Wall Street Analysts as Investor Relations Officers

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Abstract

This paper examines the practice of hiring financial analysts as investor relations officers (IRO). We posit that analysts-turned-IROs (AIROs) have a competitive advantage in communicating with investors, thereby lowering the effort expended by the investment community to process corporate disclosures. Using a unique manually-collected dataset on the employment history of IROs (compiled from LinkedIn, Capital IQ, RelationshipScience.com, and appointment press releases), we show that disclosure readability in 8-K and 10-K filings improves and that companies are more likely to host analyst/investor days after hiring former analysts as IROs. Most importantly, we find increases in analyst following, institutional investors, and stock liquidity after hiring a former analyst as IRO. We conclude that both a disclosure and a network channel are at play in the relation between AIROs and increased interest from the investment community. Overall, our findings suggest that firms benefit from hiring Wall Street analysts as IROs.

Investor relations; financial analysts; disclosure; information environment; institutional investors; stock liquidity

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1. Introduction

The investor relations (IR) function is a bridge between the preparers of financial information (i.e., management and board of directors) and the users of this information (i.e., investors, financial analysts, media, and other stakeholders), aiming to facilitate efficient and effective interaction between the firm and the investment community (Brennan and Tamarowski, 2000). The investor relations officer (IRO) is at the center of corporate disclosure activities (i.e., conference calls, press releases, and other informal interactions with the investment community) and in position to manage the expectations of the investment community and control their access to top management (Brown et al., 2019). Historically, the IR function has been viewed as a communications role (Korn Ferry Institute, 2015) and the IRO has had background or training in communications and public relations (Brennan and Tamarowski, 2000). Recently, however, more companies turn to Wall Street to fill IR positions. A National Investor Relations Institute (NIRI) survey found that 22% of the surveyed IROs working for Fortune 500 companies in 2014 are former sell-side or buy-side analysts, up from 10% in 2008 (Korn Ferry Institute, 2012, 2015). In September 2016, Brown et al. (2019) surveyed 610 IROs of U.S. listed companies; almost 30% reported having prior experience in investment banking or sell-side research.

The practical value and implications of shifting IROs' skill set from communications to financial acumen have stirred debate in the business media. For instance, a recent Wall Street Journal article suggests that while companies recruit former analysts as IROs to "talk to investors in their own language," these former analysts may "struggle with tactfully coaching fellow executives" (Stuart, 2016). In a similar vein, incumbent IROs point out that companies hiring Wall Street analysts as IROs do not "take into account the full range of skills and experience an

individual needs to work in IR" (Human, 2015). Given the important role played by IROs in communicating financial information to the investment community (Brown et al., 2019; Kirk and Vincent, 2014), and the fact that analysts are considered primary users of such information (Healy and Palepu, 2001; Schipper, 1991), we provide evidence to better understand the relation between IROs' prior experience as financial analysts and the effectiveness of the IR function.

We manually compile a unique dataset of employment history and biographical information for persons occupying the position of Head of IR from 2004 to 2016 in non-financial firms included in the S&P 500 market index. Our sample contains 452 unique *changes* in IROs, of which 118 cases involve hiring a former financial analyst (AIRO).[1] We conduct the empirical analyses on the full sample of changes to an AIRO versus a regular IRO. In addition, we implement a propensity score matched-sample (PSM) research design, matching a treated observation (*AIRO* = 1) with the nearest neighbor control observation (*AIRO* = 0), one-to-one without replacement. The first stage of the PSM relies on our test of the *determinants* of hiring an AIRO rather than a regular IRO where we find that smaller and harder to value firms are more likely to hire AIROs.

Hiring former analysts as IROs could change corporate disclosure in a way that is welcomed by the investment community. We hypothesize and find that AIRO's experience reading countless corporate disclosures enables them to improve the disclosures their new employer makes. We examine this by comparing the characteristics of 8-K and 10-K filings on the criteria set out in the SEC's Plain English Disclosure Final Rules 421(b) and 421(d). We find that after hiring former analysts as Head of IR, 8-K and 10-K filings are overall more readable as measured by the Gunning Fog Index (Lehavy et al., 2011; Li, 2008) and the Bog index (Bonsall et al., 2017), respectively.

We then examine the effect of hiring an AIRO on the number of analysts following and

[1] Our focus is on Wall Street experience broadly speaking, either as financial analysts in sell-side brokerage houses or investment banks or buy-side institutions.

institutions investing in the firms. Building and maintaining close relationships with analysts and institutional investors is a major focus of the IR function (Kirk and Vincent, 2014; NIRI, 2004). Analyst coverage and institutional ownership are increasing in corporate disclosure (Bushee and Noe, 2000; Diamond, 1985; Healy et al., 1999; Merton, 1987), which is consistent with the notion that the effort analysts expend to analyze the firm is an important determinant of analyst coverage (Barth et al., 2001; Chatalova et al., 2016; Gao et al., 2016; O'Brien and Bhushan, 1990). An analyst has experience in processing corporate disclosure and understands good-versus-bad disclosure practices from the perspective of investors. If a firm capitalizes on such expertise and deep understanding to reshape corporate disclosure and the way the firm's story is communicated, that is, by hiring a former analyst as IRO, the investment community would likely incur lower costs to process corporate disclosure. Furthermore, former analysts are likely to have cultivated a social and professional network with fellow analysts and fund managers when working on Wall Street and can leverage their network to attract coverage and institutional interest (Brochet et al., 2014; Gu et al., 2019). Thus, we expect firms to attract more interest from analysts and institutional investors after hiring a former analyst as IRO.[2] Our findings are consistent with these expectations.

Next, we examine how the recruitment of new IROs from Wall Street relates to changes in stock liquidity. Extant studies find that liquidity is increasing in the quality of firm communication (Baiman and Verrecchia, 1996; Barry and Brown, 1984, 1985; Diamond and Verrecchia, 1991; Easley and O'Hara, 2004; Healy et al., 1999; Merton, 1987). Therefore, we expect a positive link between stock liquidity and the recruitment of former analysts as IROs. Using Amihud's (2002) illiquidity ratio and bid-ask spreads as inverse measures of liquidity, we confirm this expectation.

This study contributes to several streams of literature. First, the burgeoning literature on

[2] Increased interest in the company and higher stock liquidity could lead to an increased stock price and easier financing and are, therefore, desirable from a firm's perspective.

the IR function and process has previously examined external IR consultants (Bushee and Miller, 2012), IR Magazine's "best in class" nominated IR (Agarwal et al., 2016), NIRI-certified IR personnel (Kirk and Vincent, 2014) or the long-tenured IRO (Chapman et al., 2019). We contribute by documenting improvements in the firm's information environment associated with appointing former Wall Street analysts as IROs.

Second, our study adds to research on managerial individual effects (e.g., Bamber et al., 2010; Hu and Liu, 2015; Li et al., 2017; Wells, 2020), particularly the stream on how background characteristics shape individual effects (e.g., Hoitash et al., 2016; Sunder et al., 2017). We introduce a novel, manually collected dataset of S&P 500 IROs over the period 2004–2016 for whom we compile the employment history from LinkedIn, appointment press releases, S&P Capital IQ, and RelationshipScience.com that allows us to investigate individual effects going beyond CEOs and CFOs. Therefore, our focus on the IRO, the spokesperson of the company, extends this line of research.

Third, research on the determinants of corporate disclosure aims to explain managers' disclosure choices (e.g., Lang and Lundholm, 2000; Gao et al., 2016; Li, 2008; etc.). Our study contributes by uncovering a new determinant of disclosure. Specifically, we show that corporate disclosure quality and event policy is associated with IRO's prior Wall Street experience.

Finally, this study also relates to the emerging practice of the "revolving-door" (Cohen et al., 2012; Cornaggia et al., 2016; Horton et al., 2017; Jiang et al., 2018; Lourie, 2019; Kempf, 2020).[3] While this literature focuses on the costs for investors (e.g., lower quality analyst earnings forecasts) prior to the appointment, we provide evidence on some potential benefits after the appointment. Specifically, we show that, even beyond the revolving-door scenario, the move from

[3] Only 16% of the AIROs in our sample are revolving-door analysts; thus, our focus is different from this stream of literature. All our inferences remain unchanged after we control for revolving-door analysts.

Wall Street to IRO is a frequent career step and that former analysts who are used to reading and analyzing complex corporate disclosure and who understand the needs of the investment community, bring benefits to their new employers when they take on the IRO role. Overall, our results should be useful to managers seeking to improve communications with investors.

2. Background and Hypothesis Development

2.1 The IR function and analysts as IROs

Prior literature has investigated several aspects related to the role of IR. Hiring an external IR firm for small-cap companies improves communication with investors and results in higher institutional ownership, analyst following, media coverage, and market-to-book (Bushee and Miller 2012). When firms already have a relatively high level of public disclosure, IR can enhance management's credibility through direct contact with investors and information intermediaries and further increase disclosure quality. IROs help increase the credibility of the firm's product strategy (Brennan and Tamarowski, 2000) and NIRI-certified IR professionals help firms better navigate the Regulation Fair Disclosure requirements (Kirk and Vincent 2014). In-house IR is more likely to organize or participate in events that facilitate interactions with capital-market participants, such as AI days (Kirk and Markov, 2016) or broker-hosted conferences (Green et al., 2014). Internationally, while IR activities vary, they have become increasingly more important (Karolyi et al., 2020), and the benefits are larger in weak investor protection countries (Brochet et al., 2020).

Some studies point to the dark side of IR. Evidence suggests that IR orchestrate conference calls such that analysts favorable to the company get to ask more questions, thus controlling the information flow to the market (Cohen et al., 2020). Through connections with business journalists, IR firms increase (decrease) the media coverage of good (bad) news, which results in

transient positive abnormal returns (Solomon, 2012). Ahead of initial public offerings, less visible firms and those with inexperienced management are more likely to hire IR consultants, who boost up the perception of the company in the short term, but their presence is associated with higher underpricing, lower long-run returns, and agency problems (Chahine et al., 2020). Consistent with Hong and Huang (2005), these findings suggest that investment in IR may be motivated by insiders' need for increased liquidity of their shares rather than improved valuation.

Drawing on the personnel economics literature (Oyer and Shaefer, 2011) and in light of the IROs' role, we argue that hiring a new IRO is an optimal choice that the firm makes based on the set of skills and attributes needed for the current situation or future trajectory of the firm (Rosen, 1982). IROs communicate "the story" of the company to the investment community and address financial inquiries from various stakeholders. Their skill set should thus correspond to reaching the future trajectory that management envisions and to meeting the firm's disclosure needs. Several firm-level characteristics could drive the firm to optimally appoint an AIRO.

