 16.9 | 12.6 |
| Brokerage size | 60.4 | 57.5 |
| Experience in years | 4.4 | 4.3 |

Table II: Firm and Analyst Board Appointments

Panel A shows the industry distribution of the firms that appoint their former sell side analysts to their board of directors. The total number is greater than 51 as a number of the firms switch industry classifications over the 14 year sample. Panel B shows the distribution of years in which the analysts were appointed to the boards of the firms they formerly covered.

| Panel A: Industry Distribu Industry | Frequency | Percent |
|--|-----------|---------|
| Automobiles and Trucks | 1 | 1.47 |
| Banking | 3 | 4.41 |
| Business Services | | |
| | 6 | 8.82 |
| Chemicals | 2 | 2.94 |
| Computer Software | 3 | 4.41 |
| Construction Materials | 1 | 1.47 |
| Electrical Equipment | 1 | 1.47 |
| Electronic Equipment | 1 | 1.47 |
| Entertainment and Theatre | 3 | 4.41 |
| Finance and Trading | 7 | 10.29 |
| Food Products | 2 | 2.94 |
| Healthcare Services | 1 | 1.47 |
| Household and Consumer Goods | 2 | 2.94 |
| Insurance | 1 | 1.47 |
| Iron and Steel Works | 2 | 2.94 |
| Machinery | 5 | 7.35 |
| Measuring and Control (Laboratory) Equipment | 2 | 2.94 |
| Medical Equipment | 1 | 1.47 |
| Non-Metallic and Industrial Metal Mining | 1 | 1.47 |
| Petroleum and Natural Gas | 7 | 10.29 |
| Pharmaceutical Products | 2 | 2.94 |
| Precious Metals | 1 | 1.47 |
| Printing and Publishing | 1 | 1.47 |
| Recreation and Toys | 1 | 1.47 |
| Restaurants, Hotels, Motels | 2 | 2.94 |
| Retail | 3 | 4.41 |
| Transportation | 1 | 1.47 |
| Utilities | 1 | 1.47 |
| Wholesale | 4 | 5.88 |
| Total | 68 | 100 |

Panel A: Industry Distribution

Panel B: Appointment Years

| I and D. Ap | pomement it | 2013 |
|------------------|-------------|---------|
| Appointment Year | Frequency | Percent |
| 1995 | 1 | 1.96 |
| 1996 | 1 | 1.96 |
| 1997 | 3 | 5.88 |
| 1998 | 3 | 5.88 |
| 1999 | 3 | 5.88 |
| 2000 | 4 | 7.84 |
| 2001 | 10 | 19.61 |
| 2002 | 7 | 13.73 |
| 2003 | 7 | 13.73 |
| 2004 | 2 | 3.92 |
| 2005 | 6 | 11.76 |
| 2006 | 4 | 7.84 |
| Total | 51 | 100 |

Table III: Recommendations of Analyst Appointees

This table reports the distribution of recommendations of analysts. There are five distinct levels of recommendations, ranging between Strong Sell and Strong Buy. Panel A reports the distribution of recommendations issued by analysts who are appointed to the board, on those firms that appoint the analyst to the board. Panel B reports the distribution of all other recommendations on the I/B/E/S tape. Panel C reports the distribution of recommendations by analysts who are *not* appointed to the board, on those firms that appoint an analyst to the board. Panel D reports the distribution of recommendation by analysts who are appointed to the board, on all the stocks they cover excluding the firm who appoints them to the board. Chi-square tests for equality of distributions between the comparison groups are given in each panel, along with p-values.

