

NBER WORKING PAPER SERIES

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BOARD APPOINTMENTS OF "INDEPENDENT" DIRECTORS

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Working Paper 14232
<http://www.nber.org/papers/w14232>

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
August 2008

We would like to thank Brad Barber, Nick Barberis, John Campbell, Josh Coval, Simon Gervais, Cade Massey, Erik Stafford, Jeremy Stein, Jake Thomas and seminar participants at Harvard Business School and the Yale SOM Behavioral Sciences Conference for helpful comments. We also thank Alex Tang for excellent research assistance. In addition, we are grateful to BoardEx and Linda Cechova for providing firm board data. The views expressed herein are those of the author(s) and do not necessarily reflect the views of the National Bureau of Economic Research.

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JEL No. G28,G34,J24,J44

ABSTRACT

We test the hypothesis 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 end up serving on the board of companies they previously covered. We find striking evidence that boards appoint overly optimistic analysts who exhibit little skill in evaluating the firm itself, other firms within the firm's industry, or even other firms in general. 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 appointed analysts appear to be more closely tied to appointing firms than the title "independent" director would suggest. Our results challenge the widely held view that appointments of independent directors necessarily add objectivity to the board of a firm.

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What makes a good monitor? A commonly held notion is that independent directors are ideal advocates of uninterested, shareholder-minded monitoring. Indeed, this is a presumption that is frequently advanced in the academic literature and is embodied in recent US regulatory requirements.¹ But how much do we really know about independent directors (and how they are chosen)? It certainly cannot be true 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. It almost seems necessary that a senior officer or board member has some relationship with the 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. The problem from both a regulatory and academic perspective so far, is that we often simply assume the latter motivation is the case.

Our goal in this paper is to test the hypothesis that boards appoint independent directors who, while technically independent according to regulatory definitions, nonetheless may be overly sympathetic to management. Rather than adopting the typical approach in the literature, which seeks to relate measures of board independence (e.g., increases in the number of independent directors on a board) to future performance of the firm, 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, rather than the ultimate

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.

performance of the firm, is beneficial for several reasons. First, board composition is clearly endogenous, so any studies linking independent directors to future performance must confront this issue (see Hermalin and Weisbach (2003) for a discussion). Second, any study of future performance must adequately control for all of the other determinants of firm performance besides the existence of (or change in the number of) independent directors. By contrast, our empirical strategy allows us to directly evaluate the objectivity and potential efficacy of independent directors based solely on their actual, observable opinions about the firm in question.

The agents we examine are former sell-side analysts who end up serving on the board of companies they previously covered. 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 can be easily assessed. We can explicitly compute measures of skill/ability and optimism by examining the composition and stock return performance of analysts' past buy/sell recommendations, coupled with the accuracy of their earnings forecasts. In doing so we find evidence that boards appoint overly optimistic analysts who exhibit little in the way of skill in terms of evaluating the firm itself, other firms within the firm's industry, or other firms in general.

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 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)). By contrast, we find little evidence that board-appointed analysts' recommendations are more profitable, or that their earnings forecasts are more accurate. Finally, when predicting the probability of a board appointment, optimism on the firm is a strong predictor of appointment while accuracy is not. Taken together, these results challenge the conventional view that appointing independent directors necessarily adds objectivity to the board of a firm.

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) when firms have higher than average issuance in the future, 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.

Additional tests suggest that the relationship between board-appointed analysts and the management of the firms they cover may even extend beyond the typical firm-analyst coverage relationship. For example, board-appointed analysts are more likely than the average analyst to be "connected" to management; where a connection is defined as having attended the same academic institution as a senior officer (CEO, CFO, or Chairman) of the stock in question (as in Cohen, Frazzini, Malloy (2008)). Additionally, board-appointed analysts are more likely to be geographically proximate to the appointing firm than the average analyst. Finally, board-appointed analysts are also overly optimistic on the firms that are "interlocked" to the appointing firm through common board members. All of these results indicate that the relationships between independent directors and other directors may be more close-knit and nuanced than typically assumed.² Indeed anecdotal evidence supports this interpretation: in a news release regarding the appointment of one of our analysts to the firm, the board appointment process is described as a multi-year "courtship" and the analyst as a "fan from the outside for years."

² For recent empirical evidence in support of this idea, see also Hwang and Kim (2008), who analyze a sample of Fortune 100 firms and find that 87% of boards in their sample are conventionally independent, but that only 62% are conventionally *and* socially independent (where social ties are identified through school ties, military service, regional origin, academic discipline, and industry).