Demand for disclosure can come from financial analysts, institutional investors, and from the firm's financing activities. Financial analysts covering the firm pressure management into providing disclosure through their questions during conference calls (e.g., Chapman and Green, 2018; Lang and Lundholm, 1996). Institutional investors demand and affect the public disclosure (e.g., Bird and Karolyi, 2016; Boone and White, 2015). Firms that engage in financing activities provide more frequent earnings guidance (Frankel et al., 1995). As the IRO is often the first point of contact for investor calls (Bloomberg, 2013), these activities could also relate to the firm's decision to hire a former analyst if they are perceived to better meet the demand for disclosure that the firm faces. In other words, hiring the new IRO is demand driven.

A broader indicator of the reason to choose a former analyst as IRO is the uncertainty in

valuation that surrounds firms, which may arise for reasons related to the business model of the firm (e.g., R&D-intensive) or to litigation risk, and reflects in the volatility of stock returns. Innovative firms potentially have a harder time communicating their story to the investment community. A Wall Street background often comes with training to take a two-three years' perspective, which could prove useful as IRO facing tumultuous markets (NIRI, 2017).

However, other considerations such as firm age could come into play. Surveyed IROs mention that their role is often restricted in young firms because the founder or CEO is more likely to spend significant time engaging with the investment community (IR Magazine, 2013). At the other end of the spectrum, well-established firms might be more interested in ensuring CFO or CEO succession and thus more inclined to use the IRO position as a stepping-stone for inside personnel, rather than hiring outsiders.

We expect firm growth and profitability to play a role in the hiring decision. A firm with poor performance may hire an AIRO who can better explain the reasons for the poor performance or its transitory nature. Firms on a growing trend would presumably need to convince the markets of the financial support necessary to reach that growth. For IROs, financial expertise and full understanding of the company's financials have become standard requirements that cannot be easily acquired when specializing in public relations or non-financial domains (Bloomberg, 2013).

A former analyst is not necessarily better than a non-analyst at being an IRO. Financial expertise could alternatively be gained through accounting or auditing experience; communication skills could be learned in public relations or journalism positions. Whether a junior associate who mostly worked with spreadsheets has gained the skills necessary for the IRO position is also unclear. A career IR employee has probably also gained an understanding of how Wall Street functions and has developed the connections necessary to succeed. Instead, we argue that their

combination of skills: financial expertise, training to get to the essence of how a company creates value and what is problematic for the company's future, intimate exposure to, and understanding of, the information needs of the investment community, potential industry expertise, and experience in benchmarking with peer companies makes analysts more valuable in the IRO position for certain firms. This is ultimately an empirical question that our paper addresses.

2.2 Hypothesis development

The investment community, regulators, as well as academic researchers frequently raise concerns about the ever-increasing effort exerted by investors, even sophisticated ones, to struggle through the highly technical and complex financial reporting and disclosure (CFA Institute, 2015; Lehavy et al., 2011; SEC, 2006, 2008). IROs, often nicknamed "Chief Disclosure Officers," play a key role in setting the disclosure policy of the firm (Brennan and Tamarowski, 2000; Kirk and Vincent, 2014; NIRI, 2005, 2011). The SEC Plain English Final Rules 421 (b) and 421 (d) require registrants to (1) present information in clear and concise sections, paragraphs, and sentences, (2) avoid vague boilerplate explanations, and (3) avoid legal terminology. As former sophisticated users of financial disclosures (Ramnath et al., 2008), AIROs are in a position to apply the knowledge gained as consumers of financial disclosures. Based on these aspects and on the importance that the analyst community places on the quality of corporate disclosures (Lang and Lundholm, 1993), we hypothesize that AIROs improve the quality of corporate disclosures to help the investment community better grasp the story of the company.

Some types of disclosure (i.e., press releases and SEC filings) do not involve face-to-face interaction between management and investors (Mayew, 2012). Others, however, such as conference calls (Matsumoto et al., 2011), presentations at broker-hosted conferences (Green et al., 2014), and AI days (Kirk and Markov, 2016), involve direct interaction between management

and investors. Of these disclosure events, we expect AIROs to favor AI days. Our expectation relies on the assumption that most S&P 500 companies organize earnings conference calls and on the more rigid nature of broker-hosted conferences that might leave analysts less satisfied with that opportunity to interact with management. Kirk and Markov (2016) point out that AI days are hosted and paid for by the firm and are, therefore, flexible in terms of format, timing, duration, and organization. During AI days, guests interact informally with, on average, 10–14 firm representatives, including top- and mid-level managers (Kirk and Markov, 2016), which provides ample opportunities to gather additional information on firm strategy, operations, and performance. Additionally, Kirk and Markov (2016) find that the firm's IR function plays a significant role in organizing and coordinating AI days. As a former analyst, the AIRO likely has a better understanding of how such events help companies to communicate with the investment community. Therefore, we expect AIROs to engage their new company in such corporate disclosure events. While we do not argue that AI days are necessarily "better" than other events, the IRO has more discretion over AI days than over other events. This makes AI days a suitable setting to test the role of IRO over corporate disclosure.

Interacting and nurturing close relationships with institutional investors and sell-side analysts are important parts of the IRO's job (Brown et al., 2019; Kirk and Vincent, 2014). Former analysts hired as IROs could be related to an increased interest from the investment community in their new employer through two possible mechanisms: the disclosure and the network mechanism.

Disclosure theory predicts that analyst coverage and institutional interest are increasing in corporate disclosure (Diamond, 1985; Diamond and Verrecchia, 1991; Merton, 1987). These predictions are supported by evidence that effort expended to analyze the firm is an important determinant of analyst coverage and institutional interest (Barth et al., 2001; Chatalova et al., 2016;

Gao et al., 2016; O'Brien and Bhushan, 1990). Having worked in the investment community, an analyst has a better appreciation of good-versus-bad disclosure practices from the perspective of investors and a deep understanding of the usages of disclosure outlets and financial language. Consequently, an AIRO is likely to have an edge over other IROs when it comes to "talking to investors in their own language" and can draw from her prior experience as analyst to anticipate the information needs (e.g., type, horizon) of the investment community. As a result, analysts and institutions are likely to incur lower costs in extracting decision-useful information from disclosures made by (or influenced by) AIROs. Thus, we expect firms hiring former analysts as IROs to experience an increase in analyst following and institutional investor interest thanks to the inside information that the AIRO brings about how analysts and investors make decisions that transfers into the firm's corporate disclosure. We refer to this channel as the disclosure mechanism.

Next, a network mechanism also predicts a positive relation between hiring a former analyst as IRO and increased analyst and institutional interest. Social and professional networks influence sell-side analysts' coverage decision as well as fund managers' investment decisions (Brochet et al., 2014; Gu et al., 2019). During their time working in the financial services industry, AIROs are likely to have cultivated social and professional ties with fellow analysts and fund managers. As they move to the corporate IR function, former analysts can attract analyst coverage and institutional interest by leveraging their social and professional networks. The two mechanisms are not mutually exclusive, and both can be at play to predict increased interest from the investment community after hiring a former analyst as IRO.

Another potential outcome of hiring an AIRO is enhanced stock liquidity. Theory predicts that liquidity decreases in corporate disclosure (Barry and Brown, 1984, 1985; Merton, 1987; Diamond and Verrecchia, 1991; Easley and O'Hara, 2004). Consistent with these predictions,

Welker (1995) and Healy et al. (1999) find that higher quality disclosure is associated with lower bid-ask spreads (see also Leuz and Verrecchia, 2000). However, public disclosure is but one channel that feeds into stock liquidity. Another channel is private communication (e.g., phone calls, private meetings, etc.). If AIROs provide more unobservable interactions with investors, or if, given their skill sets, are more apt to address investors' expectations in such interactions, we expect stock liquidity to increase incremental to the improvements in disclosure quality.

Hypothesis: *After hiring a former financial analyst as investor relations officer, firms experience the following outcomes:*

- *improvement in corporate disclosure characteristics,*
- *increase in analyst/investor days,*
- *increase in analyst following,*
- *increase in institutional investor ownership,*
- *increase in stock liquidity.*

One might argue, however, that studying public relations or communications academically could provide a career IRO systematic insight in steering corporate communication that cannot be learned as user of corporate communications. Furthermore, a career IRO could gain hands-on experience dealing with a wide range of analyst and investor preferences and cultivate long-term relationships with the investment community. Indeed, Chapman et al. (2019) show that the replacement of a long-tenured IRO has negative impact on the firm's information environment. These alternative and credible views provide tension to our research question and suggest that we might not find the hypothesized economic outcomes following AIRO appointments.

3. Data and Research Design

3.1 Data collection

Using Compustat North America, we compile a list of non-financial companies included in the S&P 500 market index and perform the data collection in two steps. For these firms, we

compile a list of individuals who have occupied the Head of IR position by collecting data from (1) the current investor relations contact on the company's IR website, (2) the list of participants in conference calls held by the company, (3) the contact details on the firm's earnings press releases, (4) the predecessor and successor names in Head of IR appointment press releases, where available, and (5) S&P Capital IQ (i.e., persons that occupied the job functions of "Head of Investor Relations," "Investor Relations Professional"). We also collect the dates of their employment as IROs from the same sources.[4] Importantly, where possible we corroborate or complement this information with the dates of conference calls where the person participated as IRO or with the dates of press releases where the person was the IR contact. We only identify the person holding the highest-ranking function in the IR team. Survey evidence shows that in 84% of companies, the Head of IR is the primary contact with the investment community (Karolyi et al., 2020), thus providing support for examining IROs.[5] We eliminate the cases where the CFO is also the Head of IR, either on a transitional or a permanent basis, since they are not relevant to our research question.[6] The outcome of this first step is a historical list of IROs per company and their employment dates as IRO.