| | | Panel A | | | Panel B | | | Panel C | | | Panel D |
|-------------|------|-------------------------|------|-------|---|------|--|----------|------|-------|----------|
| _ | | Appointed nendations | | | All recommendations on s appointing analysts to the board | | All recommendations by analysts appointed to a board | | | | |
| | % | Cum $\%$ | % | Diff | Cum $\%$ | % | Diff | Cum $\%$ | % | Diff | Cum $\%$ |
| Strong Buy | 41.7 | 41.7 | 25.2 | 16.5 | 25.2 | 24.8 | 17.0 | 24.8 | 26.6 | 15.1 | 26.6 |
| Buy | 40.3 | 82.0 | 31.7 | 8.6 | 56.9 | 31.6 | 8.7 | 56.4 | 38.2 | 2.1 | 64.8 |
| Hold | 15.8 | 97.8 | 37.0 | -21.2 | 93.9 | 38.0 | -22.2 | 94.4 | 31.5 | -15.6 | 96.2 |
| Sell | 2.2 | 100.0 | 4.0 | -1.8 | 97.9 | 3.6 | -1.5 | 98.0 | 2.8 | -0.7 | 99.0 |
| Strong Sell | 0.0 | 100.0 | 2.1 | -2.1 | 100.0 | 2.0 | -2.0 | 100.0 | 1.0 | -1.0 | 100.0 |
| Chi-square | | | | 39.2 | | | 39.8 | | | 23.6 | |
| P-value | | | | 0.00 | | | 0.00 | | | 0.00 | |

Table IV: Level of Appointed Analyst Recommendations

This table reports panel regressions of analyst recommendations. The dependent variable is the level of recommendation, which ranges between 1 and 5, and which we reverse-score such that 1=Strong Sell, 2=Sell, 3=Hold, 4=Buy, and 5=Strong Buy. The key variable of interest is in the first row: Appointing Firm equals 1 if the analyst recommending the stock in question is subsequently appointed to the board of directors of that firm, and 0 otherwise. The other independent variables are as follows: Size measures the $\log(ME)$ and B/M measures the $\log(BE/ME)$, of the firm being recommended. Past Month Return and Past Year Return measure the given stock's return in the prior month, and 11-months prior to that month respectively, from the recommendation date. Brokerage Size is the total number of analysts that work at the given analyst's brokerage house. At the time of each recommendation, *Experience* measures an analyst's history of recommending stocks on I/B/E/S (in years), while *Exper. Rec. Firm* measures the number of years an analyst has been recommending a given stock. All Star is a categorical variable equal to 1 if the analyst was voted an all star analyst in the October issue of Institutional Investor magazine for the given year. Affiliation is a categorical variable that measures whether or not the given firm has an underwriting relationship with the analyst's brokerage. Column 6 runs an ordered logit regression, where the left hand side variable is the recommendation level (1-5). Fixed effects for recommendation month (Time), for industry (Industry) using the Fama-French industry definitions, for the firm (Firm), and for the analyst (Analyst), are included where indicated. All standard errors are adjusted for clustering at the recommendation month level, and t-stats using these clustered standard errors are included in parentheses below the coefficient estimates. 1%, 5%, and 10% statistical significance are indicated with ***, **, and *, respectively.

| | (1) | (2) | (3) | (4) | (5) | (6) |
|-------------------|--|---|--|---|--|---|
| | | | | | | Logit |
| Appointing Firm | $\begin{array}{c} 0.477^{***} \\ (5.90) \end{array}$ | 0.420^{***} (5.14) | $\begin{array}{c} 0.363^{***} \\ (4.70) \end{array}$ | $0.435^{***} \ (5.19)$ | 0.435^{***} (5.14) | 0.918^{***} (5.12) |
| Size | | $0.004 \\ (1.44)$ | 0.039^{***} (12.54) | 0.008^{***} (3.14) | 0.079^{***} (8.13) | -0.009 (1.44) |
| B/M | | -0.037^{***} (9.10) | -0.017^{***} (4.66) | -0.027^{***} (7.82) | -0.022^{***} (3.38) | -0.113^{***} (14.09) |
| Past Month Return | | $0.224^{***} \\ (8.60)$ | $0.191^{***} \\ (8.50)$ | $0.221^{***} \\ (8.72)$ | $0.144^{***} \\ (6.50)$ | $\begin{array}{c} 0.376^{***} \\ (4.09) \end{array}$ |
| Past Year Return | | $\begin{array}{c} 0.121^{***} \\ (12.69) \end{array}$ | 0.106^{***} (12.77) | $\begin{array}{c} 0.119^{***} \\ (12.67) \end{array}$ | 0.095^{***} (12.29) | $\begin{array}{c} 0.310^{***} \\ (13.78) \end{array}$ |
| Brokerage Size | | -0.001^{***} (6.93) | -0.001^{***} (4.43) | -0.001^{***} (6.94) | $\begin{array}{c} \textbf{-0.001}^{***} \\ (6.33) \end{array}$ | -0.002*** (8.31) |
| Experience | | 0.004^{***} (3.25) | -0.024*** (3.22) | 0.003^{***} (2.84) | $\begin{array}{c} 0.002 \\ (1.63) \end{array}$ | -0.022^{***} (5.15) |
| Exper. Rec. Firm | | -0.034^{***} (13.55) | -0.035^{***} (15.44) | -0.034^{***} (14.08) | -0.024^{***} (9.41) | -0.046^{***} (7.57) |
| All Star | | -0.013 (1.08) | $\begin{array}{c} 0.004 \\ (0.33) \end{array}$ | -0.012 (0.94) | -0.007 (0.52) | $\begin{array}{c} 0.043 \\ (1.32) \end{array}$ |
| Affiliation | | $0.136^{***} \\ (8.53)$ | 0.108^{***} (6.50) | $0.129^{***} \\ (7.85)$ | $\begin{array}{c} 0.115^{***} \\ (6.56) \end{array}$ | $0.431^{***} \\ (9.90)$ |
| Fixed Effect | | Time | Time | Time | Time | |
| Fixed Effect | | | Analyst | Industry | Firm | |