While our main result on optimism is, strictly speaking, applicable to only the set of board-appointed analysts we investigate, we suspect that our results suggest broader empirical regularities. To test this conjecture, we also explore the full sample of independent directors in our dataset (of which our board-appointed analysts are a small subset), and find a similar phenomenon with respect to educational connectedness: independent directors are over three times as likely to be connected to the board relative to what one would expect by chance, given the observed structure of educational backgrounds of US board members.

Our micro-level data on analyst board appointments has advantages and disadvantages. The main advantage, as noted above, is that we can exploit the detailed historical track record of these board-appointed analysts in a clean and direct way in order to investigate their optimism and expertise with respect to the appointing firms. To our knowledge, this paper is the first to empirically document that firms may indeed stack their boards with "cheerleaders" who may be technically labeled as independent directors; this finding calls into question the common assumption that increasing the representation of independent directors on the board is by definition a positive step. 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, our identification 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 1100 recommendations. 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 significant differences in recommendation bias: our main result on the optimistic bias of board-appointed analysts is large in magnitude and statistically significant across all specifications.

The remainder of the paper is organized as follows. Section I provides background and motivation. Section II describes the data. Section III reports our main results on the positive bias in the recommendations of board-appointed analysts. Section IV explores what kinds of firm-analyst relationships result in board appointments, the dynamics of

appointed analysts' recommendations, and the potential explanations for the observed analyst behavior. Section V examines other relationships between board-appointed analysts and the management of the appointing firms, and also discusses the broader implications of our findings. Section VI concludes.

I. Background and Motivation

Our approach allows 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 ideal monitors of management, and therefore that increasing their representation on boards should necessarily improve corporate governance. Independent directors, under this view, are objective, highly skilled 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 recent theory, 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.

Our approach is unique in that we depart from the typical focus on firm-level measures of board independence, and instead explore a subset of independent directors for whom we have detailed, micro-level data on their views on the firm *prior* to being appointed to the board. Our empirical strategy thus allows us to directly evaluate the objectivity and potential efficacy of a subset of independent directors based solely on their actual, observable opinions about the firm in question. Thus the goal of our paper is not to test the impact of independent directors on firm performance, but instead to

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.

evaluate the very premise on which new theories and regulations are based regarding the ability, motivations, and characteristics of independent directors.

The paper most closely related to ours is perhaps Brickley et al. (1999), who investigate a small 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 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 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 for boards of 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 retain current and past

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 in ingratiation 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 (2005)).

⁶ See Bertrand and Schoar (2003).

roles of company officials with start-year and end-year and a board dummy for US publicly traded companies between 1993 and 2006. This is the same data used in Cohen, Frazzini, and Malloy (2007, 2008) and we refer to these papers for a more detailed description.

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 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, since I/B/E/S provides only the team members' last names but not their first name.

We look at analysts exiting the industry during our sample and generate an initial list of potential hires by matching the analyst's initials and last name to the name of board member of all the firms covered during his 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 board 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. Our main data sources are 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, as well as data on the geographic location of board-appointed analysts (constructed as in Malloy (2005), and hand-collected from the Nelson’s Directory of Investment Research), and alumni links between analysts and corporate board members (from Cohen, Frazzini, and Malloy (2008)).

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 4,716 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. 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 these differences are not significant.

III. Results

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 stocks. 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 II presents the distribution of analysts' recommendations and tests the hypothesis that analysts hired by the firm they cover issue more optimistic recommendations on these firms. Panel A reports the distribution of recommendations issued by analysts who are appointed to the board, on those firms that appoint an analyst to the board. (I.e., if analyst 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). We refer to these as "Appointed recommendations."

We compare this distribution to three benchmarks. Panel B report 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 do appoint an analyst to the board. (I.e. if analyst Smith covers firm XYZ and he is later hired by XYZ, we report recommendations on XYZ by all other analysts). 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. if analyst Smith covers firm XYZ and he is later hired by XYZ, we report his recommendations on all other firms).

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 to reject the null hypothesis of no difference between the two distribution (Chi-square statistic=39.2, p-value=0.000). Panel C and D reports very similar results (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 other firms that they themselves issue, 3) recommendations on the appointing firm issued by 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 hired by the given firm, 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 covered 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 fixed effects, where indicated.⁹ Standard errors are clustered at the recommendation month level.

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

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.