In the second step, we search the IRO's name on LinkedIn with the goal of identifying and collecting information on the IRO's previous job positions (i.e., position, dates of employment, and employer) and demographics.[7] We complement the information obtained from LinkedIn with information from appointment press releases or from corporate websites that sometimes contain

[4] Cornaggia et al. (2016), Fracassi et al. (2016), Jiang et al. (2017), and Hope et al. (2021) also use LinkedIn data.
[5] Compared to the identity of the Head of IR, the identity of IR team employees is harder to establish since their names do not appear in conference calls or press releases.
[6] We also eliminate eight companies that do not have an in-house IR function.
[7] To fill in gaps in employment history, we also use Bloomberg, BoardEx, RelationshipScience.com, and magazine articles (e.g., IR Magazine) written about the IRO. These additional sources, however, help only to a small extent.

summary biographies of top-level management employees.[8] We eliminate the cases where the Head of IR was previously in a low-ranking position in the same IR team. Such cases would add noise to our tests since we cannot know if and to what extent these persons influenced the activity and performance of the IR function from the low-ranking position. The resulting dataset is an expanded panel with observations at the firm-IRO-job level.

We manually code whether each job position that a person has held is a financial analyst job in the financial services industry based on the job title or description and the employer name.[9] We retain the firm observations with *changes* in IROs and distinguish between companies that hire an IRO with prior job experience as a financial analyst (*AIRO* = 1) and companies that hire an IRO without experience as a financial analyst (*AIRO* = 0), i.e., regular IRO.

3.2 Summary statistics

Our sample spans the period 2004–2016.[10] We identify 452 firm-quarters (268 unique firms) with changes in IROs, 118 of which are appointments of new IROs with prior analyst experience and 334 of which are appointments of new IROs without prior analyst experience.[11] Because our dependent variables are measured over the four quarters after the IRO change compared to the four quarters before, we retain only IROs with tenure of at least one year.[12]

Panels A and B of Table 1 report the sample distribution by year and industry, respectively.

[8] Employment dates are missing in some cases, especially when the person does not have a LinkedIn profile and the appointment press release is not specific enough. We nevertheless include these non-dated previous jobs in our dataset.
[9] Financial analyst positions in manufacturing firms are not Wall Street analyst positions but rather positions in which the employee performs business analysis and forecasting.
[10] Earlier information about employment history is generally harder to find from public sources. Additionally, AI days are covered consistently in FactSet starting in 2003.
[11] We identify 680 IRO appointments starting in or after fiscal quarter Q1 2004 for non-financial firms in S&P 500 corresponding to 339 unique firms. We lose 53 observations (15 unique firms) where IRO employment history is not publicly available. We further eliminate internally promoted IROs (97 observations), interim IROs or those replaced within 12 months of appointment (25 observations), and observations missing accounting data (53 observations).
[12] A minimum tenure requirement of one year also allows for the IRO to imprint her style on the way the IR department functions. Based on data availability and sample construction restrictions, the earliest IRO appointment in our sample is in June 2004 and the latest in September 2016.

Panel C presents descriptive biographical information about the IROs in our sample. In both sub-samples, males occupy 70% or more of the IRO positions, but the percentage is higher for AIROs. Most IROs in both sub-samples have an MBA, but more AIROs are MBA graduates. Regular IROs have a Master (non-MBA) as highest education level in a larger proportion compared to AIROs. Finally, AIROs are significantly more likely to have attended an Ivy League university.

3.3 Research design for determinants test

Given the possibility of endogenous IRO-firm matching, we first examine the *determinants* of hiring a former analyst as IRO. We identify the fiscal quarter when the IRO change occurred as Q0 (i.e., the event quarter) and include as potential determinants firm variables averaged over the four fiscal quarters prior to the change (Q−4 to Q−1). In other words, this cross-sectional test is conditional on there being a change in IRO and aims to explain the choice between AIRO and regular IRO. We estimate the following Probit regression model:

$$\begin{aligned} AIRO = {} & \alpha_0 + \alpha_1 Coverage + \alpha_2 \#IO + \alpha_3 Spread + \alpha_4 Market\ Cap \\ & + \alpha_5 Return\ Volatility + \alpha_6 MTB + \alpha_7 Financing + \alpha_8 R\&D \\ & + \alpha_9 Litigation\ Risk + \alpha_{10} ROA + \alpha_{11} Loss + \alpha_{12} Leverage \\ & + \alpha_{13} NASDAQ + \alpha_{14} Firm\ Age + Industry\ FE + Year\ FE + \gamma \end{aligned} \quad (1)$$

The dependent variable is *AIRO*, which takes the value 1 if the IRO hired in fiscal quarter Q0 was previously employed as a financial analyst and 0 otherwise. Because the main role of IROs is to communicate with stock-market participants, we include several variables that reflect the firm's visibility and information environment prior to the IRO change. Specifically, we include the number of analysts covering the firm, the number of institutional shareholders, and market capitalization (all log-transformed). Bid-ask spreads, daily stock-return volatility, and an indicator that distinguishes whether the firm shares trade on NASDAQ as opposed to NYSE, capture the information asymmetry between investors and uncertainty about the firm.

Firms may choose the new IRO such that their abilities match the complexity and growth

of the firm. The market-to-book ratio (*MTB*) proxies for the firm's growth opportunities; firms that are on a growing trend have incentives to "do their best" to maximize their chances that the investment community will regard their strategy positively. We account for the firm's prior ability to successfully "sell" their story to investors using a variable that captures whether the firm has been able to attract stock market financing (*Financing*). Research and development expenditures (*R&D*) account for the idea that more complicated companies may choose to hire an AIRO to explain their activities to the investment community. *Litigation Risk* is based on the firm's SIC industry classification and identifies the firms that, due to their business activity, face high securities class action litigation risk (Ali and Kallapur 2001).

Firms may also choose an AIRO based on prior firm performance or at the optimal time in its business life cycle or based on its capital structure. We thus include the return on assets ratio (*ROA*), an indicator for whether the company has made losses in the prior four quarters (*Loss*), the leverage ratio computed as total debt to assets (*Leverage*), and the log-transformation of firm age (*Firm Age*). To account for any firm-IRO matching due to intrinsic industry characteristics, we include industry fixed effects based on the Fama-French 12 industry classification. Year fixed effects account for any general trends or "fashion" in hiring AIROs.

3.4 Research design for outcomes tests

In order to analyze the *consequences* of hiring an AIRO, we estimate the following control-sample research design using the sample firms that change to an AIRO and a control group of companies that change to "regular" IRO, similar to the research design used by Bushee and Miller (2012) and Kirk and Vincent (2014). To test our hypothesis on the outcomes of hiring AIROs, we estimate the following model on the sample of AIRO and non-AIRO observations.

$$\Delta Y = \beta_0 + \boldsymbol{\beta_1 AIRO} + \beta_2 Prior\ \Delta Y + \sum \beta_k Control_k + Industry\ FE + Year\ FE + \varepsilon, \quad (2)$$

where *Y* refers to variables that proxy for the constructs hypothesized. Specifically, to take into account the role that IROs can play in different types of disclosure outlets, we employ as dependent variables the Gunning Fog readability of 8-K filings (*ΔFog*), the plain English readability of 10-K filings (*ΔBog*) (Bonsall et al. 2017), and the number of AI days *(Δ#AI Days*) (Kirk and Markov, 2016).[13] We use the changes in analyst coverage (*ΔCoverage*) and number of institutional shareholders (*Δ#IO*) after-to-before the IRO change as proxies for interest from analysts and institutional investors (e.g., Bushee and Miller 2012).[14] To test the relation between hiring an AIRO and stock liquidity, we use the Amihud (2002) stock illiquidity ratio (*ΔAmihud Ratio*) and the daily bid-ask spread (*ΔSpread*). In all cases, the dependent variable is the *change* in the average value of *Y* over fiscal quarters Q+1 to Q+4 after the quarter when the IRO changed compared to the average value of *Y* over quarters Q−4 to Q−1 before the IRO change.

The variable of interest is the indicator *AIRO*. Given our research design, the coefficient β_1 measures the incremental change in the dependent variable from before to after the change to AIRO relative to the change to a regular IRO. In other words, the specification compares the company that hires an AIRO with itself in the pre-AIRO period (i.e., within firm) and with companies that hire a regular IRO, again before and after the change (i.e., across firms).

To confirm our hypothesis, we expect a negative coefficient β_1 on *AIRO* when the dependent variables are *ΔFog* and *ΔBog*, which would mean that 8-K and 10-K filing readability,

[13] We thank Brian Miller for providing the Bog plain English readability measure of 10-K filings as computed in Bonsall et al. (2017; https://kelley.iu.edu/bpm/activities/bogindex.html). The sample size decreases to 407 observations due to missing Bog index data.

[14] We focus on the number of institutional investors (rather than the percentage of institutional ownership) as the S&P 500 firms in our sample are heavily invested by institutions (75% on average, many close to 100%) hence further increasing the percentage of institutional ownership is unlikely to be part of IR strategy. However, attracting diverse institutional investors (captured by *#IO*) is an important goal of IR (Karolyi, Kim, and Liao 2020) that may be particularly relevant in this setting.

respectively, increases after hiring an AIRO (i.e., higher index reflects lower readability). When *Δ#AI Days* is the dependent variable, a positive coefficient β_1 would imply that the AIRO organizes more AI days compared to the prior period before her appointment and compared to control firms that hired a regular IRO, confirming our prediction. When *ΔCoverage* and *Δ#IO* are the dependent variables, we expect positive β_1 coefficients to confirm our prediction that the interest from the investment community increases after hiring an AIRO compared to hiring a regular IRO. Confirming our hypothesis also rests on negative β_1 coefficients when *ΔAmihud Ratio* and *ΔSpread* are the dependent variables as higher Amihud ratios or bid-ask spreads reflect lower liquidity (Amihud and Mendelson, 1986).

Following Bushee and Miller (2012), in each regression we control for the change in the dependent variable *Y* over the four quarters prior to IRO change (i.e., *Prior ΔY* equals to *Y* in Q−1 minus *Y* in Q−4) to control for underlying trends specific to *Y*. Additionally, we include all the independent variables from the determinants model in Equation (1) as control variables in Equation (2), computed as average values over the four quarters prior to the hiring of the new IRO (where *ΔAmihud Ratio* is the dependent variable, we replace *Spread* with *Amihud Ratio* as control variable). Where the dependent variable is *ΔFog* or *Δ#AI Days*, we augment the set of controls with the average of these disclosure dimensions over the four quarters prior to the change in IRO (*Prior ΔFog* and *Prior Δ#AI Days*); where the dependent variable is *ΔBog*, we control for the Bog readability of the 10-K filing prior to the IRO change (*Prior ΔBog*). Including these controls addresses the possibility that the results reflect firm characteristics that led the company to choose an AIRO at the time of IRO turnover rather than the new IRO exerting her style and influence on the firm's information environment (i.e., matching versus influence). Detailed variable definitions are in the Appendix.