Table V: Performance of Appointed Analyst Recommendations

This table reports panel regressions of analyst predictive ability. The dependent variable in each column is the one-year return following a recommendation change (*RecChange*). In columns 1-3, the changes are upgrades from consensus (*Upgrade*), and in columns 4-6, the changes are downgrades from consensus (*Downgrade*). The key variable of interest is the interaction term in the first row: *Appointing Firm*RecChange*, which equals 1 if the analyst recommending the stock in question is subsequently appointed to the board of directors of that firm, *and* the recommendation in question is an upgrade (or downgrade) from consensus. Dummy variables for *Appointing Firm* and *RecChange* are also included. The other independent variables are those used in Table IV, and are described there. The only new independent variable is *Recommendation Level*, the level of recommendation, which ranges between 1 and 5, and which we reverse-score such that 1=Strong Sell, 2=Sell, 3=Hold, 4=Buy, and 5=Strong Buy. Fixed effects for recommendation year (Time), and for the analyst (Analyst), are included where indicated. All standard errors are adjusted for clustering at the recommendation year level, and t-stats using these clustered standard errors are included in parentheses below the coefficient estimates. 1%, 5%, and 10% statistical significance are indicated with ***, **, and *, respectively.

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---------------------------|--|--|--|---|--|--|
| | Upgrade | Upgrade | Upgrade | Downgrade | Downgrade | Downgrade |
| Appointing Firm*RecChange | -0.183^{***} (2.65) | -0.159^{**} (2.20) | -0.144^{**} (2.04) | $\begin{array}{c} 0.175^{**} \ (2.45) \end{array}$ | 0.118^{*} (1.70) | $\begin{array}{c} 0.103 \\ (1.43) \end{array}$ |
| Appointing Firm | 0.144^{**} (2.24) | 0.125^{**} (2.31) | $0.127^{**} \ (2.51)$ | -0.031 (0.49) | -0.013 (0.27) | $\begin{array}{c} 0.004 \\ (0.08) \end{array}$ |
| RecChange | $\begin{array}{c} 0.075^{**} \ (2.53) \end{array}$ | 0.058^{***} (2.72) | $\begin{array}{c} 0.032^{**} \\ (2.49) \end{array}$ | -0.093^{***} (2.95) | -0.072^{***} (3.16) | -0.036^{**} (2.36) |
| Size | $\begin{array}{c} 0.019^{**} \\ (2.28) \end{array}$ | $\begin{array}{c} 0.016^{**} \ (2.13) \end{array}$ | $\begin{array}{c} 0.018^{***} \\ (2.66) \end{array}$ | $\begin{array}{c} 0.019^{**} \\ (2.33) \end{array}$ | 0.016^{**} (2.16) | 0.018^{***} (2.60) |
| B/M | $\begin{array}{c} 0.072^{***} \\ (2.66) \end{array}$ | $\begin{array}{c} 0.071^{***} \\ (3.15) \end{array}$ | $\begin{array}{c} 0.059^{***} \ (2.93) \end{array}$ | $\begin{array}{c} 0.071^{***} \ (2.59) \end{array}$ | $0.071^{***} \ (3.07)$ | 0.058^{***} (2.84) |
| Past Month Return | $\begin{array}{c} 0.000 \\ (1.18) \end{array}$ | -0.001^{***} (3.35) | $\begin{array}{c} 0.000 \\ (0.78) \end{array}$ | $\begin{array}{c} 0.000 \\ (1.30) \end{array}$ | -0.001^{**} (3.59) | $\begin{array}{c} 0.000 \\ (0.91) \end{array}$ |
| Past Year Return | -0.001 (0.23) | $\begin{array}{c} 0.000 \\ (0.04) \end{array}$ | -0.013^{**} (2.12) | -0.002 (0.40) | -0.001 (0.22) | -0.013^{**} (1.96) |