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 ($t=5.96$), is that the average appointment effect shifts the recommendation of the analyst by half of a rating; so while the mean rating is between a Buy and a Hold (3.74), for firms appointing a former analyst the average rating of the appointed analyst rises to between a Strong Buy and a Buy (4.22). 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

To get an idea of the magnitude of the appointment effect, we compare it with a well-documented conflict of interest effect: affiliation with an investment bank underwriting the stock in question (Lin and McNichols (1998), Lin, McNichols, and O'Brien (2005)). Analysts have positively biased recommendations on those firms to which their investment banks do business. We include this affiliation effect in the regressions (Columns 2-7), and find that affiliation has 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 0.13 vs. 0.36 to 0.44).

We then create additional categorical variables (*Appointing Industry* and *Appointed Analyst Overall*) to check if this main effect is simply a reflection of the analyst's optimism on the broader industry of the appointing firm, or a reflection of the analyst's overall optimism on all her recommended stocks. Specifically, *Appointing Industry* equals 1 if the analyst recommending the stock in question is subsequently appointed to the board of directors of any stock in the same industry as the given stock, and 0 otherwise; *Appointed Analyst Overall* equals 1 if the analyst recommending the stock in question is subsequently appointed to the board of directors of any stock, and 0

¹⁰ In unreported tests, 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.

otherwise. Columns 5 and 6 indicate that 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 earlier. Meanwhile, Column 6 indicates that appointed analysts are not simply overly optimistic on all their stocks, as the coefficient on *Appointed Analyst Overall* is small and insignificant. Finally, in the last column we run the same regression specification, but as an ordered logit, and find nearly identical results.¹¹

C. Regression results on analyst ability

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 and potential efficacy, one might expect that appointed analysts would demonstrate higher predictive ability on their stock recommendations on the appointing firm, on other firms within the firm's industry, or on other firms in general. To test this conjecture we employ panel regressions where the dependent variable is the return to the recommendation in the year immediately following the recommendation (*Fut Ret*), which is defined as the realized returns if the analyst recommends buy or strong buy, and the negative of the realized return if the analyst recommends hold, sell, or strong sell. Again 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 hired by the given firm, and 0 otherwise. A positive coefficient on this variable indicates that the appointed analyst issues more profitable stock recommendations on the appointing firm relative to all other recommendations. The rest of the independent variables are the same as those used in Table III. Note that by controlling for firm size, book-to-market, and past year returns on the right-hand side, we control for well-known determinants of firm-level expected returns.

Column 1 of Table IV indicates that appointed analysts demonstrate virtually no predictive ability on the recommendations they issue on firms that subsequently appoint

¹¹ When the coefficients are transformed back into marginal effects, the predicted appointment effect is 0.42 ($t=5.12$).

them. This result is robust to any number of possible left-hand side variable formulations; for example, altering the future return horizon to one month or six months produces a similar result, as does employing four-factor alphas (Carhart (1997)) on the left-hand side. Including other categorical variables designed to capture appointed analysts' predictive ability on the broader industry of the appointing firm, or on all her recommended stocks, yields a similar result: the coefficients on *Appointing Industry* and *Appointed Analyst Overall* (defined exactly as in Table III) are small and insignificant.

For robustness we also explore the accuracy of appointed analysts' 1-year earnings forecasts. To do so we utilize a standard measure of forecast accuracy (*Earn Acc*) known as absolute forecast error, which is equal to the absolute value of an analyst's latest forecast minus actual company earnings, divided by actual company earnings. *Earn Acc* is thus bounded at 0, with larger values indicating less accurate forecasts by the analyst. We include the same independent variables as in Table III, but add one new independent variable (*Age of Earnings Forecast*), defined as the number of days between the date of the recommendation and the date the EPS is announced, to capture the well-known impact on forecast age on forecast errors (see Clement (1999)). Columns 4-6 of Table IV show that appointed analysts are not particularly accurate on their earnings forecasts either. The coefficients on *Appointing Firm*, *Appointing Industry* and *Appointed Analyst Overall* are all insignificant, with most of the point estimates even being positive (less accurate). These suggest that appointed analysts do not demonstrate any superior ability to predict future earnings on the appointing firm, on the industry of the appointing firm, or on their entire portfolio of covered stocks.

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 striking evidence that boards appoint optimistic analysts who exhibit little in the way of skill in terms of evaluating the firm itself, other firms within the firm's industry, or even other firms in general.

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

In this section we explore the determinants of board appointments, the dynamics of appointed analysts' recommendations, and the competing hypotheses for the observed analyst behavior.