To address the possibility that our findings reflect systematic differences between firms that appoint former analysts versus regular IROs, we implement a PSM sample research design in which we use the covariates in Equation (1) as the matching dimensions. Specifically, we match the treated observations (i.e., *AIRO* = 1) with the control observations (i.e., *AIRO* = 0) based on the propensity score obtained from estimating Equation (1). We match treated observations with the nearest neighbor control observation one-to-one without replacement. We choose not to impose a caliper distance since doing so further reduces the sample size. We re-estimate all tests on the matched sample (i.e., second stage) and continue to include the Equation (2) control variables following Shipman et al. (2017).

Next, we discuss our focus on readability as one dimension of corporate disclosure and on 8-K filings as corporate disclosure outlets. To test the influence of the IRO change on corporate disclosure, we proxy for disclosure quality using the Gunning Fog readability index (Li, 2008) of 8-K filings or the Bog plain English readability index of 10-K filings (Bonsall et al. 2017).[15] Broadly, readability measures aim to quantify whether the reader can accurately reconstruct the intended message (Loughran and McDonald, 2016). The Fog index measures the number of years of formal education required to read and understand a text (Li, 2008) and is a function of sentence length and number of words longer than two syllables. The Bog index is a plain English measure of readability that takes into account that the audience is specialized and familiar with terminology that may seem complicated to a general audience (Bonsall et al. 2017). Research links high readability, for instance, to the firm's need to attract investors (Lundholm et al., 2014) and to lower analyst earnings forecast dispersion and higher accuracy (Lehavy et al., 2011). Following SEC's Plain English requirements, we consider readability to be a reasonable proxy for disclosure quality.

[15] The proprietary nature of the Bog index precludes us from obtaining it for 8-K filings, hence our reliance on 10-K filings for that test.

Testing how 8-K disclosure changes with a new IRO rests on the expectation that 8-Ks are used by managers (Abramova et al. 2020; Noh et al. 2019), that IROs influence this disclosure and also on the expectation that capital market participants use these disclosures (McMullin et al. 2019). The SEC requires the 8-K form for reporting "major events that shareholders should know about." If a press release was issued at the event date, the 8-K filing typically reiterates the press release (Lerman and Livnat, 2010). In a sample of 359 surveyed IROs, Brown et al. (2019) find that press releases rank second, and 8-K reports rank fourth in terms of the influence that the IRO has on the substance and form of the disclosure. However, as mentioned above, 8-K filings reiterate the press release, which suggests that IROs "total" influence on 8-Ks is higher than indicated by Brown et al. (2019) and thus justifies testing AIROs' influence on 8-K disclosures.

4. Empirical Results

4.1 Determinants of hiring an AIRO

Table 2 reports descriptive statistics on firm characteristics over the four quarters prior to IRO changes (i.e., level variables) and on changes in corporate disclosure, analysts, institutional investors, and stock liquidity following IRO changes. Consistent with S&P 500 firms being the largest and most visible firms in the U.S. economy, the median company in the sample has 12.4 billion dollars in market capitalization, *ROA* of 1.7%, total debt representing 22.8% of total assets, has been listed for 39 years, has *MTB* of 2.861, is followed by 19 analysts, and has 409 institutional owners. About 28% of observations are companies operating in litigation-prone industries, 83.7% have issued equity during the year, 8.7% are loss-making, and 24.1% are listed on NASDAQ. The median *Fog* index for 8-K filings is 17.9 suggesting that about 18 years of education are necessary to comprehend these disclosures. Sample size decreases to 407 observations for the variables based

on the Bog index due to data availability. The median *Bog* index for 10-K filings is 86, which suggests poor readability even by a specialized audience (Bonsall et al., 2017).

Table 3 compares the firm characteristics prior to IRO changes, and the changes in corporate disclosure, analysts, institutional investors, and stock liquidity after-to-before the IRO change, between firms that subsequently change to AIROs and firms that change to regular IROs. Firms that subsequently hire AIROs are younger, smaller, and more prone to loss-making, consistent with firms that are in the earlier stages of their business life cycle. Firms that hire AIROs also receive relatively less attention from the buy-side and have higher bid-ask spreads and stock-return volatility. These differences suggest that hiring AIRO is unlikely to be a random decision, but a strategic choice tailored to a firm's economic conditions and engagement with the investment community. Compared to firms that change to regular IROs, 8-K filings issued by firms that change to AIROs become more readable. Firms in the AIRO subsample are more likely to host more AI days, experience a greater increase in analyst following, and their stock becomes more liquid. Overall, these univariate results are consistent with the appointment of AIROs being associated with improvements in corporate disclosure practices, attracting more attention from financial analysts, and experiencing lower friction in stock trading as a sign of reduced information asymmetry between the firm and investors.

Table 4 presents the results of a Probit model (column 1) and Linear Probability Model (column 2) that test the determinants of hiring an AIRO, which mitigates the possibility that including fixed effects in a Probit model could lead to biased estimated parameters (Greene, 2004). The independent variables are measured over the four fiscal quarters that precede the change in IRO. The models explain about 12% of the variation in the dependent variable *AIRO*. The coefficient on *Market Cap* is negative and significant, while the coefficient on *NASDAQ* is positive

and significant. These estimated coefficients are directionally consistent with the bivariate correlations between *Market Cap* and *AIRO*, and between *NASDAQ* and *AIRO*, respectively (untabulated). The estimated coefficients on variables that proxy for disclosure demand from the capital markets (i.e., *Coverage*, *#IO*, and *Financing*) are not significant, suggesting that the data does not support pre-existing demand as a determinant for hiring a former analyst as IRO. Similarly, variables that proxy for firm performance (i.e., *ROA*, *Loss*) are also not significantly related to this decision. More likely, the firm's management hires a former analyst to reach a goal based on the current visibility of the firm. These results are consistent with the idea that smaller and more difficult to value firms are more likely to hire AIROs to facilitate their engagement with the capital market.

4.2 Main analyses

Table 5 presents the results of estimating the relation between hiring an AIRO and corporate disclosure. In column (1), the dependent variable is the change in average Gunning Fog index of 8-K filings over four quarters after-to-before the change in IRO (*ΔFog*). We control for the trend in the 8-K readability in the four quarters before the change in IRO but also for the average level of readability in that same period, which accounts for the scope to improve readability (i.e., if readability is already high, there is not much scope to improve).[16] The coefficient on *AIRO* is negative and significant. As higher values of the Fog index reflect lower disclosure readability, a negative change in the index reflects an improvement in disclosure readability after hiring a former analyst to head the IR function as compared to hiring regular

[16] None of the correlations between prior change variables and prior level variables is strong enough to raise concern about multicollinearity. In particular, the most negative correlation is between prior level and prior change of liquidity (−0.3617) and the most positive correlation is between prior level and prior change of Bog index (0.2644).

IROs.[17]

In column (2), the dependent variable is the change in 10-K filing Bog index after-to-before the IRO change (*ΔBog*), and we similarly control for the prior trend in 10-K readability (*Prior ΔBog*) as well as the lagged level of readability (*Bog*). We find a negative and significant coefficient on *AIRO*, indicating an improvement in 10-K readability after AIRO appointments.[18]

In column (3) we test the change that AIROs bring for the firm's usage of AI days as private disclosure events where selected investors and analysts meet with the firm's management and visit the premises. We find some evidence indicating that the frequency of such events increases after hiring an AIRO (i.e., the estimated coefficient is positive and significant). This is consistent with the idea that prior experience as an audience member to disclosure events allows AIROs to shape their new employer's disclosure policy by orienting it toward events that they perceive as more useful and impactful for investors and analysts.[19] Overall, the results in Table 5 are consistent with our expectation formalized in our hypothesis that firms experience an improvement in corporate disclosure after hiring a former financial analyst as IRO. All models control for the general trend in the disclosure prior to the IRO change, thereby reducing the possibility that the coefficient on *AIRO* captures a practice that the firm began to implement prior to the arrival of the new IRO.

Table 6 presents the results of models that estimate the relation between hiring an AIRO

[17] One could question whether a junior analyst would have gained enough skills reading and interpreting corporate disclosure compared to a seasoned analyst. We identify AIROs who worked as analysts for 23 months or less (bottom decile) and find that their appointment as IRO is not associated with a decrease in the Fog index. However, the decrease in Fog associated with AIROs with extensive analyst experience (top decile, or 176 months) is more than twice the decrease in Fog associated with the other AIROs. These results further strengthen our main findings.

[18] Complex language could also be indicative of managerial obfuscation. However, using the conference call obfuscation data from Bushee et al. (2018), we find that the obfuscation component of conference call disclosure decreases steadily after hiring an AIRO. In this regard, our findings are consistent with AIROs improving disclosure through shorter length and fewer complex words.

[19] We also augment the set of controls with several variables from Kirk and Markov (2016)—the number of segments, restructurings, high-tech industry (thus removing industry fixed effects), amount of intangible assets, and prior buy-and-hold returns. Inferences are the same as those from column (3) of Table 5.

on the change in number of analysts covering the firm (*ΔCoverage*; column 1) and the number of institutional shareholders (*Δ#IO*; column 2). We control for the level of, as well as the trend in, coverage and number of institutional owners prior to the IRO change thus controlling for any pre-existing trend in the interest of the investment community for the firm. Consistent with our hypothesis, we find a significant positive coefficient on *AIRO* in both columns, consistent with an increase in analyst following and institutional owners after appointing a former analyst as IRO compared to a regular IRO. As shown in Figure 1, our results are not just statistically significant but also economically relevant. Analyst coverage increases by one (or about 5% of the original analyst coverage) when appointing an AIRO to run the IR function. Since our S&P 500-based sample firms are some of the most visible firms in the U.S., we do not merely interpret these results as implying that hiring AIROs increases the visibility of the firm, and thus attracts the attention from the investment community. Rather, the additional interest from analysts and investors may stem from improvements in disclosure practices, which reduces the effort and cost expended by the investment community to decipher corporate disclosures or from a network effect of the AIRO.