| Brokerage Size | $\begin{array}{c} 0.012^{*} \ (1.69) \end{array}$ | 0.009^{*} (1.67) | $\begin{array}{c} 0.006 \\ (1.25) \end{array}$ | $\begin{array}{c} 0.011 \\ (1.67) \end{array}$ | $\begin{array}{c} 0.009 \\ (1.62) \end{array}$ | $0.006 \\ (1.27)$ |
| Experience | $0.123^{**} \\ (1.97)$ | $\begin{array}{c} 0.038 \\ (0.82) \end{array}$ | -0.003 (0.08) | $\begin{array}{c} 0.127^{**} \\ (2.00) \end{array}$ | $\begin{array}{c} 0.039 \\ (0.84) \end{array}$ | -0.002 (0.05) |
| Exper. Rec. Firm | $\begin{array}{c} 0.012 \\ (0.13) \end{array}$ | -0.034 (0.46) | -0.048 (0.76) | $\begin{array}{c} 0.016 \\ (0.17) \end{array}$ | -0.031 (0.41) | -0.046 (0.71) |
| All Star | 0.023 (1.18) | $\begin{array}{c} 0.006 \\ (0.52) \end{array}$ | $\begin{array}{c} 0.002 \\ (0.27) \end{array}$ | 0.027 (1.49) | 0.010 (1.14) | $\begin{array}{c} 0.003 \\ (0.36) \end{array}$ |
| Affiliation | -0.128^{**} (1.99) | -0.168^{***} (2.85) | -0.134^{**} (2.20) | -0.130^{*} (1.93) | -0.171^{***} (2.74) | -0.136^{**} (2.12) |
| Recommendation Level | -0.043^{**} (2.00) | -0.031^{*} (1.81) | -0.010 (0.77) | -0.051^{**} (2.25) | -0.038^{**} (2.08) | -0.013 (0.87) |
| Fixed Effect | | Analyst | Analyst | | Analyst | Analyst |
| Fixed Effect | | | Time | | | Time |

Table VI: Determinants of Board Appointments

This table reports panel regressions of determinants of analyst board appointments as directors. The dependent variable is a categorical variable that is equal to 1 if analyst recommending the given stock is subsequently appointed to the board of directors of the firm, and 0 otherwise. Observations are at the analyst-firm pair level, so that a given analyst-firm relationship will represent one observation. Firm Level Recommendation (Rec) is the average level of analyst recommendation for a firm over the life of the recommending relationship, which ranges between 1=Strong Sell and 5=Strong Buy. Affiliation is a categorical variable that measures whether or not the given firm has an underwriting relationship with the analyst's brokerage. All Star is a categorical variable equal to 1 if the analyst was voted an all star analyst in the October issue of Institutional Investor magazine for the given year. Few Analysts is a categorical variable equal to 1 if the given stock had fewer than the median number of analysts covering it over the analyst-firm relationship. %Recs Upgrade is the percentage of all the analyst s recommendations on the firm that are upgrades. Final Rec. Was Upgrade is a categorical variable equal to 1 if the final recommendation in the firm-analyst relationship is an upgrade and 0 otherwise. The independent variables Experience, Exper, Brokerage Size, Num Analysts Covering Stock, Size, and B/M are not shown, but are included as controls in every regression; they are described in Table IV. Interaction effects are included where shown. All coefficients are multiplied by one hundred. Fixed effects for the analyst (Analyst) are included where indicated. All standard errors are adjusted for clustering at the firm level, and t-stats using these clustered standard errors are included in parentheses below the coefficient estimates. 1%, 5%, and 10% statistical significance are indicated with ***, **, and *, respectively.