A. Predicting board appointments: ability versus positive recommendations

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 analysts' predictive ability, the level of their recommendations, and a host of other analyst- and firm-level characteristics. 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. *Industry Level Recommendation* and *Overall Analyst Recommendation* are defined equivalently, but for the analyst's average recommendation on other firms in the given firm's industry, and the analyst's lifetime overall recommendation level, respectively. Our three measures of ability are constructed similarly: e.g., *Firm Level Predictive Ability* measures the average annual return following the analyst's recommendations on the given stock (coded positively for buys, and negatively for hold and sells). *Industry Level Predictive Ability* and *Overall Analyst Predictive Ability* are defined equivalently,

but as average returns to recommendations for other firms in the given firm’s industry, and overall returns to the analyst’s recommendations, respectively. The rest of the independent variables are described in Table III, 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 V reports the regression results from the cross-sectional regressions.¹² From Column 1, the coefficient on *Firm Level Recommendation* indicates that (in line with Table III) firms are more likely to appoint analysts that have more positive recommendations on the firm. The coefficient of 0.035 ($t=5.25$) 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 .033%, moves to .068%). By contrast, the coefficient on *Industry Level Recommendation* is negative and insignificant; recall from Table III that appointed analysts *were* significantly more optimistic on firms in the industry of the appointing firm, but here we see that this type of optimism does not lead to a higher probability of board appointment. Similarly, the coefficient on *Overall Analyst Recommendation* is insignificant. In summary, optimism is a significant predictor of board appointment, but only when that optimism is on the recommendations of the appointing firm directly.

Unlike the positive bias on firm-level recommendations, firm-level ability is not a significant predictor of board appointment. In fact, Table V indicates that none of our measures of predictive ability (firm-level, industry-level, or analyst level) significantly increase the likelihood of an analyst getting appointed to the board. Consistent with our prior results in Table IV, we simply find no evidence that analyst ability is linked to the board appointment process.

B. Determinants of board appointments

In this section we explore what kinds of firm-analyst relationships, analyst

¹² Here fixed effects at the analyst and firm level are excluded since some of the control variables do not vary by analyst or firm. In addition, 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.

characteristics, and analyst behaviors results in board appointments. For example, Table V 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 1 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 all-star while covering the firm will increase the positive bias' effect on being appointed by over 2 times. Column 2 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 3 presents the interaction effect of analyst coverage and recommendation level. 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. But as with the interaction results in Columns 1 and 2, the positive and significant coefficient on [*Few Analysts*Rec*] in Column 3 implies that the positive bias in recommendations has a significantly larger effect on board appointment when there is less analyst coverage on the firm. In summary, 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 4 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 $[\% \text{ Recs Upgrade} * \text{Rec}]$ is positive and strongly significant). Since upgrades from consensus are likely the most beneficial from the firm’s point of view, this result is again consistent with firms appointing their ideal past cheerleaders. Along these same lines, Column 5 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.

C. Dynamics of recommendation behavior

While Section B 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 III: 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 III are included (but unreported) in Table VI. 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 about 40% less often on firms to which they are subsequently appointed to the board (42%-17%=25% of the time). 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 bias especially at times likely to be most valuable to these firms.

V. Relationships and Broader Implications

To get a better understanding of how and why firms select analysts as board members, we also investigate other types of relationships between these analysts and the

boards of these firms, above and beyond the coverage relationship that we have focused on so far. We explore three types of relationships: 1) board interlocks between the appointing firm and other firms covered by the appointed analyst, 2) educational connections between the appointed analyst and the board of the appointing firm, and 3) geographic proximity between the appointed analyst and the appointing firm. In each case, the goal is to test if the appointed analyst may be linked to the appointing firm in a subtle way, either through his behavior on related firms, his past background, or his location. In light of our findings that appointed analysts appear to be more like cheerleaders for appointing firms rather than accurate and objective observers, it is important to examine if the relationships between these independent directors and board members may be more close-knit than typically assumed.

Our first test is identical in structure to the panel regressions reported in Column 4 of Table III, except that we include an additional independent variable (*Interlock*) designed to isolate board-appointed analysts' recommendations on firms that are "board interlocked" to the appointing firm; this categorical variable is equal to 1 if the analyst recommending the given stock is appointed to the board of another firm that is board-interlocked to the given stock, and zero otherwise. We define two firms as board interlocked if they share a common board member in the same year. A positive coefficient on *Interlock* thus indicates that appointed analysts are optimistic on stocks with a board-interlock relationship with the firm that ultimately appoints the analyst to the board. We include the same control variables as in Table III.