In Table 7, we present results of changes in liquidity following the recruitment of new IROs. In column (1), we use Amihud's (2002) illiquidity ratio and find a negative and significant coefficient on *AIRO*, which indicates an increase in stock liquidity for firms hiring AIROs relative to those hiring regular IROs. In column (2), we use the change in daily bid-ask spread after-to-before the IRO change (*ΔSpread*) and find a significant, albeit weaker, negative coefficient on *AIRO*, suggesting that stock liquidity increases for firms that hire AIROs rather than regular IROs.[20] Each column controls for the pre-existing trend in the firm's stock liquidity (*Prior ΔAmihud Ratio* and *Prior ΔSpread*) and scope for improvement (*Amihud Ratio* and *Spread*). The

[20] Our S&P 500 indexed firms are among some of the most liquid firms and bid-ask spreads are (lower-)bounded by tick size (e.g., $0.01 for NYSE), making it difficult to document further improvement in bid-ask spreads.

inferences also hold after controlling for *ΔFog*. Overall, results in Table 7 are consistent with our hypothesis that firms experience an increase in stock liquidity after hiring a former financial analyst as IRO.[21]

In Table 8, we re-estimate all analyses on a PSM matched sample of IRO changes to reduce the possibility that our findings reflect systematic differences between firms that appoint AIROs versus firms that appoint regular IROs. The matched sample is 236 observations except in column (2) where it is 204 observations due to missing data for the Bog index. Without tabulating, we note that the matching process removes the differences across all dimensions (i.e., the differences in means between the treated and control groups are not significant). Therefore, we conclude that the PSM is effective in reducing the difference between the treated and control groups. Nevertheless, the second stage includes the entire set of first-stage variables, as well as the additional control variables as per Equation (2). Across columns (1) to (7), all regression coefficients on *AIRO* confirm our hypothesis and are consistent with the results reported in Tables 5 through 7. Section 5 reports additional robustness tests of the matching process.

4.3 Disclosure and network mechanisms

We argue that the increase in analyst following and institutional interest after the hiring of AIROs can be explained by a disclosure mechanism (i.e., better disclosure attracts investors' interest) as well as by a network mechanism (i.e., AIRO's social and professional networks

[21] One could argue that while sell-side and buy-side analysts have similar technical skills in dealing with corporate disclosures, they differ in some other respects, such as professional network and communication skills. For instance, a buy-side analyst works for a particular buy-side institution and may not necessarily interact with other institutions, while a sell-side analyst tends to interact with a wide network of buy-side institutions. Furthermore, a buy-side analyst communicates privately with a specific fund manager, while a sell-side analyst effectively needs to communicate and marketing her research publicly to a range of market participants. We identify AIROs who were analysts at sell-side brokerage houses or investment banks (sell-side AIROs) and AIROs who were analysts at buy-side institutions (buy-side AIROs) and remove AIROs who had held both sell-side and buy-side positions. We find that, compared to appointing buy-side AIROs, appointing sell-side AIROs is associated with similar improvement in disclosure readability, greater increases in institutional interest and liquidity.

influence coverage decision and institutional interest). In this section, we provide some insight into these two mechanisms that could explain the relation we document in Table 6.

To shed light on the network mechanism, we explore the rationale that while an analyst may have cultivated social and professional relationships with fellow analysts and fund managers when working on Wall Street, her connections fade gradually once she leaves Wall Street, either due to lack of direct contact or due to movements out of the investment community of the network members themselves. Therefore, the more time goes by or the more jobs she has outside Wall Street and before becoming IRO, the weaker her connections with the investment community becomes. Empirically, we re-estimate the analyses in Table 6 by partitioning AIROs based on the median of (1) the number of jobs in between Wall Street and IRO (the median is one, i.e., IRO is the second job after leaving Wall Street), and (2) the number of months in between Wall Street and IRO (the median is 22, i.e., the former analyst becomes IRO 22 months after leaving Wall Street). Consistent with the network mechanism, we expect the increase in analyst coverage and institutional interest to be stronger when the AIROs have fewer than two jobs, as indicated by *Fresh AIRO (jobs)*, or have spent no more than 22 months, as indicated by *Fresh AIRO (time)*, outside Wall Street and before becoming IROs.

To test the disclosure mechanism, we include *ΔFog*, *ΔBog*, and *Δ#AI Days* (i.e., the dependent variables used in Table 5) as independent variables as we re-estimate the analyses in Table 6. Consistent with the disclosure mechanism, we expect the coefficients on *ΔFog* and *ΔBog* to be negative (i.e., a larger decrease in the readability indices upon the change in IRO relates to larger analyst coverage and more institutional interest). We expect the coefficient on *Δ#AI Days* to be positive, suggesting that an increase in the frequency of corporate disclosure events upon the change in IRO relates positively to analyst coverage and the number of institutional owners.

Table 9 reports the results from testing the two mechanisms. We find that the increase in analyst coverage and institutional interest after the appointment of AIROs comes from those AIROs who left Wall Street recently and who have taken on few other jobs before becoming head of IR. Appointments of analysts who have left Wall Street for a long time, or have held more than two other jobs since, are not associated with increases in analyst coverage and institutional interest. These results are consistent with the network mechanism. We also find some, albeit weaker, evidence supporting the disclosure mechanism. Specifically, the coefficient on *ΔBog* is negative and significant as expected, whereas the coefficients on *ΔFog* and *Δ#AI Days* have the predicted sign but are not significant. Taken together, results in Table 9 provide evidence consistent with the network effect and the disclosure effect as two mechanisms through which the appointment of AIROs relates to increases in investment community interest.

5. Additional Analyses (Untabulated)

5.1 Instrumental variable approach

While we refrain from claiming causality from our matched-sample findings, as a robustness test, we consider a two-stage least squares instrumental variable approach that further controls for potential unobservable correlated omitted variables.[22] Specifically, we instrument the appointment of a new IRO with two variables: (1) an indicator variable for whether the location of the firm is in New York or San Francisco, and (2) the number of brokerage house mergers and closures within 30 to 180 days before the appointment. We determine the historical location of the firm using 10-K data as provided in the Loughran-McDonald 10-X File Summaries Stage One

[22] The Heckman two-step procedure is designed to address self-selection that manifests as truncated or missing data (Heckman 1979), which is not the case in our context, hence we opt for the IV approach. However, our inferences hold when implementing the Heckman procedure (untabulated).

Files. We obtain information on brokerage house mergers and closures from Kelly and Ljungqvist (2012) and Fich et al. (2018). Since most analysts work in the large U.S. financial centers, it is reasonable to assume that they may prefer to continue to work for firms headquartered in these cities, which implies that firms in New York and San Francisco have access to a greater pool of former analysts to be hired as IROs (i.e., the relevance assumption that valid instruments are a good predictor of the independent variable of interest). However, the location may not be directly related to analyst ability or to firm characteristics (i.e., the exclusion restriction that valid instruments do not have a direct effect on the dependent variable or any effect through omitted variables). Further, brokerage mergers and closures may mean more analyst lay-offs, while not being directly related to their ability or to firm characteristics. After implementing this research design, we continue to find that AIROs are significantly related to improvements in disclosure readability, analyst coverage, and institutional investors.

5.2 Additional analyses and sensitivity tests

We consider characteristics of the *outgoing* IROs. We identify the employment history of 268 outgoing IROs in our sample; 50 of these are former analysts. Results on analyst coverage and stock liquidity are statistically stronger when the outgoing IROs do not have an analyst background compared to when the outgoing IROs are also former analysts. This finding strengthens our inference that analyst expertise plays a role for the outcomes we find to hiring an AIRO.

To provide further evidence that our main results are capture the IRO being a former financial analyst, and not just better educated, we (1) include indicator variables for MBA degree and Ivy league education across all regression models, and (2) include MBA degree and Ivy league education as part of the matching dimensions in the PSM. Our conclusions hold.

To investigate potential pre-existing trend differences in outcome variables, we conduct a

falsification test by replacing the dependent variable with one that captures the pre-trend (i.e., the difference in outcome from two years to one year before the IRO change). The pre-trend in the outcome variables does not differ between control and treated groups.

We also delve deeper into the components of the Fog readability measure. We find that after hiring an AIRO and compared to similar firms and IROs, 8-K disclosures become more concise and use fewer complex words. Because both total words and complex words contribute to the Fog index through a positive relation, these results provide insights into how AIROs help to improve 8-K readability. We also find a decrease in the proportion of uncertain financial terms (Loughran and McDonald 2011) used in 8-K filings after hiring an AIRO.

Starting in 2004, the filing deadline for 8-K forms is four business days after the event occurs. As our sample begins in 2004, our results are not driven by the structural changes to 8-K filings documented in Lerman and Livnat (2010). To account for a possible learning effect, we exclude observations before 2006 and our inferences remain unchanged.

We conduct additional sensitivity analyses. First, we remove observations of IRO changes that coincide with CEO/CFO changes or include an indicator variable for simultaneous CEO/CFO turnovers. Second, we lift the restrictions on internally promoted IROs and IROs with a tenure of less than 12 months. Third, we extend the window for measuring changes in outcome variables to eight quarters before and after the IRO change. Fourth, we remove IRO changes that occurred during the 2008 financial crisis, using several windows to define the crisis period (i.e., the full year 2008, July 2007 to December 2008 as per Beltratti and Stulz (2012), December 2007 to June 2009 as per the National Bureau of Economic Research).[23] Fifth, instead of PSM, we consider Coarsened Exact Matching (e.g., DeFond et al. 2016), in which we match treated and control

[23] See https://www.nber.org/research/business-cycle-dating and http://www2.nber.org/cycles/dec2008.html.

observations on firm characteristics (industry and firm size) and then separately on individual characteristics (gender, Ivy-league education, MBA degree) and the firm's industry. We continue to observe better corporate disclosure practice, higher interest from the investment community, and high stock liquidity following the appointments of AIROs.

6. Conclusion

We investigate the economic consequences associated with the emerging practice of hiring financial analysts as IROs. Our goal is to assess the role that prior experience as a financial analyst plays when the person is hired as IRO. To this end, we identify a sample of companies that changed their IROs. We manually collect information from various public sources such as LinkedIn and appointment press releases to identify the employment history of IROs and distinguish between those with or without prior analyst experience. We then compare the effect of changing to an IRO with analyst experience versus an IRO without analyst experience on variables that measure the firm's disclosure, analyst following, institutional investors, and stock liquidity.