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---------------------------|--|-------------------------|-------------------------|--|--|--|
| Firm Level Recommendation | 0.033^{***} (4.72) | 0.020^{***} (3.10) | 0.027^{***} (4.15) | $\begin{array}{c} 0.017^{**} \\ (2.29) \end{array}$ | $0.001 \\ (0.19)$ | 0.025^{***} (3.10) |
| Affiliation | $\begin{array}{c} 0.473^{**} \ (2.09) \end{array}$ | 0.460^{**} (2.05) | -4.12^{***} (2.09) | $\begin{array}{c} 0.473^{**} \ (2.09) \end{array}$ | 0.476^{**} (2.10) | $0.386 \\ (1.40)$ |
| All Star | $0.096^{***} \\ (2.71)$ | -0.500^{***} (2.78) | 0.096^{***} (2.70) | $\begin{array}{c} 0.097^{***} \\ (2.73) \end{array}$ | $\begin{array}{c} 0.097^{***} \\ (2.72) \end{array}$ | $0.119^{***} \\ (2.73)$ |
| Few Analysts | | | | -0.082^{**} (1.96) | | |
| % Recs Upgrade | | | | | -0.155^{**} (2.52) | |
| All Star*Rec | | 0.162^{***} (2.87) | | | | |
| Affiliation*Rec | | | 1.18^{**} (2.10) | | | |
| Few Analysts*Rec | | | | 0.028^{**} (2.07) | | |
| % Recs Upgrade*Rec | | | | | 0.049^{***} (2.77) | |
| Final Rec Was Upgrade | | | | | | $\begin{array}{c} 0.026^{**} \ (1.98) \end{array}$ |
| Fixed Effect | Analyst | Analyst | Analyst | Analyst | Analyst | Analyst |

Table VII: Timing of Analysts' Positive Recommendations

This table reports panel regressions of analyst recommendations. The dependent variable in columns 1-3 is the level of recommendation (*Rec*), which ranges from 1=Strong Sell to 5=Strong Buy. In columns 4 and 5, the dependent variable is *Downgrade*, which is a categorical variable equal to 1 if the recommendation is a downgrade from the current consensus, and 0 otherwise. The independent variable *Appointing Firm* is a categorical variable that is equal to 1 if the analyst recommending the given stock is subsequently appointed to the board of directors of the firm, and 0 otherwise. *Last Rec. Downgrade* is equal to 1 if the last recommendation on the stock (before the given analyst's recommendation) was a downgrade, and 0 otherwise. *High Short Interest* is equal to 1 if short interest in the month prior to the given recommended has higher than the median, and 0 otherwise. *High Future Issuance* is equal to 1 if the firm being recommended has higher than median issuance over the 6 months following recommendation, and 0 otherwise. Interaction effects are included where shown. *Size*, *B/M*, *Past Month Return*, *Past Year Return*, *Brokerage Size*, *Experience*, *Exper. Rec. Firm*, *All Star*, and *Affiliation* are also included as controls in every regression, and are described in Table IV. Fixed effects for recommendation month (Time) and the firm (Firm) are included where indicated. All standard errors are adjusted for clustering at the recommendation month level, and t-stats using these clustered standard errors are included in parentheses below the coefficient estimates. 1%, 5%, and 10% statistical significance are indicated with ***, **, and *, respectively.

| | (1) | (2) | (3) | (4) | (5) |
|-------------------------------|---------------------------|---------------------------|--------------------------------|---|--|
| | Rec | Rec | Rec | Downgrade | Downgrade |
| Appointing Firm | $0.378^{***} \\ (4.22)$ | 0.279^{**} (2.51) | 0.230^{*} (1.73) | -0.171^{***} (3.06) | -0.023 (0.31) |
| Last Rec. Downgrade | -0.064^{***} (13.50) | -0.064^{***} (13.49) | -0.064^{***} (13.49) | 0.069^{***} (19.24) | 0.069^{***} (19.25) |
| High Short Interest | -0.083*** (14.11) | -0.083^{***} (14.12) | -0.083*** (14.11) | $\begin{array}{c} 0.027^{***} \ (8.99) \end{array}$ | $\begin{array}{c} 0.027^{***} \\ (8.99) \end{array}$ |
| High Future Issuance | 0.066^{***} (15.06) | 0.066^{***} (15.06) | $0.066^{***} onumber (15.05)$ | -0.018^{***} (7.50) | -0.018^{***} (7.50) |
| High Short*Appointing Firm | | 0.326^{**} (2.14) | | | |
| High Issue*Appointing Firm | | | 0.303^{**} (2.10) | | |
| Last Rec Down*Appointing Firm | | | | | -0.259^{***} (2.90) |
| Fixed Effect | Time | Time | Time | Time | Time |
| Fixed Effect | Firm | Firm | Firm | Firm | Firm |