The first column of Panel A in Table VIII reveals that the coefficient on *Interlock* is large, positive, and significant. The magnitude of this coefficient (0.31) is only slightly smaller than the appointment effect identified earlier. This result indicates that appointed analysts are not only optimistic on the stock that ultimately appoints them (note that the coefficient on *Appointing Firm* remains largely unchanged relative to the results in Table III), but they are also optimistic on firms that are board-interlocked to the firm that ultimately appoints them. In column 2, we control for the possibility that the appointing analyst is simply optimistic on all stocks in the industry, and that *Interlock* may simply be capturing this effect since common board members may cluster in the same industry; to address this issue, we include *Appointing Industry*

which is a categorical variable to measure whether the given firm is in fact in the same industry as the appointing firm. Column 2 of Panel A indicates that once we include this variable, the coefficient on *Interlock* decreases, but is still significant and large in magnitude (0.21).

In Panel B of Table VIII we explore shared educational backgrounds and geographic proximity in order to test the idea that appointed analysts may be more likely to be connected to the board via shared experiences or common locations than the broader population of analysts. To do so, we compute the percentage of "connected" recommendations, where a recommendation is classified as connected if the analyst attended the same educational institution as a board member or senior officer (CEO, CFO, or Chairman of the Board) of the covered stock, for the population of analysts and firms for whom we can positively identify educational backgrounds.¹³ Panel B indicates that over 30% of appointed recommendations are connected recommendations, while just under 18% of all recommendations are connected; this difference (12%) is large and significant. To explore geographic proximity, we compute the percentage of recommendations that are "local" as in Malloy (2005), where a recommendation is classified as local if the analyst is located within 100 kilometers of the headquarters of the recommended stock at the time of the recommendation. Again Panel B indicates that the percentage of appointed recommendations that are local (26%) is significantly higher than the percentage of all recommendations that are local (17%).

In summary, appointed analysts are more optimistic on firms that are board interlocked to firms that subsequently appoint them, are more likely to be socially connected to board members of appointing firms, and are more likely to be geographically proximate to the appointing firm. These results are admittedly only suggestive, but coupled with our earlier findings on the robust optimistic bias of appointed recommendations, our tests produce a consistent message: board-appointed analysts appear to be much more closely tied to the firm than the title "independent" director would suggest.

¹³ See Cohen, Frazzini, and Malloy (2008) and Cohen, Frazzini, and Malloy (2007) for details on sample construction and data on the educational backgrounds of board members and equity analysts.

While our main result on optimism is, strictly speaking, applicable to only the set of board-appointed analysts we investigate, we suspect that our results suggest broader empirical regularities. To test this conjecture, we also explore the full sample of independent directors in our dataset (of which our board-appointed analysts are a small subset), and investigate educational connections between independent directors and their fellow board members across the entire universe of firms and board members in the US. Specifically, we compute the percentage of independent directors who are connected to at least one other person on the board, where each director is classified as connected if she attended the same educational institution as a fellow board member or senior officer (CEO, CFO, or Chairman of the Board) of the firm. We then compare this actual percentage to the percentage of connections that one would expect by chance, given the sample representations of schools in the entire population. Specifically, we compute the percentage of "Expected Independent" connections (given the observed structure of educational backgrounds of US board members) under the null hypothesis of no relation between educational ties and appointment, by employing a bootstrap analysis. We generate a random educational background for each board member by sampling with replacement from the list of institutions where every institution's extraction probability is equal to its relative frequency. This generates a random assignment preserving the relative frequency of academic institutions (E.g., Yale is 5% of the sample in both the actual and the simulated distribution). We then compute the average percentage of connections and iterate; we then report the average percentage of expected connections across 1,000 iterations.

Panel C of Table VIII indicates that, across the full sample of US board members, independent directors are over three times as likely to be connected to the board relative to what one would expect by chance (the expected percentage of connections is 6.7%, while the actual percentage is 20.4% - this difference of 13.73% is highly significant).¹⁴ This result suggests that our finding that appointed analysts are more closely tied to the firm than the title "independent" director would suggest is not

¹⁴When we calculate the t-stat for the difference, we use the estimated standard errors from the actual board connected percentages, adjusting this for the obvious autocorrelation within firms across years using the Newey-West procedure with an 8-period lag.

specific to our sample, but rather is systematic across the entire universe of independent directors.

VI. Conclusions

In this paper we test the hypothesis that firms appoint independent directors who are overly sympathetic to management, while still technically independent according to regulatory definitions. We do this by exploring a subset of independent directors for whom we have precise information on their views regarding the firm *prior* to being appointed to the board: 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 versus 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, other firms within the firm's industry, or even other firms in general. 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.