We find that there are positive outcomes to hiring AIROs even for relatively large and visible S&P 500 companies. Although it is not obvious that AIROs will perform better than other IROs, we argue that former financial analysts bring a heightened level of expertise to the IRO position. Because IROs' main function is to facilitate the communication between management and the financial markets, the expertise gained as a financial analyst allows AIROs to better perform their jobs, with benefits for their employer. Specifically, the results indicate that changing to IROs with prior analyst experience is related to improvements in corporate disclosure readability, corporate disclosure events, analyst coverage, number of institutional owners, and stock liquidity. We conclude that the investment community's interest for the new employer of the analyst-turned-

IRO is related to both a disclosure and a network channel.

Recent anecdotes and surveys point to a trend of investor relations hiring individuals with financial expertise who can navigate the complex informational and regulatory environment. We find that expertise that goes beyond communication skills creates benefits by improving the information environment of the company. Management teams seeking to improve communications with the capital markets (i.e., financial analysts and the investment community) should find our results useful. However, our article does not conclude that all firms should hire AIROs or that all financial analysts should pursue an IR career, as drawing such conclusions requires a full and complete cost-benefit analysis that is beyond the scope of this paper. Nonetheless, we believe our results have implications for both managers and investors, as well as for current or former financial analysts, especially in a time when increasing numbers of financial analysts are looking for jobs outside the investment community due to regulatory changes such as MiFID II (e.g., Fang et al. 2020; Walker and Flood, 2018).

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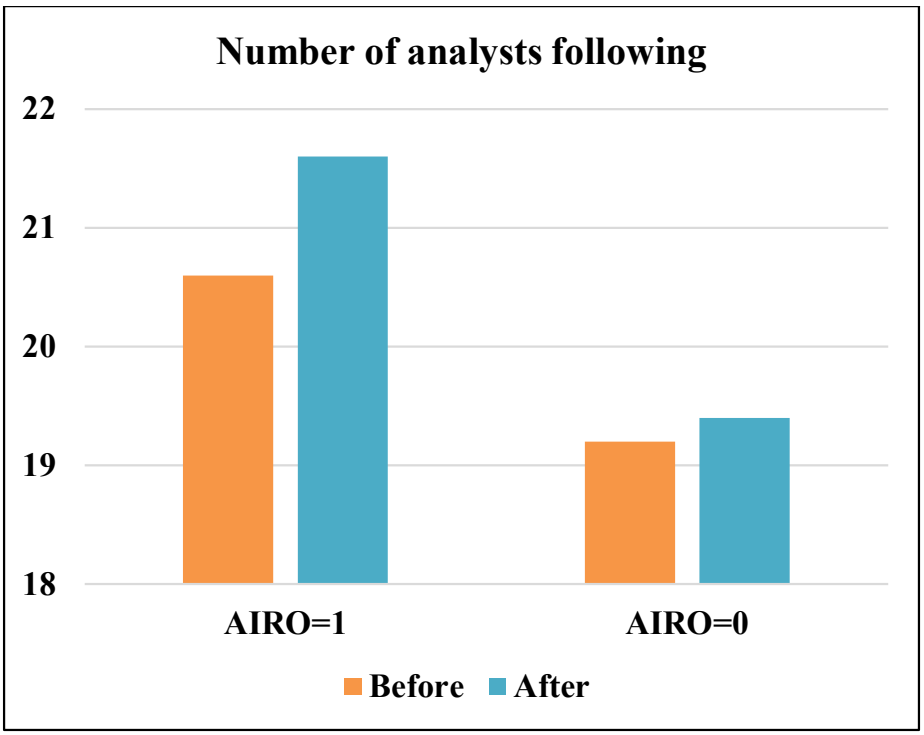
Appendix: Variable Definitions

Variable	*Definition*
Variable of interest	
AIRO	Indicator variable that takes the value 1 if the new IRO has prior experience as a financial analyst in the financial services industry and 0 otherwise.
Fresh AIRO (jobs) / (time)	Indicator variable that takes the value 1 if the former analyst has worked in one or no other jobs (for 22 months or less) since leaving Wall Street before becoming the head of IR function, and 0 otherwise. One job and 22 months are the sample median, respectively, in between the Wall Street and head of IR.
Detached AIRO (jobs) / (time)	Indicator variable that takes the value 1 if the former analyst has worked in two or more jobs (for more than 22 months) since leaving Wall Street before becoming the head of IR, and 0 otherwise.
Firm variables in the pre-IRO period	
Coverage	Average natural logarithm of 1 plus the number of analysts covering the company over the four quarters prior to the change in IRO.
Fog	Average of the Gunning Fog readability index for 8-K filings over the four quarters prior to the change in IRO. The Gunning Fog readability index is computed as $0.4 \times ((\#words/\#sentences + 100 \times (\#complex\ words/\#words))$ Higher values of the index reflect lower disclosure readability.
Bog	Bog plain English readability index of the firm's prior year (i.e., lagged) 10-K filing. The Bog index relies on *StyleWriter's* proprietary algorithm as described in Bonsall et al. (2017).
#IO	Average natural logarithm of 1 plus the number of institutional investors holding shares in the company over the four quarters prior to the change in IRO.
Return Volatility	Standard deviation of daily stock return computed over the four quarters prior to the change in IRO.
Spread	Average daily bid-ask spread computed over the four quarters prior to the change in IRO. The daily bid-ask spread is computed as the highest ask price less the lowest bid price of that day divided by the midpoint between these two values.
Market Cap	Average log-transformed market capitalization at quarter-end computed over the four quarters prior to the change in IRO.
MTB	Average market capitalization at quarter end divided by total equity for common shareholders at quarter end, computed over the four quarters prior to the change in IRO.
Litigation Risk	Indicator variable that takes the value 1 if the company's SIC code is one of the following: 2833–2836 and 8731–8734 (pharmaceuticals and biotechnology), 3570–3577 and 7370–7374 (computers and programming), 3600–3674 (electronics), and 5200–5961 (retailing), and 0 otherwise.
Financing	Average of quarterly external equity financing status computed over the four quarters prior to the change in IRO. External equity financing status is determined by whether the cash flow from sale of common and preferred stock is positive (1) or not (0).
R&D	Average quarterly research and development expense divided by total assets at

	quarter end computed over the four quarters prior to the change in IRO. The variable is set to zero if research and development expense is missing. We multiply the ratio by 100 to improve result presentation.
ROA	Average quarterly net income divided by total assets at quarter end computed over the four quarters prior to the IRO change.
Loss	Average quarterly loss status computed over the four quarters prior to the change in IRO. Loss status is determined by whether quarterly net income is negative (1) and not (0).
Leverage	Average leverage ratio computed as the sum of long-term debt and the short-term portion of long-term debt divided by total assets at quarter end. The average is taken over the four quarters prior to the change in IRO.
NASDAQ	Indicator variable that takes the value 1 if the company is listed on NASDAQ over the four quarters prior to IRO change and 0 otherwise.
Firm Age	Natural logarithm of the number of years computed since IPO to the quarter-end, averaged over the four quarters prior to the change in IRO.
Prior ΔY	Change in *Y* between quarter Q−1 and quarter Q−4 prior to the IRO change, where *Y* is any of the variables: *Fog*, *#AI Days*, *Coverage*, *#IO*, *Amihud Ratio*, or *Spread*.
Prior ΔBog	Change in the Bog readability index for a firm's 10-K filing between year *t*−1 and year *t*−2 prior to the IRO change.
Dependent variables	
ΔFog	Change in average of the Gunning Fog readability index for 8-K filings in the four quarters following the IRO change compared to the average over the four quarters prior to the IRO change.
ΔBog	Change in the Bog readability index of the 10-K filing after the IRO change compared to the filing before the IRO change.
Δ#AI Days	Change in the average number of analysts-investor days during the four quarters following the change in IRO compared to the four quarters prior to the change in IRO.
ΔCoverage	Change in average analyst coverage over the four quarters following the change in IRO compared to the four quarters prior to the change in IRO. Analyst coverage is computed as natural logarithm of 1 plus the number of analysts following the company.
Δ#IO	Change in average natural logarithm of 1 plus the number of institutional investors holding shares in the company over the four quarters following the change in IRO compared to the average over the four quarters prior to the change in IRO.
ΔAmihud Ratio	Change in average Amihud ratio over the four quarters following the change in IRO compared to the average over the four quarters prior to the change in IRO. Amihud ratio is the average ratio of the daily absolute return to the dollar trading volume in that day, as defined by Amihud (2002). We multiply the ratio by 1,000 to improve result presentation.
ΔSpread	Change in average daily bid-ask spread computed over the four quarters following the change in IRO compared to the four quarters prior to the change in IRO.

Figure 1: Number of Analysts Covering the Firm before and after the Change in IRO



This figure shows the average number of analysts following the firms that appointed AIROs (i.e., *AIRO* = 1) versus the firms that appointed a regular IRO (i.e., *AIRO* = 0), four quarters before and four quarters after the IRO change.

Table 1: Sample Distribution

Panel A: Distribution by year

Year	Full sample		AIRO = 1	AIRO = 0
	Frequency	Percentage		
2004	14	3.10%	1	13
2005	25	5.53%	4	21
2006	27	5.97%	8	19
2007	36	7.96%	5	31
2008	39	8.63%	6	33
2009	36	7.96%	11	25
2010	36	7.96%	14	22
2011	41	9.07%	11	30
2012	44	9.73%	15	29
2013	35	7.74%	9	26
2014	45	9.96%	9	36
2015	40	8.85%	9	31
2016	34	7.52%	16	18
Total	**452**	**100%**	**118**	**334**

Panel B: Distribution by industry

Industry	Full sample		AIRO = 1	AIRO = 0
	Frequency	Percentage		
Consumer non-durables	42	9.29%	11	31
Consumer durables	13	2.88%	3	10
Manufacturing	51	11.28%	7	44
Energy	47	10.40%	14	33
Chemicals	26	5.75%	5	21
Business equipment	78	17.26%	26	52
Telecommunications	20	4.42%	8	12
Utilities	43	9.51%	11	32
Shops	49	10.84%	9	40
Healthcare	35	7.74%	10	25
Other	48	10.62%	14	34
Total	**452**	**100%**	**118**	**334**

Industry is based on the Fama-French 12 industry classification. We obtain the classification from Professor French's website at http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/Data_Library/det_12_ind_port.html.

Panel C: Descriptive information about the IROs

	AIRO = 1 (N = 118)	AIRO = 0 (N = 334)	t-statistics for difference (1−0)
Gender			
Male	94	233	
Female	24	101	
Male%	79.66%	69.76%	2.07**
Education Highest Degree			
Bachelor%	27.12%	28.44%	−0.27
Master(non-MBA)%	5.93%	12.57%	−2.00**
MBA%	62.71%	51.20%	2.16**
Education University			
Ivy League%	19.49%	5.09%	4.85***

Statistical significance is based on two-tailed t-tests and is indicated as follows: *** p-value<0.01; ** p-value<0.05; * p-value<0.1.