Table VIII: Governance Characteristics of Firms That Appoint Analysts

This table reports panel regressions of firm governance characteristics over our sample period, from 1993 to 2006. The dependent variables are as follows: in columns 1-3, the governance index (*GIndex*) from Gompers, Ishii, and Metrick (2003); in column 4, the delay index (*Delay*), also Gompers, Ishii, and Metrick (2003), meant to capture provisions that slow hostile bidders; in column 5, a dummy variable equal to one if the firm has a classified board (*CBoard*); in column 6, a dummy variable equal to one if the firm has limits to written consent (*Limits*). The independent variable of interest is *Appointing Firm*, and is equal to 1 if the firm appoints an analyst who previously covered the firm to its board of directors at some point over the sample, and 0 otherwise. *Size* measures the log(ME) and *B/M* measures the log(BE/ME), of the firm being recommended. *Return Volatility* measures the given stock's standard deviation of monthly returns over the past year, and *Past Year Return* measure the given stock's return from months *t*-12 to *t*-2. Fixed effects for industry (Industry) using the Fama-French industry definitions, and for year (*Time*), are included where indicated. All standard errors are adjusted for clustering at the year level, and t-stats using these clustered standard errors are included in parentheses below the coefficient estimates. 1%, 5%, and 10% statistical significance are indicated with ***, **, and *, respectively.

| | (1) | (2) | (3) | (4) | (5) | (6) |
|-------------------|--|--|-------------------------|--|-------------------------|---|
| | GIndex | GIndex | GIndex | Delay | CBoard | Limits |
| Appointing Firm | $\begin{array}{c} 0.304^{***} \\ (4.52) \end{array}$ | $0.285^{***} \ (3.65)$ | $0.284^{***} \\ (4.06)$ | 0.243^{***} (11.00) | 0.093^{***} (7.60) | $0.138^{***} \\ (11.07)$ |
| Size | -0.031^{***} (2.95) | -0.024^{***} (3.15) | -0.024^{***} (3.14) | -0.007 (1.36) | -0.004^{**} (2.41) | $\begin{array}{c} 0.000 \\ (0.05) \end{array}$ |
| B/M | -0.086^{***} (6.57) | -0.060^{***} (4.54) | -0.057^{***} (4.37) | $\begin{array}{c} 0.007 \\ (1.13) \end{array}$ | -0.004 (1.15) | 0.002 (0.77) |
| Return Volatility | $0.105 \\ (0.69)$ | $\begin{array}{c} 0.012 \\ (0.07) \end{array}$ | -0.005 (0.03) | -0.342^{***} (4.55) | -0.089^{***} (2.67) | -0.086^{***} (2.66) |
| Past Year Return | $0.037 \\ (1.27)$ | $0.047 \\ (1.51)$ | $0.049 \\ (1.61)$ | 0.043^{***} (3.20) | 0.004 (0.66) | $\begin{array}{c} 0.015^{**} \\ (2.43) \end{array}$ |
| Fixed Effect | | Industry | Industry | Industry | Industry | Industry |
| Fixed Effect | | | Time | Time | Time | Time |