Collectively our results shed new light on the views and characteristics of independent directors. For our sample of board-appointed analysts, not only are their stock recommendations extremely optimistic, but the specific form of their optimism (e.g., the fact that it is concentrated in firms with high short interest, in firms with higher than average future issuance, and at times when the last recommendation on the firm was a downgrade) is seemingly ideal from the point of view of the firm. Board-appointed analysts also appear to be more closely tied to the firm than the title "independent" director would suggest: they are more optimistic on firms that are board interlocked to firms that subsequently appoint them, they are more likely to be connected through school ties to board members of appointing firms, and they are more likely to be geographically proximate to the appointing firm. In summary, our results

challenge the widely held view that appointing independent directors necessarily adds objectivity to the board of a firm. 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.

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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"). An independent director is classified as "connected to board" if the director attended the same academic institution as a fellow board member or senior executive (CEO, CFO, Chairman) of the firm. A firm is classified as having a "board interlock" to another firm if the two firms share a common board member in the same year. 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
Fraction of independent directors that are connected to board	0.45	0.45
Average number of board interlocks to other firms	9.38	10.40
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: Recommendations of Independent Analyst Appointees

This table reports the distribution of recommendations of analysts. The level of recommendation ranges between 1 and 5, where 1=Strong Buy, 2=Buy, 3=Hold, 4=Sell, and 5=Strong Sell. Panel A reports the distribution of recommendations issued by analysts who are appointed to the board, on those firms that appoint an 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 recommendations		All other recommendations			All recommendations on firms 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 III: 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, 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: *Appointing Industry* equals 1 if the analyst recommending the stock in question is subsequently appointed to the board of directors of any stock in the same industry as the given stock, and 0 otherwise; *Appointed Analyst Overall* equals 1 if the analyst recommending the stock in question is subsequently appointed to the board of directors of any stock, and 0 otherwise. *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 7 runs an ordered logit regression, where the left hand side variable is the recommendation level (1-5). Fixed effects for recommendation month (Month), 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. 5% statistical significance is indicated in bold.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
							Logit
Appointing Firm	0.477 (5.90)	0.363 (4.70)	0.435 (5.19)	0.435 (5.14)	0.437 (5.15)	0.437 (5.15)	0.918 (5.12)
Appointing Industry					0.155 (5.06)	0.155 (5.05)	0.443 (6.93)
Appointed Analyst Overall						-0.017 (0.69)	0.088 (1.86)
Size		0.039 (12.54)	0.008 (3.14)	0.079 (8.13)	0.080 (8.15)	0.080 (8.15)	-0.009 (1.44)
B/M		-0.017 (4.66)	-0.027 (7.82)	-0.022 (3.38)	-0.022 (3.38)	-0.022 (3.38)	-0.113 (14.09)
Past Month Return		0.191 (8.50)	0.221 (8.72)	0.144 (6.50)	0.144 (6.50)	0.144 (6.50)	0.376 (4.09)
Past Year Return		0.106 (12.77)	0.119 (12.67)	0.095 (12.29)	0.095 (12.29)	0.095 (12.29)	0.310 (13.78)
Brokerage Size		-0.001 (4.43)	-0.001 (6.94)	-0.001 (6.33)	-0.001 (6.34)	-0.001 (6.34)	-0.002 (8.31)
Experience		-0.024 (3.22)	0.003 (2.84)	0.002 (1.63)	0.002 (1.55)	0.002 (1.56)	-0.022 (5.15)
Exper. Rec. Firm		-0.035 (15.44)	-0.034 (14.08)	-0.024 (9.41)	-0.024 (9.41)	-0.024 (9.41)	-0.046 (7.57)
All Star		0.004 (0.33)	-0.012 (0.94)	-0.007 (0.52)	-0.008 (0.60)	-0.008 (0.58)	0.043 (1.32)
Affiliation		0.108 (6.50)	0.129 (7.85)	0.115 (6.56)	0.114 (6.50)	0.114 (6.53)	0.431 (9.90)
Fixed Effect		Month, Analyst	Month, Industry	Month, Firm	Month, Firm	Month, Firm	