Table 2: Descriptive Statistics

Variable	N	Mean	S.D.	p25	Median	p75
Firm variables in the pre-IRO change period						
Coverage (raw)	452	19.622	8.533	13.125	19.250	25.125
Coverage (log)	452	2.928	0.463	2.646	3.004	3.261
Fog	452	18.374	2.271	16.803	17.883	19.394
Bog	407	85.813	7.078	81.000	86.000	90.000
#IO (raw)	452	512	367	303	409	655
#IO (log)	452	5.575	1.901	5.714	6.015	6.485
Spread	452	0.024	0.010	0.017	0.022	0.029
Market Cap (mil US$)	452	30,960	49,223	6,495	12,354	30,577
Market Cap (log)	452	9.598	1.145	8.769	9.411	10.320
Return Volatility	452	0.018	0.008	0.013	0.016	0.022
MTB	452	3.758	5.997	1.934	2.861	4.260
Financing	452	0.837	0.341	1.000	1.000	1.000
R&D	452	0.766	1.326	0.000	0.106	0.925
Litigation Risk	452	0.283	0.451	0.000	0.000	1.000
ROA	452	0.017	0.018	0.009	0.017	0.027
Loss	452	0.087	0.210	0.000	0.000	0.000
Leverage	452	0.246	0.154	0.128	0.228	0.350
NASDAQ	452	0.241	0.428	0.000	0.000	0.000
Firm Age (years)	452	39	19	20	39	58
Firm Age (log)	452	3.487	0.625	2.970	3.667	4.056
Change in dependent variables from pre- to post-IRO change						
ΔFog	452	0.121	2.333	−0.716	0.097	0.970
ΔBog	407	0.162	3.052	−1.000	0.000	1.000
Δ#AI Days	452	0.020	0.230	0.000	0.000	0.000
ΔCoverage (raw)	452	0.412	2.448	−1.000	0.375	1.750
ΔCoverage (log)	452	0.026	0.132	−0.052	0.018	0.094
Δ#IO (raw)	452	25	81	−8	12	49
Δ#IO (log)	452	0.129	0.636	−0.013	0.023	0.095
ΔAmihud Ratio	452	−0.020	0.154	−0.038	−0.009	0.009
ΔSpread	452	0.000	0.010	−0.005	0.000	0.004

Sample size decreases for *Bog* due to missing data. All continuous variables are winsorized at 1 and 99%. Variables are defined in the Appendix.

Table 3: Univariate Statistics

Variable	AIRO = 1 Mean	AIRO = 1 Median	AIRO = 0 Mean	AIRO = 0 Median	Diff mean (1−0)		Diff median (1−0)	
Firm variables in the pre-IRO change period								
Coverage (raw)	20.602	20.250	19.275	19.000	1.326		1.250	*
Coverage (log)	2.978	3.056	2.911	2.994	0.067		0.062	*
Fog	18.588	18.231	18.299	17.817	0.289		0.771	
Bog	86.147	85.000	85.702	86.000	0.445		−1.000	
#IO (raw)	429.822	395.750	540.835	416.375	−111.013	***	−20.625	**
#IO (log)	5.384	5.983	5.643	6.033	−0.259		−0.050	**
Spread	0.027	0.024	0.024	0.021	0.003	***	0.003	***
Market Cap (mil US$)	20,482	11,610	34,662	12,695	−14,180	***	−1,085	*
Market Cap (log)	9.395	9.349	9.670	9.439	−0.275	**	−0.090	*
Return Volatility	0.020	0.018	0.018	0.016	0.002	**	0.002	***
MTB	4.380	2.631	3.538	2.924	0.842		−0.293	
Financing	0.826	1.000	0.841	1.000	−0.014		0.000	
R&D	0.894	0.076	0.721	0.114	0.173		−0.038	
Litigation Risk	0.297	0.000	0.278	0.000	0.018		0.000	
ROA	0.014	0.014	0.018	0.018	−0.004	**	−0.003	**
Loss	0.129	0.000	0.073	0.000	0.057	**	0.000	**
Leverage	0.253	0.220	0.243	0.230	0.010		−0.009	
NASDAQ	0.339	0.000	0.207	0.000	0.132	***	0.000	***
Firm Age (years)	34.540	28.250	40.056	42.250	−5.516	***	−14.000	**
Firm Age (log)	3.364	3.341	3.530	3.744	−0.166	**	−0.403	**
Change in dependent variables from pre- to post-IRO change								
ΔFog	−0.369	−0.187	0.294	0.202	−0.663	***	−0.389	***
ΔBog	−0.147	0.000	0.266	0.000	−0.413		0.000	
Δ#AI Days	0.056	0.000	0.008	0.000	0.048	**	0.000	**
ΔCoverage (raw)	1.035	0.958	0.191	0.000	0.843	***	0.191	***
ΔCoverage (log)	0.055	0.053	0.016	0.005	0.040	***	0.049	***
Δ#IO (raw)	25.430	6.625	24.561	12.375	0.869		−5.750	
Δ#IO (log)	0.177	0.022	0.111	0.025	0.066		−0.004	
ΔAmihud Ratio	−0.049	−0.011	−0.010	−0.007	−0.039	***	−0.004	*
ΔSpread	−0.001	−0.002	0.001	0.000	−0.002	**	−0.002	**

This table shows mean and median differences in prior-period (Q−1 to Q−4) variables between firms that hire an AIRO in Q0 and those that hire a regular IRO and in changes in economic and disclosure variables in the four quarters before and after the IRO change. Across all variables, except for *Bog*, *AIRO* is 1 for 118 observations and 0 for 334 observations. Due to missing data for *Bog*, AIRO is 1 for 102 observations and 0 for 305 observations. All continuous variables are winsorized at 1 and 99%. Variables are defined in the Appendix. Statistical significance is based on two-tailed t-tests for means and Wilcoxon rank-sum test for medians and is indicated as follows: *** p-value<0.01; ** p-value<0.05; * p-value<0.1.

Table 4: Determinants of Appointing an IRO with Prior Experience as Financial Analyst

Variables	(1) AIRO	(2) AIRO
Coverage	0.2643	0.0817
	(0.1956)	(0.0613)
#IO	-0.0169	-0.0052
	(0.0355)	(0.0120)
Spread	35.0431	11.0924
	(31.2214)	(9.1540)
Market Cap	-0.1886**	-0.0516*
	(0.0907)	(0.0265)
Return Volatility	-47.5309	-14.5437
	(39.5693)	(11.6287)
MTB	0.0174	0.0057
	(0.0130)	(0.0044)
Financing	-0.0709	-0.0156
	(0.2359)	(0.0741)
R&D	-0.0026	-0.0018
	(0.0653)	(0.0219)
Litigation Risk	-0.0018	0.0059
	(0.2491)	(0.0723)
ROA	-2.7280	-0.8323
	(5.4533)	(1.7187)
Loss	0.1509	0.0423
	(0.4767)	(0.1634)
Leverage	0.4499	0.1484
	(0.5286)	(0.1665)
NASDAQ	0.3686*	0.1137*
	(0.1970)	(0.0642)
Firm Age	-0.0742	-0.0181
	(0.1345)	(0.0418)
Constant	-0.4262	0.3229
	(1.1798)	(0.3380)
Pseudo R^2	0.114	
R^2		0.124
Industry, Year FE	YES	YES
Observations	452	452

This table presents the results of a Probit model (column 1) and Linear Probability Model (column 2) to test the determinants of hiring an AIRO. The dependent variable is *AIRO* which takes the value 1 if the IRO appointed in quarter Q0 was previously employed as financial analyst in the financial services industry, and 0 otherwise. The independent variables are measured over the four quarters prior to the IRO change. All columns include industry fixed effects defined based on Fama-French 12 industry classification and year fixed effects. Standard errors robust and clustered at firm-level are reported in parentheses. All continuous variables are winsorized at 1 and 99%. Variables are defined in the Appendix. Statistical significance is based on two-sided t-tests and is indicated as follows: *** p-value<0.01; ** p-value<0.05; * p-value<0.1.

Table 5: Changes in Firm Disclosure after Changing the IRO

Variables	Pred.	(1) ΔFog	(2) ΔBog	(3) Δ#AI Days
AIRO	**−/−/+**	**−0.3516****	**−0.4368***	**0.0357***
		(0.1528)	**(0.2991)**	**(0.0250)**
Control for the trend and scope of improvement in the dependent variable prior to the IRO appointment				
Prior ΔFog		0.0609		
		(0.0444)		
Fog		-0.3638***		
		(0.0791)		
Prior ΔBog			-0.1758	
			(0.1523)	
Bog			-0.1149***	
			(0.0411)	
Prior Δ#AI Days				-0.0061
				(0.0206)
#AI Days				-0.3201***
				(0.0817)
Control variables for firm characteristics prior to the IRO appointment				
Coverage		0.0424	-0.1476	0.0023
		(0.2303)	(0.3810)	(0.0305)
#IO		-0.0565	-0.0895	0.0037
		(0.0473)	(0.1556)	(0.0053)
Spread		70.4543	-64.6979	-0.5532
		(48.9958)	(79.6591)	(3.8881)
Market Cap		0.1689	0.1746	0.0234
		(0.1059)	(0.1824)	(0.0150)
Return Volatility		-79.6703	67.5343	-0.4615
		(59.0425)	(81.5776)	(4.9766)
MTB		-0.0037	-0.0114	0.0011
		(0.0101)	(0.0241)	(0.0023)
Financing		0.1020	0.0463	-0.0101
		(0.2383)	(0.3669)	(0.0380)
R&D		0.0569	-0.2705*	0.0063
		(0.0806)	(0.1456)	(0.0104)
Litigation Risk		-0.1352	-0.1036	-0.0069
		(0.3102)	(0.6459)	(0.0394)
ROA		-9.1925	6.5630	-0.4181
		(6.9417)	(12.1386)	(0.7402)
Loss		-0.5466	1.7938*	0.0115
		(0.5049)	(0.9224)	(0.0805)
Leverage		0.1651	-2.4806**	0.1168
		(0.6185)	(1.2189)	(0.0804)
NASDAQ		-0.0829	-0.2777	-0.0402

	(0.2621)	(0.4494)	(0.0291)
Firm Age	-0.1115	-0.5640	-0.0233
	(0.1667)	(0.4268)	(0.0217)
Constant	6.2630***	12.8292***	-0.1190
	(1.5015)	(3.7776)	(0.1698)
Industry, Year FE	YES	YES	YES
R^2	0.524	0.182	0.212
Observations	452	407	452

This table presents the results on the relation between hiring an AIRO and a firm's disclosure. In column (1), the dependent variable is the change in average Gunning Fog Index of 8-K filings over four quarters before and after the change in IRO (*ΔFog*). In column (2), the dependent variable is the change in Bog index of 10-K filings after to before the change in IRO (*ΔBog*); sample size decreases due to missing data. Higher values of the readability indices reflect lower disclosure readability. In column (3), the dependent variable is the change in average AI days over the four quarters before and after the change in IRO (*Δ#AI* Days). All columns include industry fixed effects based on Fama-French 12 industry classification and year fixed effects. Standard errors are robust and clustered at firm level and reported in parentheses. All continuous variables are winsorized at 1 and 99%. Variables are defined in the Appendix. Statistical significance is based on one-tailed test where there is a prediction and based on two-tailed test otherwise and is indicated as follows: *** p-value<0.01; ** p-value<0.05; * p-value<0.1.