Table IX: Firm Behavior and Performance, Post-Appointment

Panel A reports regressions of discretionary accruals over our sample period, 1993-2006. Discretionary accruals are computed using the modified Jones model described in Dechow, Sloan, and Sweeney (1995), and are equal to the residuals from firmlevel regressions of total accruals on non-discretionary accruals (which are equal to the change in sales minus the change in receivables plus gross property, plant, and equipment, all scaled by last year's total assets). Total Accruals are the total annual amount of accruals of the firm, estimated as in Healy (1985). These regressions include only those firms that appoint an analyst as a board member (402 firm-year observations). The independent variable of interest is After Appointment, a categorical variable equal to 1 for those firm-years after the analyst has been appointed to the board, and zero otherwise. Size, B/M, Return Volatility, and Past Year Return are defined as in Table VIII. Earnings are measured as the current year's net income, before extraordinary items. Firm fixed effects (Firm) and year fixed effects (Time) are included where indicated. All standard errors are adjusted for clustering at the year level, and t-stats using these clustered standard errors are included in parentheses below the coefficient estimates. Panel B presents value-weighted calendar-time monthly portfolio returns for two portfolios (After Appointment and Non-Appointment), as well as for a spread portfolio (Spread) which goes long the After Appointment portfolio and short the Non-Appointment portfolio each month. Firms that appoint analysts to the board enter the After Appointment portfolio in the month following their appointment, and remain in the portfolio for a year; all other stocks are placed in the Non-Appointment portfolio. 3-factor (Fama and French (1996), 4-factor (Carhart (1997), and 5-factor (Pastor and Stambaugh (2003)) alphas are computed, and 1%, 5%, and 10% statistical significance are indicated with ***, **, and *, respectively.

| | (1) | (2) | (3) | (4) | (5) | (6) |
|-------------------|---|---|---|--|---|--|
| After Appointment | $\begin{array}{c} 0.022^{**} \\ (2.06) \end{array}$ | $\begin{array}{c} 0.022^{**} \\ (2.27) \end{array}$ | $\begin{array}{c} 0.019^{**} \\ (2.12) \end{array}$ | $\begin{array}{c} 0.021^{**} \ (2.23) \end{array}$ | $\begin{array}{c} 0.021^{**} \\ (2.29) \end{array}$ | $\begin{array}{c} 0.030^{**} \ (2.51) \end{array}$ |
| Total Accruals | | $\begin{array}{c} 0.206^{**} \\ (2.58) \end{array}$ | $\begin{array}{c} 0.202^{**} \\ (2.63) \end{array}$ | 0.266^{**} (2.16) | 0.266^{**} (2.13) | 0.265^{**} (2.09) |
| Size | | | -0.005 (0.91) | -0.003 (0.53) | -0.003 (0.50) | -0.002 (0.28) |
| B/M | | | $\begin{array}{c} 0.000 \\ (0.02) \end{array}$ | $\begin{array}{c} 0.002 \\ (0.26) \end{array}$ | $\begin{array}{c} 0.002 \\ (0.33) \end{array}$ | $\begin{array}{c} 0.005 \\ (0.68) \end{array}$ |
| Return Volatility | | | | -0.109^{*} (1.72) | -0.109^{*} (1.95) | -0.157^{***} (2.72) |
| Past Year Return | | | | | $\begin{array}{c} 0.000 \\ (0.03) \end{array}$ | 0.000 (0.01) |
| Earnings | | | | | | $\begin{array}{c} 0.000 \\ (0.30) \end{array}$ |
| Fixed Effect | Time | Time | Time | Time | Time | Time |
| Fixed Effect | Firm | Firm | Firm | Firm | Firm | Firm |

Panel A: Discretionary Accruals Pre- and Post-Appointment

| Panel B: Value-Weighted Calendar Time Monthly Portfolio Returns | | | | | | | |
|---|--------------------------|-----------------------|---|---|--|--|--|
| | raw | 3-factor | 4-factor | 5-factor | | | |
| | $\operatorname{returns}$ | alpha | Alpha | alpha | | | |
| After Appointment | -0.0052 (0.60) | -0.0177^{**} (2.08) | -0.0161^{*} (1.89) | -0.0198^{**} (2.21) | | | |
| Non-Appointment | 0.0079^{**} (1.96) | 0.0000 (0.47) | $\begin{array}{c} 0.0000 \\ (0.30) \end{array}$ | $\begin{array}{c} 0.0000 \\ (0.63) \end{array}$ | | | |
| Spread | -0.0130^{*} (1.78) | -0.0177^{**} (2.09) | -0.0162^{*} (1.89) | -0.0198^{**} (2.21) | | | |