Table IV: Ability of Appointed Analysts

This table reports panel regressions of analyst predictive ability. The dependent variable in the Columns 1-3 is the return to the recommendation in the future year (*Fut Ret*), which is defined as the realized returns if the analyst recommends buy or strong buy, and the negative of the return if the analyst recommends hold, sell, or strong sell. In Columns 4-6 the dependent variable is accuracy of the given EPS forecast, defined as absolute percentage deviation from actual EPS value (*Earn Acc*). 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: *Appointing Industry* equals 1 if the analyst recommending the stock in question is subsequently appointed to the board of directors of any stock in the same industry as the given stock, and 0 otherwise; *Appointed Analyst Overall* equals 1 if the analyst recommending the stock in question is subsequently appointed to the board of directors of any stock, and 0 otherwise. The other independent variables are those used in Table III, and are described there. The only new independent variable is *Age of Earnings Forecast*, which is defined as the number of days between the date of the recommendation and the date the EPS is announced. Fixed effects for recommendation (forecast) month (Month), and for the firm (Firm), are included in each regression. All standard errors are adjusted for clustering at the recommendation (forecast) month level, and t-stats using these clustered standard errors are included in parentheses below the coefficient estimates. 5% statistical significance is indicated in bold.

[illegible]

Table V: Predicting Board Appointments: Ability versus Positive Recommendations

This table reports panel regressions of determinants of analyst board appointments as independent 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 analysts-firm pair level, so that a given analyst-firm relationship will represent one observation. *Firm Level Recommendation* 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. *Industry Level Recommendation* and *Overall Analyst Recommendation* are defined equivalently, but for the analyst's average recommendation on other firms in the given firm's industry, and the analyst's lifetime overall recommendation level, respectively. *Firm Level Predictive Ability* measures the average annual return following the analyst's recommendations on the given stock (coded positively for buys, and negative for hold and sells). *Industry Level Predictive Ability* and *Overall Analyst Predictive Ability* are defined equivalently, but as average returns to recommendations for other firms in the given firm's industry, and overall returns to the analyst's recommendations, respectively. The remainder of the independent variables are described in Table III, and are averaged over the life of the analyst-firm relationship. All coefficients are multiplied by one hundred. 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. 5% statistical significance is indicated in bold.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Firm Level Recommendation	0.035 (5.25)	0.033 (4.72)	0.033 (3.13)	0.033 (3.14)	0.033 (4.72)	0.033 (3.13)	0.033 (3.13)
Industry Level Recommendation			-0.006 (0.42)	-0.004 (0.13)		-0.006 (0.42)	-0.004 (0.13)
Overall Analyst Recommendation				-0.005 (0.16)			-0.005 (0.17)
Firm Level Predictive Ability					-0.006 (1.03)	-0.002 (0.23)	-0.002 (0.23)
Industry Level Predictive Ability						-0.010 (0.46)	0.006 (0.18)
Overall Analyst Predictive Ability							-0.005 (0.91)
Affiliation		0.473 (2.09)	0.422 (1.93)	0.422 (1.93)	0.472 (2.09)	0.422 (1.93)	0.423 (1.93)
Experience		-0.001 (0.55)	0.000 (0.15)	0.000 (0.14)	-0.001 (0.56)	0.000 (0.14)	0.000 (0.13)
Exper. Rec Firm		0.001 (0.38)	0.001 (0.33)	0.001 (0.32)	0.002 (0.40)	0.001 (0.34)	0.001 (0.35)
Brokerage Size		0.000 (0.10)	0.000 (0.39)	0.000 (0.37)	0.000 (0.09)	0.000 (0.41)	0.000 (0.40)
Num Stocks		0.000 (0.61)	0.000 (1.18)	0.000 (1.17)	0.000 (0.61)	0.000 (1.18)	0.000 (1.16)
Num Analysts Cov.		-0.002 (2.03)	-0.001 (1.74)	-0.001 (1.73)	-0.001 (1.98)	-0.001 (1.69)	-0.001 (1.67)
All Star		0.096 (2.71)	0.076 (2.31)	0.076 (2.32)	0.096 (2.71)	0.075 (2.31)	0.076 (2.32)
Size		-0.004 (1.28)	-0.004 (1.43)	-0.004 (1.42)	-0.004 (1.29)	-0.004 (1.43)	-0.004 (1.45)
B/M		-0.001 (0.29)	-0.001 (0.46)	-0.001 (0.46)	-0.001 (0.23)	-0.001 (0.37)	-0.001 (0.35)

Table VI: Determinants of Board Appointments

This table reports panel regressions of determinants of analyst board appointments as independent 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. *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: *Affiliation*, *Experience*, *Exper. Rec. Firm*, *Brokerage Size*, *Num Stokcs*, *Num Analysts Cov*, *All Star*, *Size*, and *B/M* are also included as controls in every regression, and are described in Table III. Interaction effects are included where shown. All coefficients are multiplied by one hundred. 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. 5% statistical significance is indicated in bold.