Table 6: Changes in Analyst and Institutional Investor Following after Changing the IRO

Variables	Pred.	(1) ΔCoverage	(2) Δ#IO
AIRO	+	**0.0255****	**0.0718***
		(0.0123)	**(0.0470)**
Control for the trend and scope of improvement in the dependent variable prior to the IRO appointment			
Prior ΔCoverage		0.2543***	
		(0.0468)	
Coverage		-0.1129***	0.0184
		(0.0292)	(0.0236)
Prior Δ#IO			1.4244***
			(0.1153)
#IO		-0.0005	-0.0396*
		(0.0033)	(0.0207)
Control variables for firm characteristics prior to the IRO appointment			
Spread		4.1009	-9.0309
		(3.0089)	(5.6504)
Market Cap		0.0174*	0.0181
		(0.0089)	(0.0195)
Return Volatility		-2.0519	9.0750
		(3.6559)	(7.6017)
MTB		-0.0006	-0.0032
		(0.0012)	(0.0023)
Financing		0.0073	0.0629
		(0.0170)	(0.0382)
R&D		0.0055	-0.0181
		(0.0064)	(0.0116)
Litigation Risk		0.0284	0.0062
		(0.0224)	(0.0303)
ROA		0.5191	0.0672
		(0.5642)	(1.2816)
Loss		-0.0283	0.1464*
		(0.0522)	(0.0805)
Leverage		0.0550	-0.0391
		(0.0462)	(0.0862)
NASDAQ		-0.0308	-0.0222
		(0.0206)	(0.0380)
Firm Age		-0.0166	-0.0232
		(0.0110)	(0.0304)
Constant		0.0544	0.1208
		(0.0881)	(0.1523)
Industry, Year FE		YES	YES
R^2		0.318	0.824
Observations		452	452

This table presents the results on the relation between hiring an AIRO and financial analysts and institutional investors' interest in the firm. In column (1), the dependent variable is the change in the number of analysts covering the firm over the four quarters before and after the change in IRO (*ΔCoverage*). In column (2), the dependent variable is the change in the number of institutional owners in the firm over the four quarters before and after the change in IRO (*Δ#IO*). All columns include industry fixed effects based on Fama-French 12 industry classification and year fixed effects. Standard errors are robust and clustered at firm level and reported in parentheses. All continuous variables are winsorized at 1 and 99%. Variables are defined in the Appendix. Statistical significance is based on one-tailed test where there is a prediction and based on two-tailed test otherwise and is indicated as follows: *** p-value<0.01; ** p-value<0.05; * p-value<0.1.

Table 7: Changes in Stock Liquidity after Changing the IRO

Variables	Pred.	(1) ΔAmihud Ratio	(2) ΔSpread
AIRO	**−**	**−0.0283*** **	**−0.0014***
		(0.0110)	**(0.0010)**
Control for the trend and scope of improvement in the dependent variable prior to the IRO appointment			
Prior ΔAmihud Ratio		0.3282***	
		(0.1082)	
Amihud Ratio		-0.3344***	
		(0.1093)	
Prior ΔSpread			0.1927***
			(0.0472)
Spread			-0.3164
			(0.2471)
Control variables for firm characteristics prior to the IRO appointment			
Coverage		-0.0295**	0.0002
		(0.0149)	(0.0012)
#IO		0.0012	-0.0003
		(0.0026)	(0.0003)
Market Cap		-0.0209	-0.0022***
		(0.0134)	(0.0005)
Return Volatility		0.3949	-0.5084
		(1.1589)	(0.3279)
MTB		-0.0007	0.0000
		(0.0007)	(0.0001)
Financing		0.0021	-0.0005
		(0.0179)	(0.0015)
R&D		0.0104*	0.0017***
		(0.0055)	(0.0006)
Litigation Risk		0.0183	0.0032**
		(0.0180)	(0.0016)
ROA		-1.4474**	0.0131
		(0.6488)	(0.0333)
Loss		-0.0479	0.0011
		(0.0412)	(0.0031)
Leverage		0.0111	0.0010
		(0.0440)	(0.0032)
NASDAQ		0.0082	-0.0017
		(0.01926)	(0.0012)
Firm Age		0.0070	-0.0008
		(0.0082)	(0.0009)
Constant		0.4204***	0.0399***
		(0.1257)	(0.0064)
Industry, Year FE		YES	YES

R^2	0.640	0.310
Observations	452	452

This table presents the results on the relation between hiring an AIRO and the firm's stock liquidity. In column (1), the dependent variable is the change in the firm's Amihud (2002) ratio over the four quarters before and after the change in IRO (*ΔAmihud Ratio*). In column (2), the dependent variable is the change in daily bid-ask spread over the four quarters before and after the change in IRO (*ΔSpread*). All columns include industry fixed effects based on Fama-French 12 industry classification and year fixed effects. Standard errors are robust and clustered at firm level and reported in parentheses. All continuous variables are winsorized at 1 and 99%. Variables are defined in the Appendix. Statistical significance is based on one-tailed test where there is a prediction and based on two-tailed test otherwise and is indicated as follows: *** p-value<0.01; ** p-value<0.05; * p-value<0.1.

Table 8: Propensity Score Matched Sample Analyses

Variables	Pred.	(1) ΔFog	(2) ΔBog	(3) Δ#AI Days	(4) ΔCoverage	(5) Δ#IO	(6) ΔAmihud Ratio	(7) ΔSpread
AIRO	**−/−/+/+/+/−/−**	**−0.2815***	**−0.4808***	**0.0446***	**0.0333****	**0.0715***	**−0.0266***	**0.0010**
		(0.2059)	**(0.3158)**	**(0.0297)**	**(0.0144)**	**(0.0453)**	**(0.0182)**	**(0.0012)**
Controls		YES	YES	YES	YES	YES	YES	YES
Industry, Year FE		YES	YES	YES	YES	YES	YES	YES
R^2		0.570	0.368	0.265	0.414	0.822	0.611	0.353
Observations		236	204	236	236	236	236	236

This table reports matched-sample analyses of the relation between hiring an AIRO and firm disclosure (columns 1 through 3), analyst coverage (column 4), number of institutional owners (column 5), and stock liquidity (columns 6 and 7). The treated sample (i.e., AIRO = 1) is matched with the control sample (i.e., AIRO = 0) based on the propensity score obtained from estimating the specification in column (1) of Table 4. The matching is 1-on-1 nearest neighbor, without replacement. For column (2), the first stage additionally includes the Bog index of the prior year's 10-K filing. Sample size in column (2) decreases due to missing data for the Bog index. Across all second-stage models, controls are as in the corresponding columns in Tables 5 through 7. All specifications include industry fixed effects based on Fama-French 12 industry classification and year fixed effects. Standard errors are robust and clustered at firm level and reported in parentheses. All continuous variables are winsorized at 1 and 99%. Variables are defined in the Appendix. Statistical significance is based on one-tailed test where there is a prediction and based on two-tailed test otherwise and is indicated as follows: *** p-value<0.01; ** p-value<0.05; * p-value<0.1.

Table 9: Channels through which AIROs attract Analysts and Institutional Investors' Interest

Variables	Pred.	(1) ΔCoverage	(2) Δ#IO	(3) ΔCoverage	(4) Δ#IO
Network mechanism					
Detached AIRO (jobs)	?	-0.0042	-0.0447		
		(0.0226)	(0.0491)		
Fresh AIRO (jobs)	+	0.0266**	0.0979*		
		(0.0148)	(0.0683)		
Detached AIRO (time)	?			0.0203	-0.0029
				(0.0156)	(0.0443)
Fresh AIRO (time)	+			0.0287*	0.1434*
				(0.0192)	(0.1070)
Disclosure mechanism					
ΔFog	−	-0.0019	-0.0068	-0.0017	-0.0061
		(0.0031)	(0.0070)	(0.0031)	(0.0069)
ΔBog	−	-0.0034**	-0.0177*	-0.0033**	-0.0179*
		(0.0017)	(0.0112)	(0.0017)	(0.0113)
Δ#AI Days	+	0.0153	0.0076	0.0161	0.0165
		(0.0271)	(0.0415)	(0.0272)	(0.0388)
Control variables		YES	YES	YES	YES
Industry, Year FE		YES	YES	YES	YES
R^2		0.325	0.839	0.325	0.840
Observations		407	407	407	407

This table reports results from testing the channels through which AIROs attract the interest of the investment community for their new employer. In columns (1) and (2), the independent variables *Detached AIRO* and *Fresh AIRO* rely on the number of jobs the person has held between leaving the financial analyst position and being hired as IRO. In columns (3) and (4), the independent variables *Detached AIRO* and *Fresh AIRO* rely on the time length between leaving the financial analyst position and being hired as IRO. Control variables are as in the corresponding columns in Table 6. All specifications include industry fixed effects based on Fama-French 12 industry classification and year fixed effects. Standard errors are robust and clustered at firm level and reported in parentheses. All continuous variables are winsorized at 1 and 99%. Variables are defined in the Appendix. Statistical significance is based on one-tailed test where there is a prediction and based on two-tailed test otherwise and is indicated as follows: *** p-value<0.01; ** p-value<0.05; * p-value<0.1.