	(1)	(2)	(3)	(4)	(5)
Firm Level Recommendation	0.020 (3.10)	0.027 (4.15)	0.017 (2.29)	0.001 (0.19)	0.025 (3.10)
Affiliation	0.460 (2.05)	-4.12 (2.09)	0.473 (2.09)	0.476 (2.10)	0.386 (1.40)
All Star	-0.500 (2.78)	0.096 (2.70)	0.097 (2.73)	0.097 (2.72)	0.119 (2.73)
All Star*Rec	0.162 (2.87)				
Affiliation*Rec		1.18 (2.10)			
Few Analysts			-0.082 (1.96)		
Few Analysts*Rec			0.028 (2.07)		
% Recs Upgrade				-0.155 (2.52)	
% Recs Upgrade*Rec				0.049 (2.77)	
Final Rec Was Upgrade					0.026 (1.98)

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 recommendation was 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 III. Fixed effects for recommendation month (Month) 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. 5% statistical significance is indicated in bold.

	(1)	(2)	(3)	(4)	(5)
	<i>Rec</i>	<i>Rec</i>	<i>Rec</i>	<i>Downgrade</i>	<i>Downgrade</i>
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)	0.027 (8.99)	0.027 (8.99)
High Future Issuance	0.066 (15.06)	0.066 (15.06)	0.066 (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	Month, Firm	Month, Firm	Month, Firm	Month, Firm	Month, Firm

Table VIII: Relationships

This table investigates relationships among our appointed analysts. Panel A reports results from regressions similar to those employed in Table III; the dependent variable in columns 1-2 is the level of recommendation (*Rec*), which ranges between 1 and 5, where 1=Strong Buy, 2=Buy, 3=Hold, 4=Sell, and 5=Strong Sell. 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 that firm, and 0 otherwise. *Interlock* is a categorical variable designed to isolate board-appointed analysts' recommendations on firms that are "board interlocked" to the appointing firm; it is equal to 1 if the analyst recommending the given stock is appointed to the board of a firm that is board interlocked to the given stock, and zero otherwise. Firms are classified as board interlocked if the two firms share a common board member during the time period in which the analyst covers the stock. *Appointing Industry* equals 1 if the analyst recommending the stock in question is subsequently appointed to the board of directors of any stock in the same industry as the given stock, and 0 otherwise. *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 III. Fixed effects for recommendation month (Month) 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. Panel B reports the percentage of "connected" observations among the sample of recommendations by appointed analysts, relative to the full sample of analyst recommendations; as well as the percentage of "local" observations among the sample of appointed analysts relative to the full sample of analyst recommendations. Recommendations are classified as connected if the analyst attended the same academic institution as a board member or senior executive (CEO, CFO, Chairman) of the recommended stock, and local if the analyst is located within 100 kilometers of the headquarters of the recommended stock at the time of the recommendation. For each classification (connected and local), differences between percentages in the two samples are reported, and t-stats on the differences in percentages are in parentheses. Panel C examines the entire universe of independent directors and board members. "Actual Independent" equals the percentage of independent directors who are connected to the board, where each director is classified as connected if she attended the same academic institution as a fellow board member or senior officer (CEO, CFO, Chairman) of the firm. In order to generate the percentage of "Expected Independent" connections (given the observed structure of educational backgrounds of US board members) under the null hypothesis of no relation between educational ties and appointment, we use a bootstrap analysis. We generate a random educational background for each board member by sampling with replacement from the list of institutions where every institution's extraction probability is equal to its relative frequency. This generates a random assignment preserving the relative frequency of academic institutions (E.g., Yale is 5% of the sample in both the actual and the simulated distribution). We then compute the average percentage of connections and iterate; we report the average percentage of expected connections across 1,000 iterations. The t-statistic for the difference is adjusted using the Newey-West procedure with a 8-period lag. 5% statistical significance is indicated in bold.

Panel A: Interlocks			Panel B: Concentrations			Panel C: All Board Members	
	(1)	(2)		Percent Connected	Percent Local		Percent Connected
Appointing Firm	0.386 (4.65)	0.400 (4.80)	Appointed Recs	30.17	25.76	Actual Independent	20.44
Interlock Firm	0.311 (2.84)	0.209 (1.97)	Full Sample	17.96	16.83	Expected Independent	6.71
Appointing Industry		0.153 (5.45)	Diff	12.21 (2.86)	8.93 (2.34)	Diff	13.73 (50.83)
Fixed Effect	Month	Month					